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The “Perfect Map” of Widow Hiamtse: A Micro-Spatial History of Sugar Plantations in Early Modern Southeast Asia, 1685–1710*

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ABSTRACT: Not all early modern sugar plantations were in the Atlantic World. Indeed, far away from it, in the rural space surrounding the Dutch headquarters in Asia (the Ommelanden of Batavia (Jakarta)), over a hundred of them were thriving by the end of the seventeenth century. Together, they constituted a unique plantation society that followed Dutch land law, was operated by Javanese rural labour, and was managed by Chinese sugar entrepreneurs. Through archival work on a certain “perfect map” that belonged to a Chinese widow, this article explores how that plantation society took shape on the ground.

INTRODUCTION

In the global history of sugar, early modern plantations are widely held to be a product of the expansion of the European capitalist system into the Atlantic World. An important paradigm suggests the following: the plantation method of sugar production emerged during the fifteenth and sixteenth centuries alongside the expansion of European sugar frontiers across the Atlantic

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Ocean. A “sugar revolution” in the Caribbean around the time of the mid-seventeenth century created a highly exploitative, slave-driven capitalist agro-industry, which then experienced transformations from the end of the eighteenth century amid the Haitian Revolution and prompted by the Abolitionist Movement. The system eventually spread to the rest of the world during the nineteenth century.¹

However, that linear narrative marginalizes the early modern sugar plantations that existed outside the Atlantic World. Researchers of Southeast Asia have become increasingly aware that nineteenth-century sugar plantations in Indonesia and the Philippines were not only influenced by the “Atlantic” model, but also deeply enmeshed in local agricultural traditions.² Moreover, local traditions were not isolated and unchanging but interacted with an often-ignored expansion of Chinese sugar production during the seventeenth and eighteenth centuries. Almost contemporaneously with the rise of the slave-driven sugar economy in the Caribbean, the Chinese took with them overseas their own package of sugar-making technologies, which had originally been developed in South China in the early seventeenth century. Those techniques then found their way to many locations in Southeast Asia, such as Siam (Thailand), Cochinchina (central and southern Vietnam), the Philippines, the north coast of Java, and Bengkulu (South Sumatra).³ That expansion engendered various sugar plantations as they adapted to local circumstances.

It is regrettable that the history of early modern Southeast Asian sugar plantations and their use of Chinese technology has been insufficiently studied. In

1. Philip D. Curtin, *The Rise and Fall of the Plantation Complex* (Cambridge, [1990], 1998); Richard S. Dunn, *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624–1713* (Chapel Hill, NC, 1972); Stuart B. Schwartz (ed.), *Tropical Babels: Sugar and the Making of the Atlantic World, 1450–1680* (Chapel Hill, NC, 2004); Kris Manjapra, “Plantation Dispossessions: The Global Travel of Agricultural Racial Capitalism”, in Sven Beckert and Christine Desan (eds), *American Capitalism: New Histories* (New York, 2018), pp. 361–387.

2. Ulbe Bosma, “Local Peasants and Global Commodities: Sugar Frontiers in India, Indonesia and the Philippines”, *Austrian Journal of Historical Studies*, 30:3 (2019), pp. 42–62; *idem*, *The Sugar Plantation in India and Indonesia: Industrial Production, 1770–2010* (Cambridge, 2013); Ulbe Bosma, Juan Giusti-Cordero, and G.R. Knight, *Sugarlandia Revisited: Sugar and Colonialism in Asia and the Americas, 1800 to 1940* (New York, 2007).

3. Christian Daniels, *Science and Civilisation in China, Volume 6, Part III, Agro-Industries: Sugarcane Technology* (Cambridge, 1996), pp. 419–446. Daniels also includes Ambon by referring to Rumphius’s *Het Amboinsch kruid-boek*, but I cannot find other evidence to support this. I suspect Rumphius might have mixed up his observation in Java with Ambon. Georgius Everhardus Rumphius, *Het Amboinsch kruid-boek*, 6 vols (Amsterdam, 1741–1750), vol. 5, pp. 186–191. In Java, besides Batavia, Chinese entrepreneurs opened up sugar frontiers in Banten, Cirebon, Jepara, and Kudus. Jannes Hendrik Talens, *Een feodale samenleving in koloniaal vaarwater. Staatsvorming, koloniale expansie en economische onderontwikkeling in Banten, West-Java (1600–1750)* (Hilversum, 1999), pp. 76–83; Mason C. Hoadley, “Javanese, Peranakan, and Chinese Elites in Cirebon: Changing Ethnic Boundaries”, *The Journal of Asian Studies*, 47:3 (1988), pp. 503–517, 509; Luc Nagtegaal, *Riding the Dutch Tiger: The Dutch East Indies Company and the Northeast Coast of Java, 1680–1743* (Leiden, 1996), pp. 138–140.

most cases, our knowledge is limited by a shortage of local archives, which leaves us unable to go beyond general questions such as their locations, sizes, and when precisely they were in operation. In that regard, the sugar plantations in rural Batavia (Jakarta) are an exceptional case, for they are well documented in rural archives generated by the Dutch United East India Company (the VOC) in Batavia. All the same, a deep study of these archives is wanting, with current scholarship in the field limited to a few general works, some of which are only tangentially related. For instance, the mid-seventeenth-century origin of Batavian sugar is discussed as the background to Chinese economic ascendancy;⁴ the mid-eighteenth-century crisis in Batavian sugar production is debated as an origin of the Chinese Massacre in 1740;⁵ the late eighteenth-century transition of Batavian sugar production is presented and studied either as an expansion of a cross-border economy between Banten and Batavia, or as a precursor to the modernization of Javan sugar production in the early nineteenth century.⁶ Further, Hendrik E. Niemeijer's definitive monograph on seventeenth-century Batavia and Bondan Kanumoyoso's dissertation on early modern rural Batavia each shed important light on the development of Batavia's sugar economy from the mid-seventeenth until the early eighteenth centuries. However, because sugar is dealt with only rather generally in their book-length works, neither engages critically with the subject.⁷

This article aims to approach Batavia's sugar plantations from a micro-spatial perspective through archival work on a "perfect map" (*perfecte caarte*)⁸

4. Leonard Blussé, *Strange Company: Chinese Settlers, Mestizo Women and the Dutch in VOC Batavia* (Dordrecht, 1988), pp. 84–87.

5. W.R. van Hoëvell, "Batavia in 1740", *Tijdschrift voor Neerland's Indie*, 3:1 (1840), pp. 447–556; Blussé, *Strange Company*, pp. 90–93; Remco Raben, "Uit de suiker in het geweer. De Chinese oorlog in Batavia in 1740", in J. Thomas Lindblad and Alicia Schrikker (eds), *Het verre gezicht. Politieke en culturele relaties tussen Nederland en Azië, Afrika en Amerika. Opstellen aangeboden aan prof. dr. Leonard Blussé* (Franeker, 2011), pp. 106–123.

6. Ota Atsushi, *Changes of Regime and Social Dynamics in West Java: Society, State and the Outer World of Banten, 1750–1830* (Leiden, 2006), pp. 132–140; *idem*, "Toward a Transborder, Market-Oriented Society: Changing Hinterlands of Banten, c.1760–1800", in Tsukasa Mizushima et al. (eds), *Hinterlands and Commodities: Place, Space, Time and the Political Economic Development of Asia over the Long Eighteenth Century* (Leiden, 2015), pp. 166–196, 188–190; Margaret Leidelmeijer, *Van suikermolen tot grootbedrijf. Technische vernieuwing in de Java-suikerindustrie in de negentiende eeuw* (Amsterdam, 1997), pp. 69–83; G.R. Knight, "From Plantation to Padi-Field: The Origins of the Nineteenth Century Transformation of Java's Sugar Industry", *Modern Asian Studies*, 14:2 (1980), pp. 177–204.

7. Hendrik E. Niemeijer, *Batavia. Een koloniale samenleving in de 17de eeuw* (Amsterdam, 2005), pp. 112–124; Bondan Kanumoyoso, "Beyond the City Wall: Society and Economic Development in the Ommelanden of Batavia, 1684–1740" (Ph.D., Leiden University, 2011), pp. 136–163.

8. In comparison with modern English, the meaning of "perfect" in seventeenth-century Dutch was closer to its Latin root, *perfectus*, namely, comprehensive or complete. A perfect map in this article therefore refers to a comprehensively measured map, instead of an idealized normative map as it might in modern culture. For the formation of the modern ideal of cartography, see Matthew

that belonged to a widowed Chinese sugar entrepreneur named Tan Hiamtse (?–1722).⁹ The map was granted to Hiamtse on 19 May 1685 by the Dutch rural council of Batavia (College of Heemraden) and refers to an extensive plot of land encompassing a number of sugar plantations.¹⁰ That decision was made at a critical stage while a major expansion of sugar production in Batavia was taking place, so that control of plantation space was therefore both highly desirable and contested. It should be no surprise, then, that a series of debates and surveys about the nature of landownership in rural Batavia soon began to revolve around Hiamtse's "perfect map". Those debates reveal a colonial rural society that featured encounters between people and ideas from all across the early modern world. There were Chinese entrepreneurs who introduced sugar-making techniques from South China, Javanese¹¹ labourers whose presence had originated from the expansion of the Mataram Empire in western Java, and Dutch colonial elites who imposed on the plantations of the tropics the landowning culture from the polders of the Low Countries.

Focusing on their interactions on the ground, this article aims to elaborate a basic question: How did a sugar plantation society take shape in a rural colonial space in early modern Southeast Asia? This article will first contextualize the significance of Hiamtse's perfect map in the sugar economy and rural administration of late seventeenth-century Batavia in order to understand how it gave rise to a distinctive plantation space. We shall then proceed to look at Hiamtse's Javanese neighbours, showing how Hiamtse's perfect map encroached on the land rights of a disenfranchised Javanese rural society around Batavia. By the end, we will have examined how a plantation labour regime grew from that disenfranchised rural society.

THE WIDOW HIAMTSE

Who was Hiamtse? And how, as a widow, did she become a sugar entrepreneur? In the document that mentions her "perfect map" she is recorded as "Njai Tan Hiamtse, widow and estate executor (*boedelhouster*) of the late

H. Edney, *Cartography: The Ideal and Its History* (Chicago, IL, 2019). I am grateful to Simon Kemper and Aad Blok for pointing this out.

