CHAPTER 1

Peasant Households under Pressure

Women's Work and the Cultivation System on Java, 1830–1870

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1 Introduction: Colonial Extraction and Women's Work*

The costs and benefits of empire have been intensively debated by contemporaries as well as historians. Some historians have focused on the relatively high (especially military) costs of maintaining the British, French and Portuguese empires.[1] Others have argued, instead, that the costs were relatively minimal and that the net benefits for the metropole prevailed; if not in terms of economics, then at least in terms of political power and status.[2] Most scholars seem to agree, however, that, within metropolitan societies, the elites and capitalists had by far the most to gain from their nations' overseas possessions.[3] Apart from the costs and benefits for the *metropoles*, the costs and benefits for the inhabitants of the *colonies* are particularly relevant to this debate. In terms of natural resources and taxation in cash or in kind, ordinary colonised people generally paid a high price for colonialism, whereas the benefits they received were – at least until the early twentieth century – either negligible, or funded from their own contributions to the colonial state.[4] These issues are

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1 See, for instance, Patrick O'Brien, "The Costs and Benefits of British Imperialism 1846–1914," *Past & Present* 120 (1988): 163–200; Lance E. Davis and Robert A. Huttenback, *Mammon and the Pursuit of Empire: The Political Economy of British Imperialism, 1860–1912* (Cambridge: Cambridge University Press, 1986); Jacques Marseille, *Empire colonial et capitalisme français: Histoire d'un divorce* (Paris: Albin Michel, 1984).

2 Paul Kennedy, "Debate: The Costs and Benefits of British Imperialism 1846–1914," *Past & Present* 125 (1989): 186–92; Avner Offer, "The British Empire, 1870–1914: A Waste of Money?" *Economic History Review* 46, no. 2 (1993): 215–38; Philip J. Havik, "Colonial Administration, Public Accounts and Fiscal Extraction: Policies and Revenues in Portuguese Africa (1900–1960)," *African Economic History* 41 (2013): 171.

3 For instance, Davis and Huttenback, *Mammon*, 317.

4 For recent studies on the lack of investment in the well-being of indigenous populations, see, among others, Anne Booth, "Night Watchman, Extractive, or Developmental States? Some Evidence from Late Colonial South-East Asia," *Economic History Review*

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at the heart of questions on the degree of colonial extraction, and how this affected the well-being of indigenous societies and economies.

One problem in answering these questions is that colonial extraction (and redistribution) is difficult to measure. Not only are the sources incomplete and often incomparable, there are also many different forms of extraction – ranging from sheer theft to indirect taxation – in cash or in kind. Also, it is often unclear which types of revenue historians include in their estimates of colonial extraction. In this chapter, I employ a broad definition of colonial extraction as "a net transfer of economically valuable resources from indigenous to metropolitan societies."[5] Such remittances generally consisted of tax revenues, returns from government monopolies on commerce, and unremitted government transfers.[6] In this broad definition of colonial extraction, indigenous labour services and *corvée* labour – be they for public works, as a form of non-monetary taxation, or systems of forced cultivation – ought to be included.[7] Often, colonisers legitimised practices of forced labour by claiming that these covered the costs of maintaining the empire, which included, for instance, investments in infrastructure or warfare in the colonies.

Towards the end of the nineteenth century, both with an eye to imperial competition and for humanitarian reasons, metropoles as well as the international community started to monitor excessive forms of extraction. However, the degree of control was amenable to definitions of what was considered extractive, and the ways in which "tradition" served to continue precolonial forms of taxation, such as *corvée* labour.[8] Especially with regard to building

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60, no. 2 (2007): 257 (Dutch and British Southeast Asia); Elise Huillery, "The Black Man's Burden: The Cost of Colonization of French West Africa," *The Journal of Economic History* 74, no. 1 (2014): 1–38 (French West Africa); Havik, "Colonial Administration"; and Kleoniki Alexopoulou "An Anatomy of Colonial States and Fiscal Regimes in Portuguese Africa: Long-Term Transformations in Angola and Mozambique, 1850s–1970s" (PhD diss., Wageningen University, 2018) (Portuguese Africa).

5 Ewout Frankema and Frans Buelens, "Introduction," in *Colonial Exploitation and Economic Development: The Belgian Congo and the Netherlands Indies Compared*, ed. Ewout Frankema and Frans Buelens (London and New York: Routledge, 2013), 2.

6 Anne Booth, *The Indonesian Economy in the Nineteenth and Twentieth Centuries: A History of Missed Opportunities*; *A Modern Economic History of Southeast Asia* (London: Macmillan, 1998), 138–39.

7 See for a recent discussion of (forced) labour as a form of colonial taxation: Marlous van Waijenburg, "Financing the African Colonial State: The Revenue Imperative and Forced Labor," *The Journal of Economic History* 78, no. 1 (2018): 40–80, notably 41–42.

8 See, for instance, Alexander Keese, "Slow Abolition within the Colonial Mind: British and French Debates about 'Vagrancy,' 'African Laziness,' and Forced Labour in West Central and South Central Africa, 1945–1965," *International Review of Social History* 59, no. 3 (2014): 377–407; and Van Waijenburg, "Financing."

and infrastructure, imperial powers hid behind supposedly long-standing traditions of labour services, in which local elites demanded part of the (male) population to invest in public works.[9]

Despite the recent growing attention to forced labour in the colonial context, most studies tend to focus on the contributions of male workers, especially those working in the construction and maintenance of roads and infrastructure, or in mining.[10] More "hidden," indirect forms of labour extraction, such as the extra input of family members other than the male head of household due to shifts in his labour allocation, have often been overlooked, both by contemporaries and historians. By contrast, this chapter aims to connect the study of colonial extraction to indigenous women's work in agriculture, by investigating the case of Java under the Cultivation System. This system was introduced by the Dutch in 1830, and was highly profitable until the 1860s, which is why it has also been called a "classic piece of colonial exploitation."[11] At least until the 1870s, net remittances from Java to the Netherlands – after subtracting costs such as colonial administration and defence – were larger than in most other imperial contexts.[12] Between 1830 and 1870, the Cultivation System involved the labour of millions of Javanese households. A heavy mix of taxes and cultivation obligations burdened the majority of the Javanese peasant population.