9. For the micro-spatial approach, see Christian G. De Vito and Anne Gerritsen (eds), *Micro-Spatial Histories of Global Labour* (Cham, 2018); Christian G. De Vito, "History Without Scale: The Micro-Spatial Perspective", *Past and Present*, Supplement 14 (2019), pp. 348–372.

10. Arsip Nasional Republik Indonesia (ANRI), College van Heemraden 5, Resoluties, 19 May 1685, fo. 84.

11. Dutch records from late seventeenth-century Batavia made no clear distinction between the Javanese and the Sundanese. People from the island of Java were all referred to as "Javanen" (Javanese). Therefore, unless otherwise indicated, the Javanese in this article should also be taken to include a number of Sundanese. I am grateful to Simon Kemper for raising this point.

Chinese Lieutenant Li Tsoeko".¹² Whereas her title, "Njai" (*nyai, nga*), indicates that she was probably a Peranakan or even an indigenous woman, her Chinese surname, Tan (likely Chen 陳 in Mandarin), was different from her husband's surname Li (李), indicating that she already had a Chinese identity before marrying Tsoeko, either because her father was a Tan-surnamed Chinese, or because she had previously been adopted by a Tan-surnamed Chinese family.¹³

One advantage for Hiamtse as a woman entrepreneur with a Chinese identity in early modern Batavia was that her status enabled her simultaneously to manage business within a Southeast Asian milieu, where there was "a common pattern of relatively high female autonomy and economic importance",¹⁴ and within an elite Chinese circle in Batavia, which controlled enormous wealth.¹⁵ An important material testimony to her social and family background was a graveyard, previously standing in the northern part of the centre of Jakarta, containing key members of two allied elite Chinese families.¹⁶ In the 1920s, the Dutch Sinologist, B. Hoetink, drew a plan of it as follows (Figure 1).

The two graves placed centrally, in the middle of the vertical row, held the remains of So Bing Kong (Su Minggang 蘇鳴崗, c.1580–1644, also known as Bencon) (Grave I), the first Chinese Captain of Batavia, and his wife Njai Inqua (Li Qinci 李勤慈, ?–1666/1667) (Grave II). The two graves on each side of them belonged to Li Tsoeko (Li Zuge 李祖哥 or Li Jiongcai 李炯萃, ?–1680/1681) (Grave III) and Tan Hiamtse (Tan Tsing Ie 陳?, ?–1722) (Grave IV). The two horizontally arranged graves belonged to their coupled

12. ANRI, College van Heemraden 5, Resoluties, 19 May 1685, fo. 82. All direct quotations from Dutch have been translated by me.

13. Very few Chinese women travelled to Southeast Asia in the early modern period. Chinese marriage to and adoption of indigenous women was therefore a common practice. Leonard Blussé and Nie Dening, *The Chinese Annals of Batavia, The Kai Ba Lidai Shiji and Other Stories (1610–1795)* (Leiden, 2018), pp. 18–20; Li Minghuan, "From 'Sons of the Yellow Emperor' to 'Children of Indonesian Soil': Studying Peranakan Chinese Based on the Batavia Kong Koan Archives", *Journal of Southeast Asian Studies*, 34:2 (2003), pp. 215–230, 227; Claudine Salmon, "Women's Social Status as Reflected in Chinese Epigraphs from Insulinde (16th–20th Centuries)", *Archipel*, 72 (2006), pp. 157–194.

14. Anthony Reid, *Southeast Asia in the Age of Commerce, 1450–1680* (New Haven, CT, 1988), p. 146. On women in seventeenth-century Batavia, see Hendrik E. Niemeijer, "Slavery, Ethnicity and the Economic Independence of Women in Seventeenth-Century Batavia", in Barbara Watson Andaya (ed.), *Other Pasts: Women, Gender and History in Early Modern Southeast Asia* (Honolulu, 2000), pp. 174–194.

15. Hiamtse was, of course, not the only Chinese female entrepreneur in the early modern Dutch Empire. See also Adam Clulow and Siyen Fei, "The Slaves of Widow Tsieko: Chinese Slave Owners and the Enslaved in the Dutch Empire", *Harvard Journal of Asiatic Studies*, forthcoming; James C. Armstrong, "The Estate of a Chinese Woman in the Mid-Eighteenth Century at the Cape of Good Hope", *Journal of Chinese Overseas*, 4:1 (2008), pp. 111–126; B. Hoetink, "De Weduwe van Kapitein Siqua", *Chung Hwa Hui Tsa Chih*, 2:1–2 (1918), pp. 16–25.

16. Apart from the restored tomb of So Bing Kong (Makam Souw Beng Kong), the graveyard no longer exists.

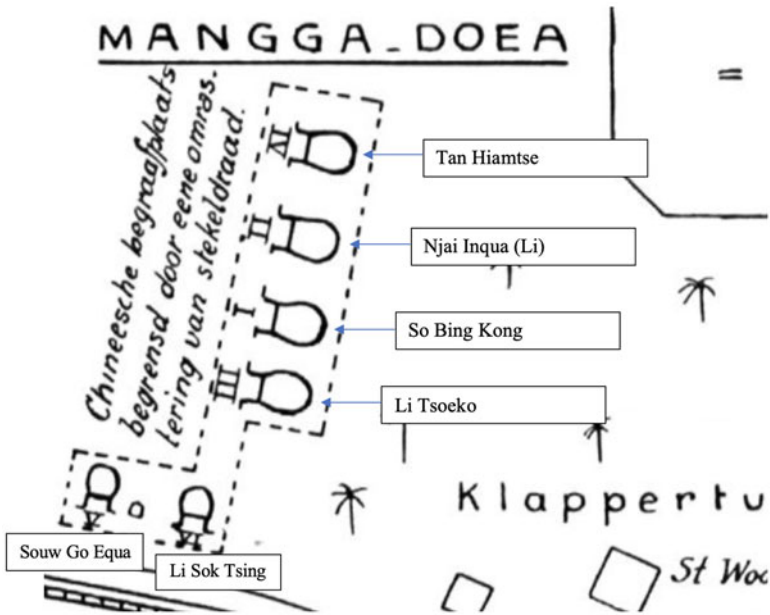


Figure 1. The family graveyard of Tan Hiamtse.

Adapted from Hoetink, “So Bing Kong: Het eerste hoofd der Chineezten te Batavia (Eene nalezing)”, illustration between pages 40 and 41.

offspring, namely Souw Go Equa (Su Zhongzheng 蘇中正, 1650?–1708) (Grave V), who was So Bing Kong’s grandson, and Li Sok Tsing (Li Shuzhen 李漱貞, ?–1684) (Grave VI), who was Tsoeko and Hiamtse’s daughter.¹⁷

17. For the Romanization of Chinese names, this article follows the Dutch records, because the form given was closer to their original pronunciation in the Hokkien dialect. Mandarin Pinyin is presented only when the Chinese characters of these names are known. The Chinese living in early modern Batavia usually had several names. I use the names they used in everyday life and that were recorded in Dutch archives, instead of their literary names, which, recorded in their genealogies, are often unknown to us except when Chinese records, such as tombstones, are available. For a biographical study of these two families, see B. Hoetink, “So Bing Kong: Het eerste hoofd der Chineezten te Batavia (Eene nalezing)”, *Bijdragen tot de Taal-, Land- en Volkenkunde (BKI)*, 79:1 (1923), pp. 1–44; *idem*, “So Bing Kong. Het eerste hoofd der Chineezten te Batavia”, *BKI*, 73:1 (1917), pp. 344–414. Iwao Seiichi visited this graveyard in the 1930s and copied its Chinese epigraphs. Unfortunately, by then, the tombstone of Hiamtse had already been lost. We are therefore unable to identify Hiamtse’s name in Chinese characters. Iwao Seiichi and Nakamura Takashi, “Bencon ichizoku no bohi” 本コン一族の墓碑 [Tombstones of Captain Bencon’s Family], *Nampo-Bunka, Tenri Bulletin of South Asian Studies*, 16 (1989), pp. 129–136. Furthermore, in the early 1920s, Hoetink noted that Hiamtse’s

The founder of this familial union was Njai Inqua, who was also a wealthy female proprietor. Njai Inqua was married twice and widowed twice. After her first husband So Bing Kong died, in 1644, she married another wealthy Chinese merchant in Batavia, Conjock (?–c.1661).¹⁸ Conjock died, too, in 1661,¹⁹ but the now twice-widowed Njai Inqua lived for another few years. Shortly before her own death,²⁰ in 1666, Njai Inqua decided to entrust her property to Tsoeko and Hiamtse's family. She nominated the still teenaged Souw Go Equa – grandson of So Bing Kong – as her universal heir and pre-arranged a marriage between him and Li Sok Tsing, who was Tsoeko and Hiamtse's daughter. To secure their union, Njai Inqua appointed Hiamtse's husband Tsoeko executor of her estate (Figure 2).²¹ As a result of this arrangement, much of the wealth from Njai Inqua and her two marriages was subject to Tsoeko's administration.

Njai Inqua's arrangement ultimately "benefited" Hiamtse in a rather tragic way, because of the early death of Tsoeko in 1680/1681. Tsoeko's death was a testimony to the chaotic and violent origin of Batavia's sugar frontier, which came about amid a mid-seventeenth-century global sugar crisis. From the 1630s–1650s, the Dutch West India Company (the WIC) invaded Brazil, which was then the principal sugar production area in the Atlantic World. The WIC's action caused a great disturbance to the global sugar trade, and, in response to the crisis, new sugar frontiers emerged in the Caribbean, on the north-eastern coast of South America (the "Wild Coast"), and in Asia.²² In the mid-1630s, the English East India Company (the EIC) approached a number of Chinese entrepreneurs and contracted them to produce sugar in Banten, to the west of Batavia.²³ The VOC soon followed suit, supporting

name on the tombstone was "Tsing Ie", but he offered no Chinese characters. Hoetink, "So Bing Kong. Het eerste hoofd der Chineezen te Batavia (Eene nalezing)", p. 41.

18. Conjock was an important landowner. He rented out his land to other Chinese to set up sugar plantations. Niemeijer, *Batavia*, pp. 108–114.