In this chapter, I will present estimates of changing Javanese women's labour input under the influence of the Cultivation System. By estimating the amount of labour required for particular types of agricultural as well as non-agricultural production, and by an analysis of shifts in labour relations within households, a clearer picture will emerge of the labour burden on households, and particularly of the role Javanese women played in this crucial period of

9 For such indigenous labour services increasing under colonial rule, see, for instance, Peter Boomgaard, *Children of the Colonial State: Population Growth and Economic Development in Java, 1795–1880* (Amsterdam: Free University Press, 1989), 51 (Dutch East Indies); Keese, "Slow Abolition" (Central Africa) and Sarah Kunkel, "Forced Labour, Roads, and Chiefs: The Implementation of the ILO Forced Labour Convention in the Gold Coast," *International Review of Social History* 63, no. 3 (2018): 449–76 (Gold Coast).

10 For public works, see the works cited in the previous footnote. For a recent example of a study on forced labour in mines, see, for example, Kleoniki Alexopoulou and Dácil Juif, "Colonial State Formation without Integration: Tax Capacity and Labour Regimes in Portuguese Mozambique (1890s–1970s)," *International Review of Social History* 62, no. 2 (2017): 215–52.

11 Robert E. Elson, *Village Java under the Cultivation System, 1830–1870* (Sydney: Asian Studies Association of Australia [etc.], 1994), 303.

12 Angus Maddison, "Dutch Income in and from Indonesia 1700–1938," *Modern Asian Studies* 23, no. 4 (1989): 646; Booth, "Night Watchman," 257.

economic change. Most crucially, the increasing labour demands of the system led to a growing role for women in agriculture. First of all, their activities in subsistence agriculture increased, and, secondly, there were multiple ways in which they became involved in the production of cash crops, even if the colonial authorities eschewed recruiting women (or children) for this purpose. Apart from agriculture, the Cultivation System expanded women's activities in trade as well as domestic industries. As these were also important supplemental income-generating activities for peasant households, they will be briefly touched upon in this chapter.

2 Why Women, Work and Colonialism?[13]

Studying the agricultural work of women in a colonial context is important for several reasons. First of all, labour relations – and, in particular, the position of women in the household and the labour market – signify not only economic but also important social, cultural and political developments. Labour was often crucial in shaping colonial relations, as the scarcity of workers needed to obtain the natural resources the tropics had to offer was a constant concern of imperial rulers – whether they were Spanish, British, French, Portuguese, Dutch or Belgian. From the silver mines and the plantations in Latin America to the population-scarce and land-abundant areas of Africa, as well as in the labour-intensive rice planting economies in Southeast Asia, colonisers found it difficult to find and consolidate a labour force that was willing to work to their benefit.[14] For instance, the Dutch East India Company (VOC: *Vereenigde Oost-Indische Compagnie*) sailing to the coasts of what is nowadays called the Indonesian Archipelago, encountered communities that were overwhelmingly

13 The title of this section alludes to my recent monograph: Elise van Nederveen Meerkerk, *Women, Work and Colonialism in the Netherlands and Java: Comparisons, Contrasts, and Connections, 1830–1940* (London: Palgrave Macmillan, 2019). The current chapter draws heavily from the book, in particular chapter 3, but has been thoroughly revised for the purpose of this edited volume.

14 The literature on labour scarcity in European powers' overseas colonies is vast. Labour scarcity certainly predated the nineteenth century. See, for example, Rosanna Barragan, "Extractive Economy and Institutions? Technology, Labour, and Land in Potosí, the Sixteenth to the Eighteenth Century," in *Colonialism, Institutional Change, and Shifts in Global Labour Relations*, ed. Karin Hofmeester and Pim de Zwart (Amsterdam: Amsterdam University Press, 2018), 207–37; Ravi Ahuja, "Labour Relations in an Early Colonial Context: Madras, c. 1750–1800," *Modern Asian Studies* 36, no. 4 (2002): e.g., 797 (British India).

focused on agricultural production for subsistence and regional markets. It was difficult for the VOC traders to convince peasants to voluntarily cultivate cash crops, such as coffee, for export markets, and they resorted to alliances with local elites and forced labour in order to gain this high-profit tropical produce.[15] In the early nineteenth century, when the Dutch intensified their colonial administration on the island of Java, an even more stringent regime of forced cultivation, the notorious "Cultivation System" (*Kultuurstelsel*, c. 1830–1870) was implemented. Again, historians researching the Cultivation System have focused on the effects on male labour, or at best on indigenous *households*. As I will argue for the case of colonial Java, the reallocation of women's work facilitated part of the solution to this labour scarcity.

Second, "gender was an important axis along which colonial power was constructed."[16] Colonial encounters created "gender frontiers," in which "two or more culturally specific systems of knowledge about gender and nature met and confronted one another, forcing the invention of new identities and social practices."[17] These confrontations of different gender systems presented the problem of understanding the different expectations on either side regarding the roles of men and women. From the first colonial encounters onwards, European definitions of appropriate gender roles were used to "demasculinise" colonised men. This pertained to a whole range of gender-specific expectations,[18] but particularly when Europeans encountered gender-specific divisions of labour that were unusual to them. For instance, European colonists described African men who spun and washed as "womanly,"[19] or Indian men as "effeminate" and incapable of providing for their families.[20] In the case of colonial Java, many contemporary Dutch observers commented upon the

15 Jan Breman, *Koloniaal profijt van onvrije arbeid: Het Preanger stelsel van gedwongen koffieteelt op Java, 1720–1870* (Amsterdam: Amsterdam University Press, 2010).

16 Mrinalini Sinha, *Colonial Masculinity: The "Manly Englishman" and the "Effeminate Bengali" in the Late Nineteenth Century* (Manchester: Manchester University Press, 1995), 11.

17 Kathleen Wilson, "Empire, Gender, and Modernity in the Eighteenth Century," in *Gender and Empire*, ed. Philippa Levine (Oxford: Oxford University Press, 2004), 23.

18 For recent analyses of gender and empire, see Merry Wiesner-Hanks, "Crossing Borders in Transnational Gender History," *Journal of Global History* 6, no. 3 (2011); Elise van Nederveen Meerkerk, "Gender and Empire: Postcolonial Perspectives on Women and Gender in the "West" and the "East," 17th–20th Centuries," in *Vingt-cinq ans après: Les femmes au rendez-vous de l'histoire*, ed. Enrica Asquer et al. (Rome: École Française de Rome, 2019).

19 Susan D. Amussen and Allyson M. Poska, "Restoring Miranda: Gender and the Limits of European Patriarchy in the Early Modern Atlantic World," *Journal of Global History* 7, no. 3 (2012): 344.

20 Sinha, *Colonial Masculinity*, 55.

perceived "laziness" of indigenous men in contrast to the "industriousness" of their wives.[21] This was a way to represent dark-skinned Javanese men as less masculine than their white, European counterparts, confirming the latter's superiority and thus justifying their presence in the colony.

Third, studying the role of women in the household economy provides a more complete and accurate picture of the importance of the labour factor in practices of colonial extraction, as well as in the development of living standards. Many historians have contended that the living standards of the Javanese population deteriorated, or at best stagnated during the nineteenth and early twentieth centuries.[22] So far, Javanese women's economic activities and their contributions to the household income have generally not been accounted for in debates on the standard of living.[23] This is unfortunate, as the importance of women's work, either paid or unpaid, is increasingly being acknowledged in the more general literature on households' living standards.[24]

3 The Cultivation System in Java (1830 – c. 1870)

Dutch interference with the Indonesian Archipelago dates from the late sixteenth century. Although the VOC had established a few strongholds

21 See, for instance, H. W. Daendels, *Staat der Nederlandsche Oostindische bezittingen: Bijlagen, organique stukken, preparatoire mesures* (The Hague, 1814), 104; *Onderzoek naar de mindere welvaart der Inlandsche bevolking op Java en Madoera*, vol. IXb3, *Verheffing van de Inlandsche vrouw* (Batavia: Kolff [etc.], 1914), 1; Philip Levert, *Inheemsche arbeid in de Java-suikerindustrie* (Wageningen: Landbouwhogeschool, 1934), 247.

22 Peter Boomgaard, *Children*; Booth, *Indonesian Economy*, 114; Pim de Zwart and Jan Luiten van Zanden, "Labor, Wages, and Living Standards in Java, 1680–1914," *European Review of Economic History* 19 (2015): 215–34.

23 This is also largely true for the standard literature on living standards in the Western world, which is often based on male wages. See, for instance, Robert C. Allen, "The Great Divergence in European Wages and Prices from the Middle Ages to the First World War," *Explorations in Economic History* 38, no. 4 (2001); Robert C. Allen, *The British Industrial Revolution in Global Perspective* (Cambridge: Cambridge University Press, 2009).

24 See, for example, for Britain, Sarah Horrell and Jane Humphries, "Women's Labour Force Participation and the Transition to the Male-Breadwinner Family, 1790–1865," *Economic History Review* 48, no. 1 (1995): 89–117; Jane Humphries, "The Lure of Aggregates and the Pitfalls of the Patriarchal Perspective: A Critique of the High Wage Economy Interpretation of the British Industrial Revolution," *Economic History Review* 66, no. 3 (2013): 693–714. For the Netherlands, see Van Nederveen Meerkerk, *Women, Work and Colonialism*, Chapter 5; Corinne Boter, "Living Standards and the Life Cycle: Reconstructing Household Income and Consumption in the Eearly Twentieth-Century Netherlands," *Economic History Review* 73, no. 4 (2020): 1050–73.

throughout the archipelago, and particularly on the most populous island of Java, it never gained full authority and relied on relationships with indigenous elites and indirect rule to be able to make its huge profits. In coalition with local rulers in the West-Javanese province of Priangan, for instance, forced coffee cultivation was implemented, which was lucrative for the elites and European traders but highly burdensome for the Priangan peasants, as it demanded more from their labour and land.[25] The VOC went bankrupt by the end of the eighteenth century, and during the Napoleonic Wars the British took up rule in Java between 1811 and 1815. Following the Anglo-Dutch Treaty, the East Indies were returned to the Netherlands, and the newly installed Dutch King Willem I explicitly wished to make the colony gainful to the Dutch treasury. The metropole maintained the land tax the British had introduced in Java, and further aimed to stimulate bilateral trade with the colony. However, the Dutch failed to outcompete the British under the system of free trade, and Java became more of a burden than a cash cow in the 1820s, adding to the already large metropolitan state deficit.[26] To counter this problem, the Dutch designed more protective trade policies, in combination with forced cash crop cultivation; this became known as the "Cultivation System." This system, designed by one of the King's trustees, Johannes van den Bosch, involved Javanese households' forced cultivation of export crops, such as coffee, tea, indigo and sugar, in exchange for monetary compensation.

Van den Bosch was appointed Governor-General in Batavia (present-day Jakarta) in 1830. He was strongly convinced that Javanese peasants needed to be stimulated to cultivate cash crops for the world market instead of merely producing rice for their own subsistence. Enhancing their industriousness would benefit both the indigenous population and the Dutch state. To achieve this, Javanese peasants were expected to reserve a proportion of their land (ideally 20 per cent, although in practice this differed per region) as well as their labour to produce export crops for the Dutch colonial authorities. For their surpluses, peasants would receive monetary compensation, called "planter's wage" (*plantloon*).[27] However, in order for the colonial government to be able to make a profit, for most peasants this compensation was only two-thirds

25 Breman, *Koloniaal profijt*.

26 Janny de Jong, "Van batig slot naar ereschuld: De discussie over de financiële verhouding tussen Nederland en Indië en de hervorming van de Nederlandse koloniale politiek, 1860–1900" (Master's thesis, University of Groningen, 1989), 19–21.