19. Hoetink, "So Bing Kong. Het eerste hoofd der Chineezen te Batavia (Eene nalezing)", p. 39.

20. Njai Inqua's will was made on 10 December 1666 and she was buried on 16 January 1667. *Ibid.*, pp. 33, 39.

21. Hoetink, "So Bing Kong. Het eerste hoofd der Chineezen te Batavia", pp. 409–411.

22. J.J. Reesse, *De suikerhandel van Amsterdam van het begin der 17de eeuw tot 1813* (Haarlem, 1908), pp. 187–226; Dunn, *Sugar and Slaves*, pp. 46–83; Curtin, *The Rise and Fall of the Plantation Complex*, pp. 81–85; Stuart B. Schwartz, "Looking for a New Brazil: Crisis and Rebirth in the Atlantic World after the Fall of Pernambuco", in Michiel van Groesen (ed.), *The Legacy of Dutch Brazil* (Cambridge, 2014), pp. 41–58; Yda Schreuder, *Amsterdam's Sephardic Merchants and the Atlantic Sugar Trade in the Seventeenth Century* (Cham, 2019); Lin Wei-sheng 林偉盛, "Heju shiqi de Taiwan shatang maoyi" 荷據時期的台灣砂糖貿易 [The Sugar Trade of Taiwan during the Dutch Period], in *Cao Yonghe Xiansheng Bashi Shouqing Lunwen Ji* 曹永和先生八十壽慶論文集 [Papers Compiled in Honour of the Eightieth Birthday of Mr Cao Yonghe] (Taipei, 2001), pp. 7–29; Guanmian Xu, "From the Atlantic to the Manchu: Taiwan Sugar and the Early Modern World, 1630s–1720s", *Journal of World History*, forthcoming.

23. Claude Guillot, Lukman Nurhakim, and Claudine Lombard-Salmon, "Les sucriers chinois de Kelapadua, Banten, XVIIe siècle. Textes et vestiges", *Archipel*, 39 (1990), pp. 139–158; Talens, *Een feodale samenleving in koloniaal vaarwater*, pp. 76–77.

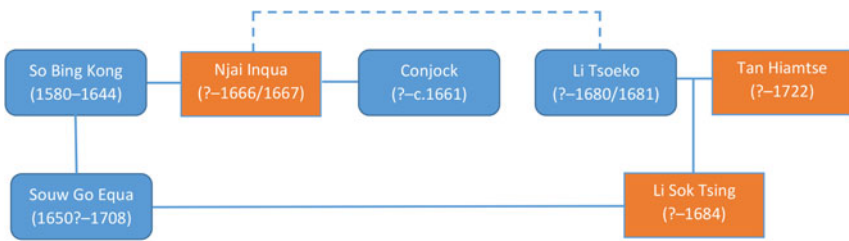


Figure 2. A familial alliance.

the Chinese in Batavia to turn part of the area around the city (the so-called Ommelanden) into plantation space from the end of the 1630s.²⁴

In the early stages, this nascent plantation space was fraught with violence and disorder, as it was situated on a battlefield between the Banten sultanate and the VOC.²⁵ In the late 1650s and the early 1680s, Bantenese armies pillaged Batavia's sugar plantations. The most disastrous among these conflicts was the invasion of 1656–1659, during which all the sugar plantations that lay outside the defensive line of Batavia were ruined. In 1662, the Company even developed a plan to replace the Chinese method of sugar production, which used buffalo-driven mills and tended to expand into the hinterland, with a water-driven sugar mill that was to be situated within the defence line and operated by a European entrepreneur.²⁶ That plan failed to materialize, and, as we will see from Hiamtse's case, Chinese sugar entrepreneurs expanded once again into the dangerous frontier region in the 1660s and 1670s.

The Company, moreover, contributed to new confusion by issuing varying types of documents to those who were willing to populate this frontier, either to turn it into cultivated fields, or to build a buffer zone between Batavia and its enemies. A notice of 9 December 1678 shows land documents issued by the Company for rural Batavia included title letters (*erfbrieven*), land letters (*grontbrieven*), donation letters (*donatie brieven*), purchase letters (*coopbrieven*), maps (*kaarten*), or “whatever could be identified” (*hoedanigh die genaemt mochten zijn*). The Company kept no centralized cadastral registry for such documents and the practice led to a complex variety of landholding practices.²⁷

24. Reesse, *De suikerhandel van Amsterdam van het begin der 17de eeuw tot 1813*, pp. 160–169; Niemeijer, *Batavia*, pp. 107–124; Blussé, *Strange Company*, pp. 64–65; Kanumoyoso, “Beyond the City Wall”, pp. 136–163; Daniels, *Sugarcane Technology*, pp. 438–441.

25. F. de Haan, *Priangan. De Preanger-regentschappen onder het Nederlandsch bestuur tot 1811*, 4 vols (Batavia, 1910), vol. 1, pp. 6–7, 41–58; vol. 2, pp. 13–28; Simon Kemper, “The Spark of Fighting Cocks: Mustering and Mapping Warriors on Java During the Fattah Wars (1669–1684)” (Ph.D., Leiden University, forthcoming).

26. Nationaal Archief (NA), VOC 678, Kopie-resoluties, 16 May 1662, fos 110–115; N.P. van den Berg, *Uit de dagen der Compagnie. Geschiedkundige schetsen* (Haarlem, 1904), pp. 313–319.

27. ANRI, General Resolutions of Batavia Castle 891, 9 December 1678, fos 483–485. Before 1678, individual surveyors, such as Frederich Heinrich Müller (c.1632–1678), had been registering

Despite the violence and chaos, Hiamtse's husband Tsoeko belonged to a small group of adventurous Chinese, who, against the odds, attempted to open up a sugar frontier. Tsoeko himself established his sugar enterprise on some ruined plantations previously belonging to Bingam (Pan Mingyan, 潘明岩, ?–1663). As the Chinese Captain of Batavia from 1645–1663,²⁸ Bingam was among the first generation of Chinese sugar entrepreneurs in Batavia, and, by 1643, he had “planted many fields with sugar canes”.²⁹ In 1650, Bingam acquired the land of Tanah Abang from the Company to use for setting up sugar mills.³⁰ To connect the new property with Batavia City, he had already obtained permission from the Company in 1648 to dig a canal, which would be named after him, as the “Bingam Canal”.³¹ However, Bingam's investments were to collapse into disaster when the war between Banten and the VOC broke out in 1656, for his plantations lay outside the defence line of the VOC and were destroyed by the Bantenese force.³²

After Bingam's death (1663), in 1664, his son Towasia transferred Bingam's land to the then Chinese *boedelmeester* (Estate Manager), Tsoeko, and another Chinese for just 440 rijksdaalders.³³ In 1666, Tsoeko asked the Company to prohibit unauthorized transport along a canal (most likely the Bingam Canal), in order to reserve it for the purpose of shipping firewood to his sugar mills on the land previously owned by Bingam.³⁴ In 1668, Tsoeko obtained his partner's share and became the sole owner of this land.³⁵ In 1679, Tsoeko further applied to acquire extra land near Fort Angke (Ankee) for his sugar plantations, which the Company acknowledged were “among the most prominent of this city”. The Company approved Tsoeko's request but was reluctant to issue a new title letter.³⁶ This request indicates that, by the end of the 1670s, Tsoeko had greatly expanded his operations westwards from the late Bingam's base in Tanah Abang to the Angke River (Figure 3).

Tsoeko's expansion exposed him to grave danger. The area to the west stretching from the Grogol River to the Angke River was claimed by other landholders and directly faced Tangerang, which was then contested by Banten. It was in an armed skirmish with an invading Bantenese force towards

estates and villages in the Ommelanden, but their registers were not institutionalized and were often kept privately. For Müller's survey, see Kemper, “The Spark of Fighting Cocks”.

28. Blussé and Nie, *The Chinese Annals of Batavia*, pp. 65, 249.

29. Van den Berg, *Uit de dagen der Compagnie*, p. 312.

30. Niemeijer, *Batavia*, p. 114; ANRI, *College van Heemraden 5, Resoluties, 1682–1687*, 2 June 1685, fos 91–92.

31. De Haan, *Priangan*, vol. 2, p. 412.

32. NA, VOC 678, *Kopie-resoluties, 16 May 1662*, fos 110–115.

33. De Haan, *Priangan*, vol. 2, pp. 412–413.

34. ANRI, *General Resolutions of Batavia Castle 878*, 2 April 1666, fos 89–90.

35. De Haan, *Priangan*, vol. 2, p. 413.

36. ANRI, *General Resolutions of Batavia Castle 891*, 8 August 1679, fos 392–393; B. Hoetink, “Chineesche officieren te Batavia onder de Compagnie”, *BKI*, 78:1 (1922), pp. 1–136, 97.

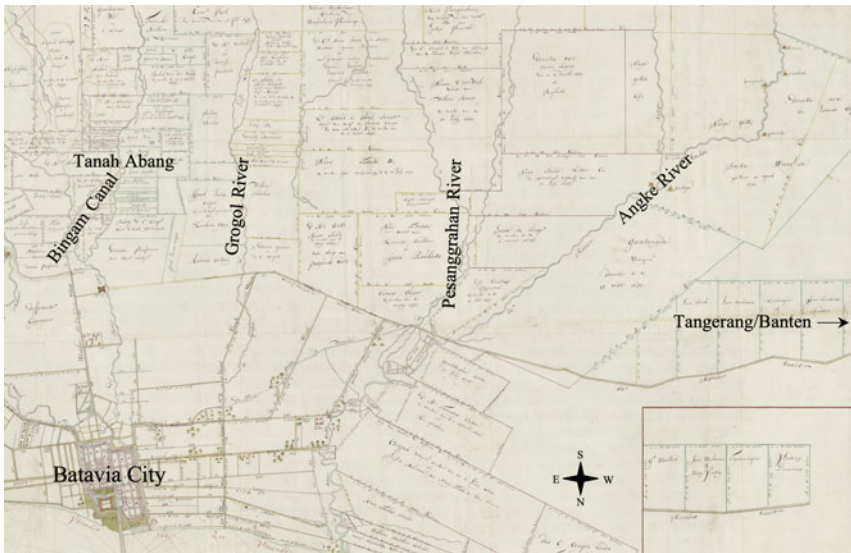


Figure 3. From Tanah Abang to Angke River.