27 Albert Schrauwers, "The 'Benevolent' Colonies of Johannes van den Bosch: Continuities in the Administration of Poverty in the Netherlands and Indonesia," *Comparative Studies in Society and History* 43, no. 2 (2001): 316.

of the market price for these export crops. Moreover, part of this money served to pay taxes to indigenous elites and Dutch civil servants. Thus, in practice, Javanese households only received about one-third of the market value for their produce.[28]

Although its impact varied greatly between the different regions of Java, overall, the Cultivation System widely impacted both the Javanese and the Dutch economies and, consequently, the work that was delivered by the men, women and children living in Javanese peasant households. Initially, the system was installed to replace the land tax, but, in fact, it functioned alongside it, and other forms of *corvée* labour for the community also continued to exist.[29] While the execution of the Cultivation System has been typified as "based upon an unsophisticated style of trial and error,"[30] including many failures and mishaps, its extractive effects are without a doubt. The fact that both Dutch administrators and village heads (*bupati*) received a percentage of the peasants' proceeds (*kultuurprocenten*) for their active interventions surely encouraged these overseers to continuously persuade peasants to deliver high yields.[31]

The success of the Cultivation System, in terms of the production volumes of cash crops, became evident within just a few years (Figure 1.1). Until the early 1840s, the forced cultivation of coffee was especially lucrative for the colonial authorities: the yield of coffee beans roughly quadrupled in the first decade of the system, from around twenty to eighty thousand tons per year. From then onwards, sugar gradually became the most prominent export product. In its final stage, the Cultivation System annually delivered about 160,000 tons of refined cane sugar to the Dutch state, to be sold on the world market, where the demand for sugar was rising rapidly.[32]

Over the decades, the net profits for the metropole were enormous (see Table 1.1 on page 40), as hundreds of millions of guilders landed in the Dutch state coffers.

28 Edwin Horlings, "Miracle Cure for an Economy in Crisis? Colonial Exploitation as a Source of Growth in the Netherlands, 1815–1870," in *Colonial Empires Compared: Britain and the Netherlands, 1750–1850*, ed. Bob Moore and Henk van Nierop (Aldershot: Ashgate, 2003), 154.

29 Cees Fasseur, *Kultuurstelsel en koloniale baten: De Nederlandse exploitatie van Java 1840–1860*. (Leiden: Universitaire Pers Leiden, 1992), 90. Ulbe Bosma, "Dutch Imperial Anxieties about Free Labour, Penal Sanctions and the Right to Strike," in *Labour, Coercion, and Economic Growth in Eurasia, 17th–20th centuries*, ed. Alessandro Stanziani (Leiden: Brill, 2013), 72.

30 Elson, *Village Java*, 82.

31 Elson, *Village Java*, 42, 44.

32 For a classic study of the importance of sugar in production, consumption and unequal economic relations, see Sidney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Viking, 1985).

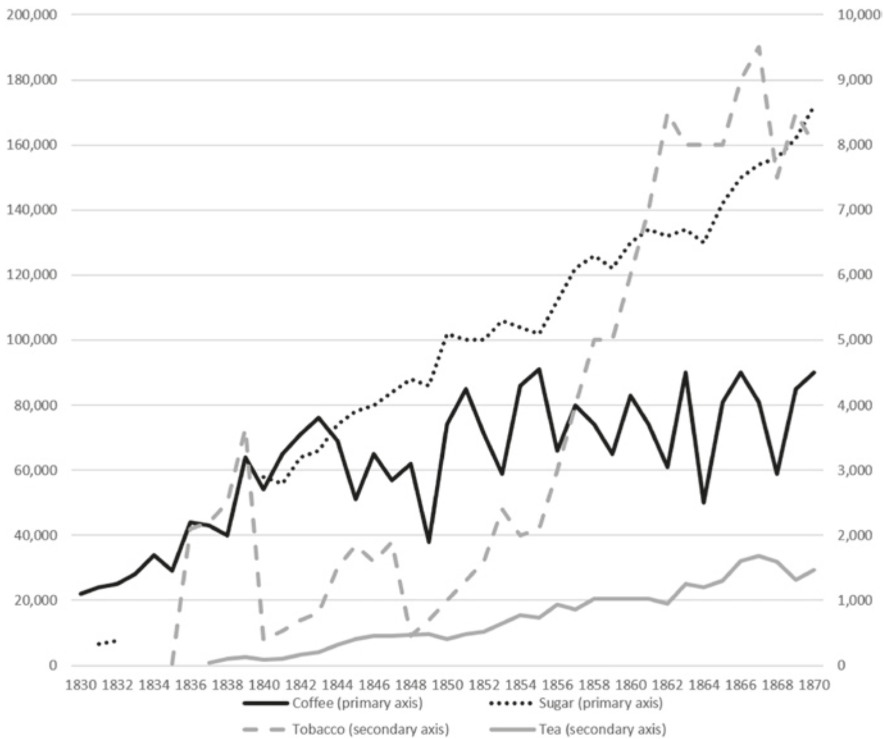

FIGURE 1.1 Volume (tons) of the most important crops under the cultivation system, 1830–1870
SOURCE: DATA FROM W. M. F. MANSVELT AND P. CREUTZBERG, *CHANGING ECONOMY OF INDONESIA: A SELECTION OF STATISTICAL SOURCE MATERIAL FROM THE EARLY 19TH CENTURY UP TO 1940*, VOL. 5, *INDONESIA'S EXPORT CROPS, 1816–1940* (THE HAGUE: MARTINUS NIJHOF, 1975), 52–53

Over the entire period, more than one billion Dutch guilders are estimated to have been transferred to the Dutch treasury as *batig slot* (colonial surplus). The colonial remittances formed a vital supplement to the state budget, which allowed for restructuring the large public debt from 1843 onwards, and for infrastructural improvements in the metropole.[33]

However, for Javanese peasants the system was much less profitable. Although some historians have argued that the Cultivation System may have enhanced the economic viability of Javanese villages, bringing, for instance,

33 Horlings, "Miracle Cure," 166.

TABLE 1.1 Net colonial remittances to the Dutch treasury, 1831–1877

Period	Net colonial surplus (million Dfl)	% of Dutch GNP	% of Dutch tax income
1831–1840	150.6	2.8	31.9
1841–1850	215.6	3.6	38.6
1851–1860	289.4	3.8	52.6
1861–1870	276.7	2.9	44.5
1871–1877	127.2	1.7	26.5

SOURCES: 1831–1870: ESTIMATES BY JAN LUITEN VAN ZANDEN AND ARTHUR VAN RIEL, *THE STRICTURES OF INHERITANCE: THE DUTCH ECONOMY IN THE NINETEENTH CENTURY* (PRINCETON: PRINCETON UNIVERSITY PRESS, 2004), 180, INCLUDING HIDDEN GOVERNMENT SUBSIDIES. 1870–1877: JANNY DE JONG, "VAN BATIG SLOT NAAR EERESCHULD: DE DISCUSSIE OVER DE FINANCIËLE VERHOUDING TUSSEN NEDERLAND EN INDIË EN DE HERVORMING VAN DE NEDERLANDSE KOLONIALE POLITIEK, 1860–1900" (MASTER'S THESIS, UNIVERSITY OF GRONINGEN, 1989) 133, 262; GNP: JAN-PIETER SMITS, EDWIN HORLINGS, AND JAN LUITEN VAN ZANDEN, *DUTCH GNP AND ITS COMPONENTS, 1800–1913* (GRONINGEN: GROWTH AND DEVELOPMENT CENTER, 2000), 173, 177

monetisation and infrastructural developments,[34] most scholars have, instead, pointed to the extractive and disruptive effects of the system for indigenous peasants.[35] Table 1.2 shows the number of households and amount of arable land involved in the Cultivation System after its installation in 1830, attesting to the quick spread and impact of the system. Of the more than 1.1 million households living in Java in the 1830s and 1840s, two-thirds up to almost three-quarters produced crops for the Dutch authorities, and, at its peak in the 1840s, over a quarter of all land suitable for agriculture was in use for forced cash crop cultivation.

Apart from the increasing demand for their labour for cash crop cultivation, both European and indigenous officials demanded extra labour services, for public works, such as road maintenance, but also – illegitimately – for private purposes, such as working their land.[36] On top of this, the land tax as well as

34 See, for instance, Elson, *Village Java*; Melissa Dell and Benjamin A. Olken, "The Development Effects of the Extractive Colonial Economy: The Dutch Cultivation System in Java" (NBER working paper no. 24009, 2017).

35 For instance, Boomgaard, *Children*; Booth, *Indonesian Economy*; De Zwart and Van Zanden, "Labor" .

36 Robert Van Niel, *Java under the Cultivation System* (Leiden: KITLV Press, 1992), 81; Booth, *Indonesian Economy*, 21.

TABLE 1.2 Households and arable land engaged in forced cultivation, averages for Java 1836–1870

Year	% of households	% of total arable land
1836	67.1	18.3
1840	73.3	26.2
1845	69.5	24.8
1850	63.0	21.4
1855	61.0	21.2
1860	56.2	19.0
1865	54.1	16.4
1870	39.3	13.0

SOURCES: DATA FROM ROBERT E. ELSON, *VILLAGE JAVA UNDER THE CULTIVATION SYSTEM, 1830–1870* (SYDNEY: ASIAN STUDIES ASSOCIATION OF AUSTRALIA [ETC.], 1994), 185; F. VAN BAARDEWIJK, *CHANGING ECONOMY OF INDONESIA: A SELECTION OF STATISTICAL SOURCE MATERIAL FROM THE EARLY 19TH CENTURY UP TO 1940*, VOL. 14, *THE CULTIVATION SYSTEM, JAVA 1834–1880* (AMSTERDAM: KIT, 1993), 190–93

indirect levies on consumption and marketed products increased notably in the same period.[37] The outrageous demands on peasant households for labour services as well as cash payments led many of them into debt. Particularly men, who were pressed to provide labour services for the Cultivation System as well as being asked to perform other *corvée* duties, were unable to reserve sufficient time for subsistence production. This increasingly endangered peasants' food security. In the 1840s, the increased labour burden, in combination with bad weather conditions, epidemic diseases, crop failures and rising rice prices, led to successive famines in several residencies.[38] The inability to deal with these difficulties in ensuring food security, which led many people to migrate or even die, was closely linked to imbalances caused by the Cultivation System. Ironically, it was those peasants who fled their land to escape extortion, famine or epidemics, who ended up losing their rights to that land. As their land was usually claimed by the village elites, this led to increasing socio-economic polarisation.[39]

37 Van Niel, *Cultivation System*, 143.
38 Elson, *Village Java,* 119.
39 Elson, *Village Java*, 124–125.

As is evident, the effects of the Cultivation System on the labour time and economic well-being of Javanese households were tremendous, and, especially in its initial phase, the system led to serious problems for peasant households' livelihoods. Some studies have suggested that Javanese peasant households adjusted quite adequately to the increasing demands of the system;[40] however, the dynamics that were in place are still unclear. In the next section, I will argue that, to a large extent, the ability of households to adapt to new circumstances related to the flexibility with which women in particular employed their time.

4 Changes in Women's Work under the Cultivation System

Women in Southeast Asia have traditionally played a large role in subsistence agriculture, performing gender-specific tasks. Women, sometimes assisted by children, were responsible for the labour-intensive transplanting of young rice seedlings to the wet rice fields (*sawahs*), whereas men were in charge of maturing the crop in the following three months, in tasks such as weeding, tilling and irrigation. Harvesting was a community task, in which women and children, again, played an important role.[41] It is likely that an intensification of women's labour in subsistence rice cultivation occurred due to the labour demands the Cultivation System imposed on households and, in particular, on their adult male members, to grow cash crops. Although in some regions the system led farmers to plant their *sawahs* with sugar or indigo, this competition with subsistence crops was often avoided by creating new fields for rice.[42] Moreover, in principle, coffee was grown on drylands. All of this implies that the cultivation of cash crops, mostly done by men, came on top of rice cultivation. Of course, this seriously extended the total workload of households.[43] After 1830, obligations such as cash crop cultivation and other forced labour services greatly aggravated the additional labour burden on male peasants.[44] Especially sugar and indigo took much more than the anticipated sixty-six days' labour

40 Boomgaard, *Children*; Elson, *Village Java*.
41 Elson, *Village Java*, 6.
42 Elson, *Village Java*, 238–39.
43 Boomgaard, *Children*, 82–83.
44 Although *corvée* labour was intended only for the male breadwinner (*adjek*), there are indications that forced labour services increased to such an extent that household "dependants" (*afhangelingen*), too, were required to provide these services: Arsip Nasional Republik Indonesia (ANRI), Jakarta, Indonesia, K50 – Archief Directeur der Cultures (Cultures), file 1623, Residential report Tegal 1856.

to produce, and were more likely to consume between 120 and 130 days of an adult man's time.[45] In some regions, such as Pekalongan (North Central Java), male peasants had only fifty labour days left to spend on food production for their own use, where about ninety were required.[46]

As a consequence, women's involvement in agriculture increased. Around 1900, on average about 75 per cent of all hours spent on rice cultivation was performed by women,[47] compared with an estimated 50 per cent *before* the Cultivation System.[48] This also implied a change in gendered divisions of work. For example, harvesting – which, prior to the Cultivation System, had been done by men and women together – became a more exclusively female task.[49] By reallocating much of men's work in subsistence agriculture to women, Javanese women played an important role in restoring peasant households' food security after the first difficult years of the Cultivation System. It is likely that in the heyday of the system the corresponding figure was even slightly higher.