Adapted from a cadastral map of c.1706, NA, *Verzameling Buitenlandse Kaarten Leupe, VEL. 1185*.

the end of 1680 that Tsoeko lost his life.³⁷ Tsoeko's death left the entire sugar enterprise in the hands of his wife, Hiamtse, albeit now only the eastern tract between Tanah Abang and the Grogol River was still under their control. The vast area of land between the Grogol River and the Angke River was by then being contested by others.³⁸

PERFECT MAPS

Facing these rural administration problems, the High Government of the VOC in Batavia planned to solve them by introducing a typical Dutch rural institution. On 19 September 1664, the decision was taken to install a College of Heemraden, "in accordance with the mode customary in our

37. The exact date of Tsoeko's death is unknown. According to the Chinese epigraph on his tombstone, he was buried in the twelfth month of *genshen* year (庚申歲季冬), namely, 20 January–17 February 1681. Iwao and Naka, "Bencon ichizoku no bohi", p. 132. According to Dutch records, he drew up his will on 10 December 1680. The Heemraden archive implies Tsoeko was killed by some hostile Javanese from Tangerang and Banten (*Tangaranse en Bantamse Javanen*). ANRI, College van Heemraden 5, Resoluties, 19 May 1685, fo. 83. As Banten was then divided, it is uncertain which faction's force attacked Tsoeko. On the complicated situation in Banten and Tangerang in the early 1680s, see Kemper, "The Spark of Fighting Cocks".

38. ANRI, College van Heemraden 5, Resoluties, 19 May 1685, fos 82–84.

fatherland”.³⁹ With its origins in the polder areas of the Low Countries, *heemraden* was originally the term for members of a water board (*waterschap*), but then, around the thirteenth century, certain regional water boards (*hoogheemraadschap*) began to assume administrative functions in the Dutch polder society, whereupon the *heemraden* began to evolve into a sort of rural government.⁴⁰ By the seventeenth century, the idea of rural administration through *heemraden* had become so deeply ingrained that a transfer to a tropical colonial area with hardly any polder seemed entirely reasonable to the Dutch colonial elites sitting in the Castle of Batavia.

This early College of Heemraden, however, left no archive and, in the 1670s, its function was absorbed by the College of Schepenen. A new College of Heemraden was established by the High Government on 13 October 1679, originally with the aim of raising funds to dig a “ring-ditch” (*ringsloot*) protecting the most valuable part of rural Batavia,⁴¹ and then with further powers added on 23 July 1680 to take charge of the rural administration of Batavia.⁴² On 21 November 1680, the Company made a division of responsibilities between two land surveyors, one who would specialize in measuring the land within the city of Batavia, and the other outside it.⁴³ In 1681, there had already been a land surveyor serving the College of Heemraden.⁴⁴ On 26 September 1684, the College was further reorganized and began to assume a proactive role in the rural administration.⁴⁵ On 23 October 1685, the Company specified that all rural land transactions had to be registered by the College.⁴⁶

This “typical Dutch” rural institution offered Hiamtse a legal path to securing and advancing her late husband’s sugar enterprise. To expedite it, she learned to use the maps drawn up by the Dutch land surveyors within the Dutch colonial land system. Even before its approval by the College of Heemraden on 19 May 1685, Hiamtse had already asked an important Dutch surveyor, Jacob Verberkmoes (Verbergmoes), to survey her land and

39. ANRI, General Resolutions of Batavia Castle 876, 19 September 1664, fo. 389.

40. Mijla van Tielhof and Petra J.E.M. van Dam, *Waterstaat in stedenland. Het hoogheemraadschap van Rijnland voor 1857* (Utrecht, 2006), pp. 45–119; G.P. van de Ven (ed.), *Man-made Lowlands: History of Water Management and Land Reclamation in the Netherlands* (Utrecht, 2004), pp. 78–82.

41. ANRI, General Resolutions of Batavia Castle 891, 13 October 1679, fos 547–549.

42. J.A. van der Chijs (ed.), *Nederlandsch-Indisch plakaatboek, 1602–1811*, 17 vols (Batavia, 1885–1900), vol. 3, pp. 52–64.

43. *Ibid.*, p. 68.

44. *Dagh-register gehouden int Casteel Batavia vant passerende daer ter plaetse als over geheel Nederlands India, anno 1681* (Batavia, 1919), p. 324 (6 June).

45. Van der Chijs, *Nederlandsch-Indisch plakaatboek*, vol. 3, p. 138. De Haan suggests that the 1684 reorganization followed the death of the Governor General, Cornelis Speelman (1681–1684), who made “shameful deception with the funds of Heemraden”. De Haan, *Priangan*, vol. 1, Personalia, p. 8.

46. Van der Chijs, *Nederlandsch-Indisch plakaatboek*, vol. 3, p. 168.

draw up a map of it.⁴⁷ However, Verberkmoes came up with a map covering only the eastern part of her land, because he was unwilling to venture to the western part, on the pretext that “it is not accessible”.⁴⁸ Hiamtse subsequently applied to the reformed College of Heemraden. The College decided to let its surveyor measure this land and from the findings make a “new, perfect map” for Hiamtse.⁴⁹

The concept of the “perfect map” stemmed from early modern Dutch land culture.⁵⁰ It saw its zenith in the large-scale drainage projects carried out in early seventeenth-century northern Holland, such as the impoldering of the Beemster (drained in 1612), which took place after a group of Amsterdam merchants, including two of the founders of the VOC, decided to transform the former Beemster Lake into a polder.⁵¹ Comprehensive cadastral maps drawn up by land surveyors, known as “perfect maps”, featured prominently in the project from the outset, there being a printed map showing “the situation of Beemster, [...] put on perfect (comprehensive) scale by Pieter Cornelisz. Cort of Alkmaar, sworn land surveyor, 1607” (Figure 4). Its cartouche depicts the surveyor carrying an astrolabe, implying a certain accuracy derived from the application of triangulation technology.⁵² Thereafter, the lake was remeasured in 1611, leading to another perfect map (*perfecte caerte*).⁵³

47. Jacob Verberkmoes was a military engineer from Ghent serving the VOC. In 1681, he was chosen to serve the College of Heemraden as a city-surveyor (*stadtilantmeeter*). He later joined the expedition to Tangerang and Banten in 1682 and 1683. He was subsequently sent to the west coast of Sumatra in late 1684. He most likely surveyed Hiamtse’s land after the death of Tsoeko but before his own departure to Sumatra. ANRI, General Resolutions of Batavia Castle 893, 6 June 1681, fos 308–309; Kemper, “The Spark of Fighting Cocks”; ANRI, General Resolutions of Batavia Castle 898, 12 September 1684, fo. 337; 17 November 1684, fo. 430.

48. ANRI, College van Heemraden 5, Resoluties, 1682–1687, 19 May 1685, fo. 83.

49. *Ibid.*

50. “Dutch land culture” is a concept I have adopted from Petra J.E.M. van Dam.

51. Alette Fleischer, “The Beemster Polder: Conservative Invention and Holland’s Great Pleasure Garden”, in Lissa L. Roberts, Simon Schaffer, and Peter Dear (eds), *The Mindful Hand: Inquiry and Invention from the Late Renaissance to Early Industrialisation* (Amsterdam, 2007), pp. 145–166, 151–152; Elizabeth A. Sutton, *Capitalism and Cartography in the Dutch Golden Age* (Chicago, IL, 2015), pp. 57–58.

52. H.C. Pouls, *De landmeter van de Romeinse tot de Franse tijd* (Alphen aan den Rijn, 1997), pp. 33–59; *idem*, “De driehoeksmeting of triangulatie”, *Caert-Thresoor*, 8:3 (1989), pp. 61–71; Uta Lindgren, “Land Surveys, Instruments, and Practitioners in the Renaissance”, in David Woodward (ed.), *The History of Cartography, Volume Three, Cartography in the European Renaissance, Part 1* (Chicago, IL, 2007), pp. 477–508. The triangulation technology used in the early seventeenth-century Low Countries was still not as accurate as modern “scientific” triangulation, which emerged in late eighteenth-century France with the innovations made by the Cassini family. I am grateful to Simon Kemper for raising this point.

53. Frouke Wieringa, “Landmeters in de Beemster, de Purmer en de Wormer”, in Chris Streefkerk, Jan Werner, and Frouke Wieringa (eds), *Perfect gemeten. Landmeters in Hollands Noorderkwartier, ca. 1550–1700* (Wormer, 1994), pp. 59–60; Peter de Zeeuw, Clemens Steenbergen, and Erik de Jong, “De Beemster. Een arena van natuur, kunst en techniek”, in



Figure 4. Detail showing the land surveyor Pieter Cornelisz. Cort measuring the Beemster in 1607. *NA*, 4.VTH, 2598.

From polders to plantations, cadastral maps measured by European surveyors were recognized by the Company as primary evidence in the solving of land disputes like Hiamtse's. After an onsite measurement, the College's land surveyor, Ewout Verhagen, returned on 2 June 1685 with a map that showed a confused situation. The Company had initially ascribed an immense plot of land to Bingam in 1650, land that, as mentioned, was sold in 1664 to Tsoeko. Notwithstanding its grant of the land, the Company continuously made new allocations of land in the same area, which had the effect of creating many overlapping land claims. In order to honour the first donation letter (*donatie brief*) issued by the Company to Bingam in 1650, the College initially decided to make the above "perfect map" for Hiamtse and eliminate all overlapping claims.⁵⁴

The College's order still needed to be adapted on the ground. Right at the start, with its decision of 2 June 1685, the College had allowed the heirs of the late Balinese Captain, Mangus, to keep a plot of land in return for payment of compensation. Captain Mangus's family had been settled there for many years and had set up a sugar mill at great expense, and all their land lay within the boundary of the land claimed by Hiamtse. To avoid further disputes,

Toon Lauwen (ed.), *Nederland als kunstwerk. Vijf eeuwen bouwen door ingenieurs* (Rotterdam, 1995), pp. 157–158.

54. ANRI, College van Heemraden 5, Resoluties, 1682–1687, 2 June 1685, fos 91–92.

therefore, the College decided to draw up a “perfect map” for them, too,⁵⁵ and further border adjustments followed. For instance, the land of the widow of Willem de Rover encroached on Hiamtse’s land to the extent of 250 *roeden*.⁵⁶ Initially, the College decided that De Rover’s land should be returned to Hiamtse, but on learning that De Rover’s widow had already rented it to a Chinese sugar entrepreneur whose mill stood squarely on the disputed land, the College agreed to allow the Widow de Rover to retain the disputed land. Hiamtse would then receive compensation from elsewhere, although, as we shall see, that was to cause further problems.⁵⁷ As a result of the surveys and adjustments, this part of rural Batavia came to be clearly measured and registered in a cadastral map (Figure 5) of approximately 1706, which showed no further overlapping claims.

We can see from these disputes that Hiamtse was not the only sugar entrepreneur in the area. Her neighbours, too, were investing in sugar plantations, indicating that, although war-torn, this area was also becoming contested plantation space. The change was associated with the colonial expansion of the VOC in the early 1680s. Shortly after Tsoeko died, the VOC launched a military expedition against Banten, and in 1684 signed a treaty with Banten to annex Tangerang and make the Cisadane River the new border.⁵⁸ That action ended a decades-long military threat from Banten, and, also in the early 1680s, the Company sought to protect Batavian sugar from competition by imposing treaties on Banten and the Mataram to restrict sugar production in their territories.⁵⁹ These treaties ensured a strong demand for Batavian sugar, for other sugar production areas on the north coast of Java could no longer pose serious competition.

The favourable conditions induced a sugar boom. In 1696, the College of Heemraden surveyed all sugar mills in rural Batavia, revealing that there were 116 mills owned by ninety-four sugar entrepreneurs, of whom seventy-six were Chinese, five Europeans, five *Mardijkers*, and eight of undisclosed ethnicity. Most of the mills were new, seventy-seven of the 116 having been constructed fewer than five years earlier and eighteen mills between six and ten years before. Besides four mills of unspecified age, only seventeen were older than ten years, indicating that growth of the sugar economy, which had begun in the mid-1680s, accelerated greatly from about 1690.⁶⁰

55. *Ibid.*, 27 October 1685, fo. 169; *ibid.*, 2 April 1686, fos 285–287.

56. Land measurement in Batavia followed the standard of Rijnland. One Rijnland *roede* is about 3.77 metres.

57. ANRI, College van Heemraden 5, Resoluties, 27 October 1685, fos 169–170.

58. De Haan, *Priangan*, vol. 1, pp. 59–60.

59. Niemeijer, *Batavia*, pp. 115–116; Guillot *et al.*, “Les sucriers chinois de Kelapadua”, p. 143; Nagtegaal, *Riding the Dutch Tiger*, pp. 138–140.

60. ANRI, College van Heemraden 7, Resoluties, 15 September 1696, fos 37v–43r. A slightly different statistic was given by Niemeijer in Niemeijer, *Batavia*, pp. 403–404.

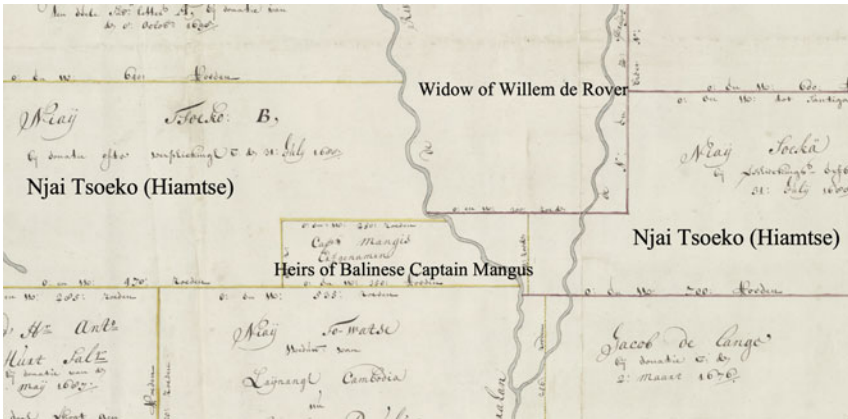


Figure 5. The contested land between Hiamtse (Njai Tsoeko), the heirs of the late Balinese Captain Mangus, and the widow of Willem de Rover. Adapted from a cadastral map of c.1706, NA, *Verzameling Buitenlandse Kaarten Leupe, VEL. 1185*.

Hiamtse, as one of the most firmly established sugar plantation owners, owned seven sugar mills. She herself operated five older mills, which had been standing for between twenty-four and thirty years, while her son (Li Gieko) operated a newer mill, which had been standing only three years. Another mill, also three years old, was rented to another Chinese.⁶¹ About ten years later, the cadastral map of c.1706 shows that Hiamtse had further expanded her interests, for she and her children now held three large pieces of adjacent land along the Angke River downstream of their existing holding, their new property likely forming a new sugar frontier. Together with that of another important Chinese sugar entrepreneur, Li TSIONQUA (Li TSIONCO), Hiamtse's name also appears on two pieces of land along the Mookervaart Canal – constructed in the 1680s to connect Batavia City with an emerging sugar frontier in the recently annexed Tangerang region.⁶²

However, having joined the sugar boom only recently and operating sugar mills most of which stood on rented land, the majority of Chinese millers were less well established than Hiamtse. Their economic practice of renting land for setting up sugar plantations opened the door to certain high-ranking Dutch officials to become rentiers. The most notable among them was Joan van

61. ANRI, College van Heemraden 7, Resoluties, 15 September 1696, fos 42r–43r.

62. NA, *Verzameling Buitenlandse Kaarten Leupe, VEL. 1185*. Li TSIONQUA (Li TSIONCO) was probably the same as Li Tsjoenqua (Li Junguan 李俊觀), who rented Tsankaringh (Cengkareng) from the Company for ten years in 1704 and would make it one of the most valuable sugar plantations in rural Batavia in the early eighteenth century. ANRI, College van Heemraden 8, Resoluties, 23 August 1704, fos 283–286.

Hoorn, who presided over the reformed College of Heemraden from 1684–1687 and was therefore a major policymaker in the mid-1680s reorganization of Batavia's rural administration that dealt with Hiamtse's case.⁶³ Afterwards, Van Hoorn became the Director General of the VOC in 1691 and Governor General from 1704 to 1709.⁶⁴ According to the survey of 1696, Van Hoorn owned seven plots of land, which he rented to eight Chinese sugar entrepreneurs, who, within seven years, had constructed eleven sugar mills there.⁶⁵ Making use of his privileges, Van Hoorn continued to exploit the sugar boom right up to the end of his career. On 7 May 1709, just a few months before he retired to the Netherlands, he obtained a huge plot of land (c.2,790 *morgens*)⁶⁶ in Tangerang, on which he was allowed to set up two sugar mills.⁶⁷ Within a few months, he had divided his new land into three pieces and sold each of them to Chinese buyers for a total of 10,690 rijksdaalders.⁶⁸

Moreover, the College of Heemraden also owned sugar plantations on behalf of the Company and rented them to Chinese entrepreneurs. The emergence of that type of landholding practice was linked to the “rebellion” of the Ambonese Captain Manipa Sanweru (Kapitein Jonker) in 1689.⁶⁹ The Company promptly killed Manipa Sanweru and confiscated his land, including a sugar plantation already constructed by some Chinese.⁷⁰ To ensure the ecological sustainability of the plantation, the Company added eight clauses stipulating a new rental contract, which included obligations to maintain land fertility and to replant firewood.⁷¹ A plan drawn by a land surveyor of the College of Heemraden in 1732 comprehensively illustrates how the plantation was laid out (Figure 6). There was a sugar mill in the centre (Letter A) with two small cottages next to it. To the north-west, towards the sea, there was a small forest offering firewood (Letter C), while to the east and south of the sugar mill lay two long tracts of sugar cane field (Letter B). An orchard grew further to the south (Letter E), which was dotted with scattered cottages.

63. M.A. van Rhede van der Kloot, *De Gouverneurs-Generaal en Commissarissen-Generaal van Nederlandsch-Indië, 1610–1888* (The Hague, 1891), p. 73; De Haan, *Priangan*, vol. 1, Personalialia, p. 8.

64. De Haan, *Priangan*, vol. 1, Personalialia, pp. 11–12.

65. ANRI, College van Heemraden 7, Resoluties, 15 September 1696, fos 37v–43r.

66. One Rijnland *morgen* is about 8,516 square metres.

67. NA, VOC 725, Kopie resoluties, 7 May 1709, fos 224–225.

68. De Haan, *Priangan*, vol. 1, Personalialia, p. 14. The land was given to Van Hoorn in exchange for Edam Island (Pulau Damar Besar).

69. For the background to this rebellion, see J.A. van der Chijs, “Kapitein Jonker, 1630(?)–1689”, *Tijdschrift voor Indische Taal-, Land- en Volkenkunde (TBG)*, 28 (1883), pp. 351–472; 30 (1885), pp. 1–233. I am grateful to Simon Kemper for informing me of the full name of Manipa Sanweru, who is usually referred to only as Jonker in Dutch archives.

70. This land had been given to Manipa Sanweru in 1666. Van der Chijs, “Kapitein Jonker, 1630(?)–1689”, *TBG*, 30 (1885), pp. 101–102.

71. ANRI, College van Heemraden 6, Resoluties, 23 December 1690, fos 322–326.

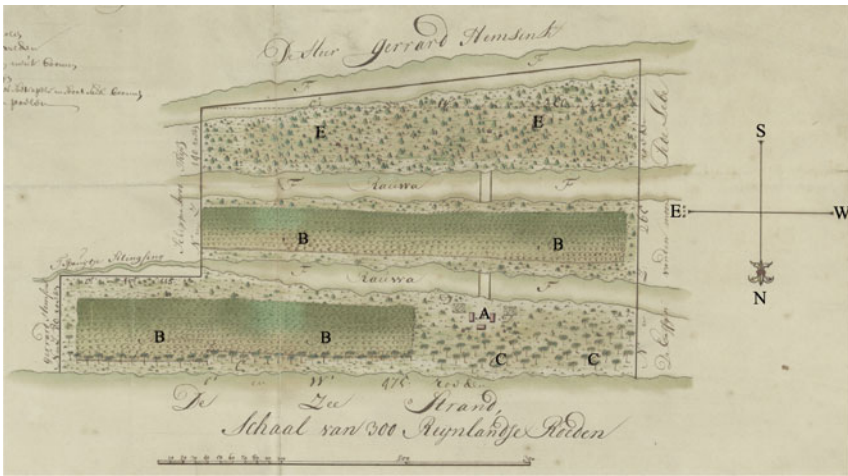


Figure 6. Detail showing a sugar plantation near Tanjung Priok (1732). Adapted from NA, *Verzameling Buitenlandse Kaarten Leupe*, VEL. 1240.