Although statistical information about the work of women in Java is notoriously lacking for the period of the Cultivation System, there are indirect ways to estimate their increased involvement in subsistence agriculture. By combining available information on the historical development of arable land and rice in Java[50] with more qualitative descriptions of women's involvement in rice cultivation,[51] we can arrive at aggregate estimates of the number of days women spent on subsistence production during the Cultivation System (see

45 Boomgaard, *Children*, 82.

46 Elson, *Village Java*, 88.

47 L. Koch, *Bijdrage tot de ontleding van het Inlandsch landbouwbedrijf* (Batavia: Landbouwvoorlichtingsdienst, 1919), 4–7.

48 Elsbeth Locher-Scholten, "Door een gekleurde bril ... Koloniale bronnen over vrouwenarbeid op Java in de negentiende en twintigste eeuw," *Jaarboek voor Vrouwengeschiedenis* 7 (1986): 39; Barbara Watson Andaya, "Women and Economic Change: The Pepper Trade in Pre-Modern Southeast Asia," *Journal of the Economic and Social History of the Orient* 38, no. 2 (1995): 167.

49 Peter Boomgaard and Jan Luiten van Zanden, *Food Crops and Arable Lands, Java 1815–1942*: *Changing Economy of Indonesia; A Selection of Statistical Source Material from the Early 19th Century up to 1940*, vol. 10 (Amsterdam: KIT, 1990), 17.

50 Most of this material was collected in the context of the research project *Changing Economy in Indonesia* and its subsequent publications. This series of publications of statistical source material relating to the Dutch East Indies for the period 1795–1940 was launched by W. M. F. Mansvelt in 1975, and the final volume appeared in 1996. See also Van Nederveen Meerkerk, *Women, Work and Colonialism*, Chapter 1, Section 1.6.

51 For example, Peter Boomgaard, "Female Labour and Population Growth on Nineteenth Century Java," *Review of Indonesian and Malayan Affairs* 15, no. 2 (1981): 19; Elson, *Village Java*.

Table 1.3). The table lists the available statistics on rice yields and arable lands (second and third columns) collected and published by Peter Boomgaard and Jan Luiten van Zanden, and lists the number of full-time (ten-hour) labour days needed for the cultivation of these amounts of rice (fourth column). From more descriptive literature, we know that, before the Cultivation System, women were involved in around 50 per cent of rice cultivation,[52] and that this rose over the nineteenth century (fifth column).[53] We can thus calculate the number of days women would have been involved in the different benchmark years (sixth column), and, relating this to the estimated number of adult women in the population, derived from the population statistics, we get an impression of what this meant in terms of number of days per adult woman per year (seventh column). In reality, of course, women did not work the land ten hours per day in the indicated number of days, as they were involved in many other, non-agricultural and household, tasks. They would have spread their agricultural activities over most of the year.

From these estimates, it can be concluded that the average adult Javanese peasant woman spent an increasing amount of time on rice cultivation, suggesting that the Cultivation System indeed impacted on the division of labour in peasant households. On average, due to the forced cultivations, men spent about twenty labour days less on rice cultivation, and this was presumably compensated by women, which would explain most of the rise in the number of labour days per adult woman between 1815 and 1836 shown in Table 1.3. The reallocation of women's time was caused by the additional tasks, such as weeding, that became necessary as many men were drawn into forced cultivation, and, as already mentioned, harvesting was also increasingly done by women.[54] In the residency of Pasuruan, for instance, colonial observers noted that, around 1840, women did all of the tasks, from transplanting the rice and weeding to harvesting.[55] Reforms to the Cultivation System, which were implemented after a severe subsistence crisis in the 1840s, seem to have temporarily interrupted this process, allowing men to spend some more time on rice production; however, after the 1860s, the relative involvement of women in subsistence production increased again, with rising per capita rice yields. It is, therefore, safe to say that the increasing time invested in rice production by

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52 Locher-Scholten, "Door een gekleurde bril," 39.

53 Koch, *Bijdrage*, 4–7.

54 Boomgaard and Van Zanden, *Food Crops*, 17.

55 H. A. van der Poel, "Nota over de Rijstkultuur op Java," *Tijdschrift voor Nijverheid en Landbouw in Nederlandsch Indië* 11 (1865): 97–118.

TABLE 1.3 Estimated intensification of Javanese peasant women in rice cultivation, 1815–1880

Year	Rice yields (in 1,000 tons)	Ha of arable land	No. of labour days needed	% of women engaged in rice cultivation	Full-time labour days of women	No. of full-time days per adult woman	Index (1836 = 100)
1815	860.0	521,212	156,363,636	50	78,181,818	47	64
1836	1,202.6	884,265	252,015,441	70	176,410,809	72	100
1846	1,621.1	988,476	281,715,549	80	225,372,439	76	105
1860	2,051.2	1,235,663	352,163,855	80	281,731,084	74	102
1870	2,849.2	1,499,579	470,867,789	75	353,150,842	92	127
1880	3,816.2	1,684,857	529,044,945	70	370,331,461	90	124

SOURCES: RICE YIELDS AND ARABLE LAND: DATA FROM PETER BOOMGAARD AND JAN LUITEN VAN ZANDEN, *CHANGING ECONOMY OF INDONESIA: A SELECTION OF STATISTICAL SOURCE MATERIAL FROM THE EARLY 19TH CENTURY UP TO 1940*, VOL. 10, *FOOD CROPS AND ARABLE LANDS, JAVA 1815–1942* (AMSTERDAM: KIT, 1990), 41, 109, 112, 114, 116. REQUIRED LABOUR DAYS: PETER BOOMGAARD, *CHILDREN OF THE COLONIAL STATE: POPULATION GROWTH AND ECONOMIC DEVELOPMENT IN JAVA, 1795–1880* (AMSTERDAM: FREE UNIVERSITY PRESS, 1989), 221, 224, 227. POPULATION DATA: PETER BOOMGAARD AND A.J. GOOSZEN, *CHANGING ECONOMY OF INDONESIA: A SELECTION OF STATISTICAL SOURCE MATERIAL FROM THE EARLY 19TH CENTURY UP TO 1940,* VOL. 11, *POPULATION TRENDS 1795–1942* (AMSTERDAM: KIT, 1991)

women played a crucial role in safeguarding food security in the later decades of the Cultivation System.