With no paddy fields or any sizeable villages, this map represents a typical plantation space, lacking rural settlers but highly specialized in cash-crop production.

DISENFRANCHISED JAVANESE

However, the comprehensively mapped plantations took up only part of Batavia's rural space. Surrounding them were many Javanese villages, but, with inferior land rights, they were vulnerable to the reformed colonial land system.⁷² In Hiamtse's case, to the west of her plantations there was a Javanese settlement headed by Naija Gattij, who had been given a lease letter (*leenbrief*) by the Company in 1675 allowing him and his followers to settle there. Gattij's letter, however, failed to offer security, such as in early 1686 when the College of Heemraden was looking for compensation for Hiamtse's loss in the above-mentioned dispute with the widow of Willem de Rover. In that instance, the College decided to expropriate part of the land belonging to Naija Gattij and his followers and donate it to Hiamtse.⁷³

That event quickly alerted the Javanese community. On 16 April 1686, Naija Gattij appealed to the College of Heemraden, requesting a document more powerful than his lease letter of 1675, or at least as powerful as

72. There were also villages of the Balinese, the Makassarese, the Ambonese, the Mardijkers, etc. in rural Batavia, but these peoples were not as numerous as the Javanese and few of them participated in the sugar economy.

73. ANRI, College van Heemraden 5, Resoluties, 2 April 1686, fos 285–287.

Hiamtse's landholding document.⁷⁴ On the same day, another Javanese neighbour of Hiamtse, Captain Soeta Wangsa, made a similar request for a piece of land occupied by his people.⁷⁵ The two requests presented the College with a dilemma. Both Naija Gattij and Soeta Wangsa had been allies of the VOC in the recently concluded war against Banten. Their settlements were on the front line and they had participated actively in the Tangerang Campaign in 1682.⁷⁶ However, an upgrade of their landholding documents would encourage all other Javanese commanders to follow their example and lead to a fundamental challenge to the landholding system of rural Batavia.⁷⁷ The College therefore submitted the case to the High Government of the Company in Batavia.⁷⁸

The High Government's response is intriguing. Approximately two months after the petition, on 18 June 1686, it decided to "qualify gentlemen Heemraden, according to findings, to give Javanese and some other indigenous people (*inlanderen*) some pieces of land in possession (*besit*), in order to properly cultivate it under the current conditions".⁷⁹ Their seemingly positive reply in fact reinforced an old distinction between donated land or freehold on the one hand and "possessed" land or leasehold on the other, because the High Government merely agreed to give land into their "possession" (*besit*). The term "possession" (*besit*) gives an impression of full landownership, but in the context of early modern rural Batavia its meaning was closer to occupation (*bezetting*) or leasehold, for a possessor had no permanent landownership but merely occupied their land and had to pay tithes to the Company, which held ultimate ownership of the land and could revoke the possessory right. We should bear in mind that Naija Gattij and his followers lost part of their land to Hiamtse precisely because their land had the legal status of "being possessed" (*wordt bezeten*), while Hiamtse's land was registered as donated.⁸⁰ From the c.1706 cadastral map of rural Batavia (Figure 7), we can see that Naija Gattij eventually failed to obtain a donation letter as the land was still registered as "Naija Gattis *besit*" (in Naija Gattij's possession). Soeta Wangsa, too, failed in his petition of 1686, although he would later be rewarded with a donation letter, in 1700, for his good service to the Company.⁸¹

In spite of its reluctance to grant freehold ownership of land to Javanese commanders like Naija Gattij and Soeta Wangsa, the Company was

74. *Ibid.*, 16 April 1686, fo. 299.

75. *Ibid.*

76. *Dagh-register gehouden int Casteel Batavia vant passerende daer ter plaetse als over geheel Nederlands India, anno 1682* (Batavia, 1928 and 1931), vol. 1, pp. 177 (17 February), 408 (30 March), 435 (2 April), 445 (7 April), 554 (3 May), 628 (22 May), 755–756 (14 June); vol. 2, pp. 847 (11 July), 964–965 (9 August), 1161 (1 October), 1306–1307 (14 November).

77. ANRI, College van Heemraden 5, Resoluties, 16 April 1686, fo. 299.

78. *Ibid.*

79. ANRI, Hoge Regering, Generale resoluties 900, 18 June 1686, fo. 292.

80. ANRI, College van Heemraden 5, Resoluties, 2 April 1686, fo. 286.

81. ANRI, Hoge Regering, Generale resoluties 916, 30 March 1700, fo. 142.

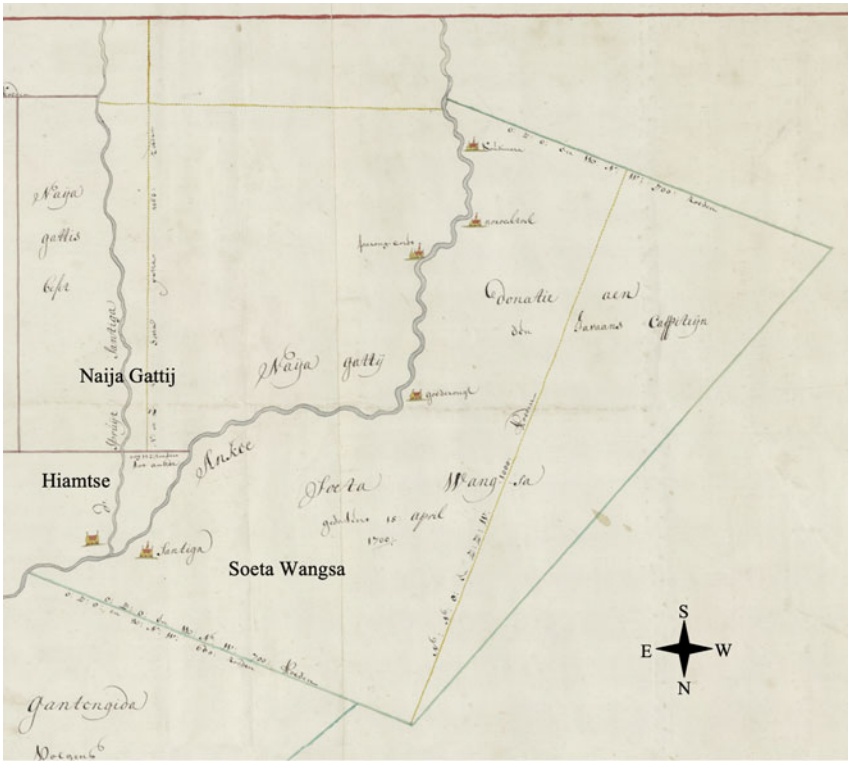


Figure 7. The land of Naija Gattij, Soeta Wangsa, and Hiamtse. Adapted from a cadastral map of c.1706, NA, *Verzameling Buitenlandse Kaarten Leupe, VEL. 1185*.

meanwhile content to entrust them with authority over the rural Javanese population, authority that was linked to land tax. A crucial difference in rural Batavia between possessed land and donated land was that occupants of the former had to pay ten per cent of their agricultural output in tax while the latter was tax-free. As most Javanese rural dwellers lived on possessed land, they had to pay the tithe tax. All the same, the Company could not afford the enormous cost of dispatching its own personnel to collect such a relatively small tax from each Javanese household, many of which were in remote villages on the fringe of rural Batavia. The Company therefore relied on Javanese headmen to collect the tithes.⁸² To make the system more efficient, on 12 March 1689, the College of Heemraden appointed two leading Javanese captains as chief collectors, namely Carsa for the east part of rural

82. A typical tithe consisted mostly of unhusked rice (*padi*). A Javanese headman had to collect it from peasants and deliver it to the Company's warehouse. Niemeijer, *Batavia*, p. 132.

Batavia and Naija Gattij for the west, simultaneously authorizing them to nominate sub-collectors from the lower echelons of Javanese commanders.⁸³ On 2 April 1694, Soeta Wangsa replaced Carsa as the Javanese Captain accountable for the eastern tithes,⁸⁴ with the result that Hiamtse's two disenfranchised Javanese neighbours became the chief commanders of the entire Javanese community in rural Batavia.

The Javanese rural population they commanded was of very different origin from the highly commercialized Chinese community in Batavia. The diary of the Castle of Batavia shows that Captain Naija Gattij was from "Mataram" and Captain Soeta Wangsa was from "Pattij" (Pati), indicating that they were both originally from central or eastern Java.⁸⁵ The existence of these Javanese communities in rural Batavia was related to the expansion of the Mataram Empire onto formerly Sundanese land on western Java. After repeated failures in the wars targeting Banten and Batavia in the late 1620s, the Mataram ruler Sultan Agung (r. 1613–1645) launched a major campaign against his former Sundanese ally in the hinterland of Batavia in 1632, who, by then, had deserted and rebelled against the Mataram.⁸⁶ That campaign caused further depopulation of an already underpopulated region. Sultan Agung then sent immigrants from central and eastern Java to the region, and his successor Amangkurat I (r. 1645–1677) continued the policy.⁸⁷ A Javanese colony in Karawang, which was situated close to the east of Batavia, therefore expanded during the 1650s.⁸⁸ Amid this westward expansion of the Mataram Empire, many Javanese and Sundanese moved further into rural Batavia. The Company referred to them generally as "Javanese", appointed commanders among them, and settled them as peasants in the hinterland, mainly to cultivate the rice that was in great demand by the urban population of Batavia and, occasionally, to be mobilized for military service.⁸⁹

These factors created a "Javanese" rural society consisting of many villages on the peripheries of rural Batavia, led by their own headmen, some of whom also served as military commanders for the Company and therefore held

83. ANRI, College van Heemraden 6, Resoluties, 2 April 1689, fo. 177.

84. ANRI, Hoge Regering, Dagregisters, 2512, 2 April 1694, fo. 284. Officially, the position of Javanese Captain was not hereditary, but Soeta Wangsa's family managed to retain the position for generations. Remco Raben, "Batavia and Colombo: The Ethnic and Spatial Order of Two Colonial Cities, 1600–1800" (Ph.D., Leiden University, 1996), p. 208.

85. *Dagh-register gehouden int Casteel Batavia, anno 1682*, vol. 2, p. 1161 (1 October).

86. H.J. de Graaf, *De regering van Sultan Agung, vorst van Mataram (1613–1645) en die van zijn voorganger Panembahan Séda-ing-Krapjak (1601–1613)* (The Hague, 1958), pp. 193–197.

87. De Haan, *Priangan*, vol. 1, pp. 15–24.

88. *Ibid.*, pp. 24–25; R. Dr. D. Asikin W.K., "De stichting van het Regentschap Krawang en Krawangs eerste Regent", *TBG*, 77:2 (1937), pp. 178–205. Besides the Javanese, there were also many Sundanese and Chinese living in Karawang – a point raised by Simon Kemper.

89. Niemeijer, *Batavia*, pp. 91–96, 130–132.

military titles.⁹⁰ Their settlement pattern can be identified with a specific section on the cadastral map of c.1706. It shows that the Company divided the land between the Small Cakung River and the Sunter River into many parcels, each corresponding to a Javanese settlement (Figure 8). Their land registry follows a standard format, such as “The honourable Company’s (land) possessed by XX” (*d’ E’ Comp^s beseten door XX*) or “The honourable Company’s (land) under XX” (*d’ E’ Comp^s onder XX*), indicating that the holders of the land were actually leasing it from the Company, which remained the land’s ultimate owner. In 1685, Javanese headmen in this region had made a one-off attempt to challenge the situation by making a joint appeal for donation letters.⁹¹ The College of Heemraden, however, noted that the land was merely provisionally (*bij provisie*) in their possession.⁹²

The path to full landownership would be further blocked by a decision of the High Government on 16 December 1701.⁹³ That decision forbade further land donations in rural Batavia and allowed the College of Heemraden only to rent (*verhuren*) land for cash revenue or give it in possession (*in besit te geven*) against payment of tithes, so that “the Company will have the most benefit and profit”.⁹⁴ Then, from 1703, when “diverse applicants” asked for full ownership of land “that they have for a certain period in possession and have cultivated”, the High Government resolutely refused, repeating that “no more land shall be given out” and that the College of Heemraden should require those applicants to pay “proper rent (*huur*) or tithes (*tienden*)”.⁹⁵ In 1706, the College of Heemraden even planned to restrict the leasehold of land, with a proposal to let the government, instead of private leaseholders, keep lease letters (*leenbrieven*) in order to make sure that “no one, after the death of the endowed, will come to own such lands”. But the proposal was, in the end, rendered unnecessary when the High Government found that the lease letters had already stated that “those lands can be neither sold nor alienated, but [will] fall back to the honourable Company”. It recommended only that the College keep a separate registry of leased land.⁹⁶

PLANTATION LABOUR

Without full ownership of their land, the Javanese rural community would take a different path to participate in the booming sugar economy.

90. For the Company’s registration of these villages, see Kemper, “The Spark of Fighting Cocks”.

91. ANRI, College van Heemraden 5, Resoluties, 3 July 1685, fos 105–108.

92. *Ibid.*, fo. 105.

93. D.A. Berkhout, “De zakelijke rechten op onroerende goederen in Nederlandsch-Indië, tijdens de Ned. O. I. Compagnie”, *De Indische Gids*, 32:2 (1910), p. 1039.

94. ANRI, Hoge Regering, Generale resoluties 917, 16 December 1701, fo. 474.

95. ANRI, Hoge Regering, Generale resoluties 919, 21 August 1703, fo. 441.

96. Van der Chijs, *Nederlandsch-Indisch plakaatboek*, vol. 3, pp. 573–574; NA, VOC 722, Kopie-resoluties, 5 November 1706, fos 768–769.



Figure 8. Javanese rural settlements.

Adapted from a cadastral map of c.1706, NA, *Verzameling Buitenlandse Kaarten Leupe, VEL. 1186*.

Although invisible in the land archives, that path is richly documented in the labour-recruitment contracts in the notarial archives of Batavia.⁹⁷ An interesting example is a contract signed between a Chinese sugar entrepreneur, Lie Poanko, and a Javanese commander, Wangsa, on 22 June 1703. Under the terms of the contract, Wangsa promised to provide twenty-three servants (*dienaren*) to a sugar mill belonging to Lie Poanko for the milling season of 1703, with the following division of labour:

Six servants mill sugar [canes] by day and night, namely 8 *passos*⁹⁸ of sugar [juice] by day and 8 *passos* by night. In case they mill less than 8 *passos* of sugar [juice] during a day or night, that day or night will be counted as if they milled no sugar [canes].

Four servants stoke the fire when the sugar [juice] is cooked, namely with firewood and dried bagasse. No bagasse shall be abandoned.

Ten servants cut the sugar canes in the fields and bring them to the mill.

Two servants cut the leaves of canes for feeding buffaloes.

One servant carries water that is necessary for the mill.

97. See also Niemeijer and Kanumoyoso's pioneering works on these documents. Niemeijer, *Batavia*, pp. 120–121; Kanumoyoso, "Beyond the City Wall", pp. 131–133.

98. *Passo* refers to the Javanese word *paso*, meaning a large earthenware vessel. It probably referred to a pottery container to hold the juice milled from sugar canes.

In return, Lie Poanko was to pay sixty-six rijksdaalders monthly to Wangsa, of which forty-one rijksdaalders would be retained until all the sugar cane had been milled.⁹⁹

According to the contract, Wangsa was a Javanese living in Pondok Bamboe (Pondok Bambu). Pondok Bambu was on the Company's land between the Small Cakung River and the Sunter River, which, as introduced in the last section, the Company parcelled out for provisional possession by many Javanese settlements. We know from the cadastral map of c.1706 that there was a Javanese lieutenant named Wangsa living in Pondok Bambu (Figure 8),¹⁰⁰ and it is probable that he mobilized his own followers to serve the plantation of Lie Poanko for cash revenue.

Wangsa was not the only Javanese commander-turned labour recruiter. In the same month of June 1703, another Javanese headman, Tsipta Wangsa, who also lived in Pondok Bambu, agreed to deliver twenty-four labourers for sixty-eight rijksdaalders per month to a Chinese sugar entrepreneur called Tan Kinko, whose mill was in Tsakong (Cakung) to the east of the Small Cakung River.¹⁰¹ Again in the same month, a Javanese headman Carta Soeta, living in a place next to Pondok Bambu called Pondok Clappa (Pondok Kelapa) (Figure 8), agreed to deliver twenty-one workers for seventy rijksdaalders per month to Chinese miller Lim Tsiako, whose plantation was in Jatijnagara (Jatinegara), likewise situated between the Small Cakung River and the Sunter River.¹⁰² Both those cases originated in a small space where sugar plantations and Javanese settlements were very close to each other, probably following an established model by which sugar plantations could draw seasonal labour from nearby villages during the milling season, in return for payments to village headmen.

As labour was mobilized collectively, a number of Chinese entrepreneurs would even outsource the entire milling job to a Javanese headman, without specifying how many labourers should be involved. For instance, in a case dated 9 May 1703, Javanese headman Jaga Soeta agreed to provide Chinese miller Ong Lieko with "as many servants as it shall be strong enough to do the following services for the sugar mill", including cutting the sugar cane in the fields, carrying them in buffalo carts to the mill, milling sugar day and night, cutting leaves from sugar canes to feed the buffaloes, stoking the fire to cook sugar, and carrying water for the mill. The contract stipulated that all the above-mentioned services should be overseen by a Javanese supervisor (*mandadoor*) for a package price of sixty-six rijksdaalders per month, of

99. ANRI, Het notarieel archief van Batavia, 1621–1817, 2092, 22 June 1703.

100. NA, Verzameling Buitenlandse Kaarten Leupe, VEL. 1186.

101. ANRI, Het notarieel archief van Batavia, 1621–1817, 2092, 27 June 1703. Tan Kinko's sugar plantation was constructed on land rented from a Dutch widow, Elisabeth van der Beeck, in 1694. ANRI, College van Heemraden 8, Resoluties, 9 November 1703, fo. 173.

102. ANRI, Het notarieel archief van Batavia, 1621–1817, 2092, 28 June 1703.

which thirty-six rijksdaalders would be withheld by the Chinese miller until all that year's cane had been milled.¹⁰³

These notarized contracts reflect only part of the plantation labour regime, covering as they do only the milling season, which ran roughly from June to August, and which was also the high period of the dry season when sugar cane has its highest sucrose content.¹⁰⁴ Besides that, a sugar plantation in rural Batavia was a complex operation integrating milling and planting.¹⁰⁵ Sugar cane fields required year-round cultivation, which demanded permanent deployment of labour. A full account of the plantation labour regime is provided by a 1710 report (Table 1),¹⁰⁶ which reveals that more than thirty-six workers were employed year-round, including twenty-eight Javanese, eight Chinese, and an unknown number of buffalo keepers. A group of Javanese labourers and two Chinese firemen were recruited solely for the four milling months.

There was a notable ethnic division among the labourers. All the Chinese workers were identified with a certain skill and were paid much more than the Javanese.¹⁰⁷ The exclusively Chinese management team, consisting of a clerk, a general supervisor, and four supervisors of the sugar cane cultivation, collectively received 260 rijksdaalders per year, the equivalent of about 43.33 rijksdaalders per person. Wages for other Chinese technicians, such as the milling stone supervisor (sixty rijksdaalders), the two firemen (sixty rijksdaalders each), and the sugar-purging expert (fifty-two rijksdaalders), were even higher. By comparison, the twenty Javanese sugar cane cultivators received only 400 rijksdaalders per year collectively, or about twenty rijksdaalders each. The eight Javanese canoe crewmen earned as little as 120 rijksdaalders per year, or fifteen rijksdaalders each.