The traditional gender-specific division of labour on Java meant that it was predominantly male peasants who cultivated crops destined for (local) markets, such as groundnuts, corn and cane sugar.[56] This division of labour remained in place when the Cultivation System was installed. Colonial officials even noted that women and children should not be involved in cash crop production under this system.[57] Nevertheless, in practice, women became increasingly involved in commercial agriculture for the Cultivation System. Many export crops simply turned out to be too labour-intensive to be exclusively cultivated by men. Women, and to a lesser extent children, were soon employed, both as unpaid members of the household economy and as wage workers. Wives regularly assisted their husbands in cultivation for export, for instance in the case of coffee. Furthermore, women were frequently engaged as wage workers on plantations. From the early days of the Cultivation System, tea cultivation required many extra labourers, especially for picking tea leaves, and, as it was hard to find male wage workers, women and children from the neighbourhood were often hired.[58] Finally, in sugar cultivation, which steadily increased during the Cultivation System, women were employed in all sorts of tasks, such as weeding and harvesting, with the exception of the very heavy labour of digging canals for irrigation.[59]

The existing information on women's work in cash crop production is scattered. Moreover, women's work varied strongly according to regional circumstances, such as crop type, soil suitability and the prevalent percentage of land/labour involved in forced cultivation. Nevertheless, we can make an educated guess about the minimum number of days Javanese peasant women spent, on average, working for the Cultivation System on an annual basis. A few assumptions have to be made, though, based on descriptions of women's tasks in particular forms of cash crop production and the proportion of households engaged in the Cultivation System (Table 1.2), as well as on the crop yields associated with the system.[60] Take, for instance, coffee cultivation. Coffee bean

56 Watson Andaya, "Women and Economic Change," 168.

57 Nationaal Archief (NA), The Hague, the Netherlands, Koloniën, 1850–1900, 2.10.02, file 5830, Geheime verbalen, no. 47, 12 February 1852.

58 ANRI, K3 – Batavia, file 2/1, General Report 1837/1838.

59 Peter Alexander, "Women, Labour and Fertility: Population Growth in Nineteenth Century Java," *Mankind: Official Journal of the Anthropological Societies of Australia* 14, no. 5 (1984): 367.

60 F. van Baardewijk, *Changing Economy of Indonesia: A Selection of Statistical Source Material from the Early 19th Century up to 1940*, vol. 14, *The Cultivation System, Java 1834–1880* (Amsterdam: KIT, 1993).

picking was highly labour-intensive and was often done by women. Depending on the region, coffee growing could require between 100 and 240 labour days per year.[61] Assuming that half of this labour was done by women, which is a minimum estimate, we multiplied the total number of labourers involved in forced coffee cultivation in a given year – as provided in the statistics by Van Baardewijk[62] – by 0.5 and thus arrived at a certain amount of women involved in this work per year. Furthermore, we know that women were involved in specific tasks in tea cultivation (leaf picking and sorting), tobacco cultivation (half of the irrigation and weeding, all of the sorting and bundling) and in cinnamon scraping (exclusively women). In sugar cultivation and processing, by contrast, they played a less important role – that is, compared to Javanese men.[63] Considering the changing mix of products under the Cultivation System in different years,[64] and assuming the minimum input of labour necessary to arrive at the yields registered,[65] a conservative estimate of the average number of full-time (ten-hour) days worked by women can be made for Java as a whole. The result of this exercise is shown in Table 1.4.

The involvement of the average Javanese peasant woman in commercial agriculture for the Cultivation System will have been around no more than one month per year. Initially, it was mostly the export of coffee and tea which involved an important share of female labour. Even though many more male than female labourers were involved in the cultivation and production of sugar, the sheer growth of the export volume of sugar from the 1840s (see Figure 1.1) made it important for women's work in cash crop cultivation too, as women were quite regularly hired for planting and weeding the sugar fields.[66] Over the 1850s, the number of days per capita seems to have dropped somewhat. This is consistent with the reduction in the total labour burden on households after the late 1840s, and also with the reported intensification of women's

61 Elson, *Village Java*, 89.

62 Van Baardewijk, *Cultivation System*, 190–93.

63 Elson, *Village Java*, 205.

64 For example, in 1836, 63 per cent of all forced labour used under the Cultivation System went towards coffee cultivation, and only 18 per cent was used for sugar cultivation. In 1870, these shares had risen to 73 per cent and 26 per cent. Still, the number of labour days for women declined overall because of their involvement in sugar cultivation, which became more important than tea or tobacco towards the end of the system, and because women were less prominent in the cultivation of sugar.

65 These are most probably underestimates, as Javanese rulers had an interest in reporting lower yields and labour input than the true figures. Van Baardewijk, *Cultivation System*, 24.

66 Roger Knight, "Gully Coolies, Weed-Women and *Snijvolk*: The Sugar Industry Workers of North Java in the Early Twentieth Century," *Modern Asian Studies* 28, no. 1 (1994): 58–59.

TABLE 1.4 Minimum estimates of labour days for adult women spent on cash crop cultivation, Java 1815–1870

Year	Total no. of women involved in cash crops (minimum estimate)	No. of full-time days per adult woman under the cultivation system
1815	0	0
1836	236,326	35
1846	293,770	36
1860	284,948	27
1870	323,162	31

Note: author' s own calculations, based on: minimum estimate labour input van baardewijk, *the cultivation system*, 190–93; population figures boomgaard and gooszen, *population trends*; information on women's involvement in cash crop production: robert e. elson, *village java*

involvement in rice cultivation. In the later days of the Cultivation System, the involvement of women in cash crops increased again, mainly owing to the rise in coffee cultivation on private coffee plantations owned by Europeans, which were permitted in Java after the second half of the 1860s. Strictly speaking, this form of women's work was not directly prompted by the Cultivation System, but it was a type of commercial agriculture that would not have been in place without colonialism.

Last but not least, the Cultivation System also impacted Javanese women's work in other economic sectors. Traditionally, women were very active in selling whatever small surpluses the household generated from the land, such as rice, vegetables and fruit, at local markets.[67] Two important side effects of the Cultivation System facilitated trade: first of all, the investments in infrastructure that were done to facilitate the transportation of export crops from the fields to the harbours and, second, the increasing monetisation due to the cash payments of *plantloon* to the peasants. As a consequence, more markets (*pasars*) arose, and these were more frequently visited.[68] The growing circulation of money led to an increase in the number of shops (*warung*), which were run by both men and women; in some regions the number of shops even

67 Watson Andaya, "Women and Economic Change," 172.
68 Boomgaard, *Children*, 113–14.

doubled within ten years.[69] Moreover, women took the opportunity presented by the increasing number of seasonal migrant workers travelling several miles from their villages to work on coffee or sugar plantations. They started selling food, such as rice dishes or fried peanuts or bean cakes, along the roads towards the plantations.[70] For many women, the preparation of food – which was traditionally a task carried out by women in the domestic sphere – thus became a way to earn some extra cash.

Apart from economic activities in (retail) trade, women also became increasingly active in cottage industry. As my previous research has shown, after a few decades of downturn, industrial activity recovered after the 1850s, for instance in aspects of textile production such as weaving and batiking (wax printing and dyeing) of cotton cloth, in which women played a crucial role.[71] Besides textiles, there were many other cottage industries, such as straw-mat-making and bamboo-working, that showed increased activity in the later years of the Cultivation System, be it out of opportunity – increasing welfare and commercialisation[72] – or out of the necessity to supplement household income.[73] The increased monetisation and the growing local demand for indigenous products, as well as the rising number of landless peasants, who sought alternative work opportunities in wage labour and cottage industries, stimulated local industrial activity.

5 Conclusion

Javanese women's work was vital in the context of economic change induced by colonial extraction under the Cultivation System in a number of ways. The system put immense pressure on peasant households, by increasingly calling upon labour for cultivating export crops. Although the system was mainly intended towards having men respond to the labour demands of the system, women's economic role increased in numerous ways. First of all, the reallocation of men's labour to cash crop production meant that women's already

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69 Elson, *Village Java*, 263.

70 NA, Koloniën 1850–1900, 2.10.02, file 559, Verbaal van 27-11-1856, no. 24.

71 Elise van Nederveen Meerkerk, "Challenging the De-Industrialization Thesis: Gender and Indigenous Textile Production in Java under Dutch Colonial Rule, c. 1830–1920," *Economic History Review* 70, no. 4 (2017): 1219–43.

72 As is posed by Elson, *Village Java*, 270–271.

73 As is argued by Boomgaard, *Children*, 134.

substantial activities in subsistence agriculture intensified further. Second, women became involved in the production of cash crops, most notably tea and coffee, even though the colonial government did not actively recruit women (or children) for this purpose. However, the labour intensity of these cultivations was such, that the demand for unpaid family labour as well as wage labour increased due to the Cultivation System. Third, women's activities in market and retail trade expanded due to the increasing monetisation of the economy. Finally, most notably, from the late 1840s, women were found to be increasingly performing non-agricultural activities in the countryside, such as textile production and straw plaiting, for their own use, but certainly also to be sold on local markets.

Figure 1.2 shows my estimates of what this implies for the increase of women's labour time in terms of average days per year. This figure suggests that the total time women spent on economic activities for subsistence and for the market over the entire course of the Cultivation System rose considerably. At first, this related mainly to an intensification in the forms of agriculture, with women replacing and assisting men deployed in forced cultivation. Subsequently, after the reforms of the late 1840s, there was more leeway to increase commercial activities. Whereas Javanese households were greatly affected by the Cultivation System because much extra labour was demanded from them, women formed an important factor in providing both labour and extra income – by intensifying as well as by reallocating their economic activities.

Of course, these are rough estimates, and highly aggregate figures: not *all* Javanese households were affected to the same degree. But as (depending on the time period) half to three-quarters of all households on Java were involved in the Cultivation System, we can safely conclude that the majority of women were highly impacted regarding their input and work pace. During the system's most stringent decades – the 1830s and 1840s – women had to increasingly step in to make sure the production of rice and other foodstuffs for the household's own consumption was safeguarded, thus trying to prevent the strained indigenous living standards from further deteriorating. They also put in hours of work in cash crop production, either to help their husbands or to earn some extra cash on neighbouring farms. At the same time, following the monetisation brought about by the Cultivation System, opportunities to earn some extra cash in retail trade or proto-industry emerged. All in all, to come back to the issue of colonial extraction that was raised in the introduction, it is clear that not only indigenous men but, perhaps even more so, indigenous women, carried the burden of Java's highly extractive Cultivation System.

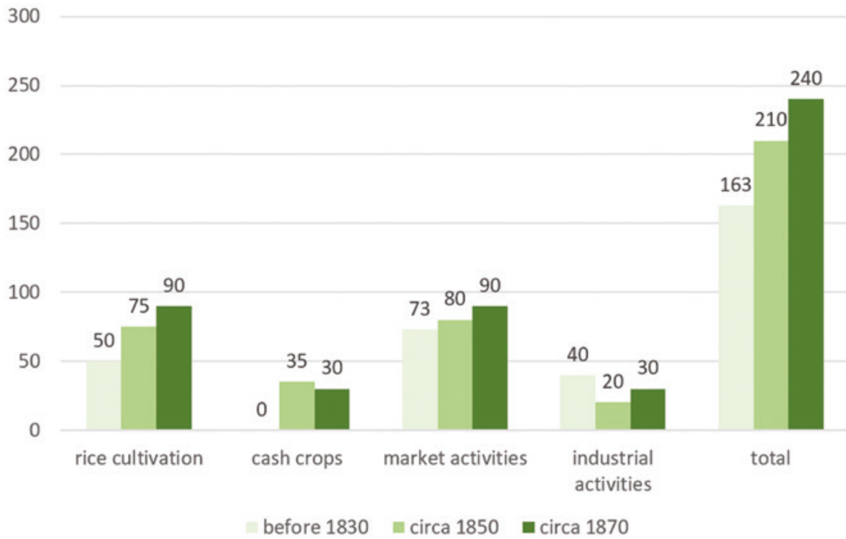

FIGURE 1.2 Estimates of number of full-time (ten-hour) days worked by Javanese women, 1830–1870

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