A preliminary observation is that Javanese plantation labour was paid less than contemporary urban unskilled labour but more than rural corvée labour.

103. *Ibid.*, 9 May 1703.

104. Andries Teisseire, "Verhandeling over den tegenwoordigen staat der zuikermolens omstreeks de stad Batavia", *Verhandelingen van het Bataviaasch Genootschap der Kunsten en Wetenschappen*, 5 (1790), p. 24.

105. In the Atlantic World, this integration took place in the mid-seventeenth-century "sugar revolution" in Barbados. See Curtin, *The Rise and Fall of the Plantation Complex*, pp. 82–85. In rural Batavia, the integration took place around the same period. It will be elaborated on in my book-length manuscript about Batavian sugar.

106. Christoffel van Swoll and Hendrick van Zwaardkroon, "Uittreksel uit een rapport en uit de bijlagen over de suijkercultuur, in de ommelanden van Batavia", in J.K.J. de Jonge (ed.), *De opkomst van het Nederlandsch gezag in Oost-Indië*, 13 vols (The Hague, 1862–1888), vol. 8, pp. 157–164.

107. This observation accords with the general situation in Batavia that "Chinese laborers earned much more than indigenous workers". Pim de Zwart and Jan Luiten van Zanden, "Labor, Wages, and Living Standards in Java, 1680–1914", *European Review of Economic History*, 19:3 (2015), pp. 215–234, 220.

Table 1. *Cost breakdown of a sugar plantation in rural Batavia (1710) (in rijksdaalders)*

FIXED INVESTMENT		
A sugar mill, its accessories, and buffaloes	2,368.36	
Preparing a plot of unclaimed land and cultivating 200,000 plants of sugar canes	1,500	
Total fixed investment	3,868.36	
RUNNING COSTS		
Labour cost		
1 Chinese clerk, 1 Chinese chief supervisor (<i>mandadoor</i>), and 4 Chinese supervisors of sugar cane cultivation	260	
20 Javanese sugar cane cultivators	400	
1 Chinese supervisor of milling stones	50	
Salary for buffalo keepers	60	
8 Javanese who transport sugar out and other necessities in for the mill with canoes	120	
Javanese milling labourers, firemen, [a] water carrier, <i>poetsoek</i> (polisher?), and sugar cane cutters, who are employed for the four milling months	440	
Wage for 2 Chinese firemen during the milling season	120	
1 Chinese who purges sugar in pots (drainage cones) with mud	52	
Subtotal	1,502	51.11%
Other running costs		
Maintenance of 4 large steel sugar cooking pans	20	
Replacement for deceased and retired buffaloes	100	
Supplement for sugar pots (drainage cones) and their footings (receiving jars)	30	
Lime and stone for repairing the mill and masonry wage	35	
6 <i>last</i> (c.7.5 metric tons) of rice for feeding the workers	210	
Yearly change of ironware for the mill	30	
Oil and candles	50	
200 <i>roeden</i> of firewood against 2 rijksdaalders per <i>roe</i>	400	
Baskets, beans, rattans, and straw mattresses	48	
Lime for making sugar	16	
Land rent	150	
Interest (9% per year) for the fixed investment	348	
Subtotal	1,437	48.89%
Total annual running cost	2,939	

Source: Van Swoll and Van Zwaardekroon, “Uittreksel uit een rapport en uit de bijlagen over de suijkercultuur, in de ommelanden van Batavia”, pp. 158–160.

Considering that the cost of subsistence (barebones basket) in Batavia around 1710 was about twenty guilders (8.33 rijksdaalders),¹⁰⁸ the lowest paid of the Javanese – the canoe crews – with a wage of fifteen rijksdaalders (a subsistence

108. *Ibid.*, p. 228. There was huge fluctuation in the cost of subsistence in the early eighteenth century because of warfare in the rice export region of Java. Here, we have taken a rough average.

ratio of 0.57 for keeping a family of a wife and two children)¹⁰⁹ were paid much less than free unskilled labourers in urban Batavia (subsistence ratio c.1.3) but slightly more than rural corvée labourers (subsistence ratio c.0.4).¹¹⁰ It is, of course, worth noting that the watermen's work was less labour-intensive, for the milling season lasted only about four months and for the rest of the year they had no burdensome transport duties but merely supplied everyday necessities. The more intensive labour was done by the cultivators, whose wage (twenty rijksdaalders, subsistence ratio 0.76) was significantly higher than that of rural corvée labour. Moreover, given that the plantation workforce was given rice from the plantation they worked, their real subsistence ratio was actually much higher, for, according to the above-mentioned barebones basket model, food was an overwhelmingly important factor.¹¹¹

However, we should beware of over-interpreting these preliminary data, the sources of which were Chinese officers in Batavia.¹¹² Representing the interest of Chinese sugar entrepreneurs, they were lobbying for a higher sugar price through the report, and had probably overstated their cost. For instance, the reported cost of the Javanese milling team was 440 rijksdaalders for four months (Table 1), or 110 rijksdaalders per month, much higher than the wages in the above-mentioned contracts from the notarial archives, namely, approximately around 66–70 rijksdaalders monthly. It is, however, impossible to calculate the subsistence ratio of those seasonally employed milling labourers by merely referring to the contracts in the notarial archives, because they belonged to a rural society and were only seasonally mobilized as plantation labour by their headmen. For the rest of the year, they stayed with their families in the villages and lived as peasants.

Another question concerns how much money ended up in the hands of the workers. Each of the above-mentioned contracts was collectively signed by Javanese recruiters and Chinese sugar entrepreneurs and none made any reference to the actual incomes of individual labourers. The 1710 sugar report also provided only the collective Javanese labour costs. We therefore have no conclusive evidence to indicate whether or to what extent Javanese labourers were able to negotiate their wages individually with Chinese entrepreneurs. It might well have been the case that they received a different

109. Following the model of De Zwart and Van Zanden, the cost of subsistence is multiplied by 3.15, "to allow for the cost of maintaining a wife and two children (each consuming ½ basket) as well as rent (adding 5 percent for each basket)". *Ibid.*, pp. 228–229.

110. *Ibid.*, p. 229.

111. Van Swoll and Van Zwaarderkroon, "Uittreksel uit een rapport en uit de bijlagen over de suijkercultuur", p. 159.

112. *Ibid.*, p. 158.

and discounted wage from their own commanders, who could charge an intermediary fee.¹¹³ We shall bear in mind, too, that the commanders, as mentioned in the last section, were individuals authorized by the Company to collect tithes from their followers. Part of the cash income of Javanese labourers might have been withheld by their commanders to offset the costs of tithes or other taxation, and corvée.

Besides locally mobilized labourers, there were migrant labourers from villages outside Batavia, and they faced extra exploitation by inland rulers. A 1705 report by Cornelis Chastelein, an important Dutch official and landowner,¹¹⁴ tells us that local rulers in Cirebon and Priangan (two partly Javanized regions in western Java) held the wives and children of Javanese migrant labourers who went to work for sugar plantations in rural Batavia as “bail” (*borg*), in order to ensure those labourers would return and pay the poll tax (*hoofdgeld*) for themselves, their families, and even their friends.¹¹⁵ This poll tax, worth the equivalent of about a Spanish dollar (*real*) per *cacah* (corporate peasant household, unit of taxation) per year, was inherited from the Mataram period.¹¹⁶ There were, therefore, complicated social factors that bound those particular plantation labourers to their native villages.

The involvement of migrant labourers indicates that the booming sugar economy was now mobilizing labour from beyond the border of rural Batavia. There is evidence that, as early as 1691, Wirabaja, a leader of a Javanese community in Karawang (Krawang), had made a contract with a sugar miller to send ten of his people to work for a year in return for 180 rijksdaalders.¹¹⁷ Situated between Batavia and Cirebon, Karawang, as mentioned in the last section, hosted a Javanese colony established by the Mataram. In 1677, the Mataram ceded all its colonies in western Java to the Company. Amid this power transition, Wirabaja was one of the local rulers who shifted his allegiance to the VOC.¹¹⁸ Perhaps he was quick to discover that he could benefit

113. Niemeijer refers to a case dated 30 January 1693 in which a Javanese Wangsa Tria sent eight of his people to a sugar miller for a year. In return, he received ten rijksdaalders as an intermediary and those labourers received fifteen, seventeen, to twenty-five rijksdaalders per year. Meanwhile, he was also responsible for any loss of buffaloes or prahu boats. Niemeijer, *Batavia*, p. 120.

114. Cornelis Chastelein's land accommodated three sugar mills in 1696. ANRI, College van Heemraden 7, Resoluties, 15 September 1696, fos 40v–41v.

115. Cornelis Chastelein, “Memorie van C. Chastelein”, in J. Faes (ed.), *Geschiedenis particulier landbezit op West-Java* (Batavia, 1893), pp. 224–225.

116. De Haan, *Priangan*, vol. 1, p. 26; vol. 3, p. 180; Mason C. Hoadley, *Towards a Feudal Mode of Production: West Java, 1680–1800* (Singapore, 1994), pp. 32–33; Jan Breman, *Mobilizing Labour for the Global Coffee Market: Profits from an Unfree Work Regime in Colonial Java* (Amsterdam, 2015), pp. 40, 60, 369.

117. De Haan, *Priangan*, vol. 3, p. 208.

118. Asikin W.K., “De stichting van het Regentschap Krawang en Krawangs eerste Regent”, p. 184; De Haan, *Priangan*, vol. 1, pp. 38–39.

from Batavia's sugar economy if he mobilized his followers as plantation labour. Into the second half of the eighteenth century, former Mataram colonies outside the conventionally defined rural area of Batavia would become the major source of so-called *bujang* migrant labour, made up of unmarried boarders or farm servants, who, by then, had replaced villagers living within rural Batavia as the principal plantation workforce.¹¹⁹

CONCLUSION

In 1710, there were 131 sugar mills in rural Batavia, each with a capacity of about 800 *piculs*¹²⁰ and with a total annual output of approximately 13,100,000 pounds, which was far more than the Company's approximately five-million-pound average annual order.¹²¹ Wishing, therefore, to prevent a crisis of overproduction, on 10 October 1710, the Company introduced a restrictive sugar policy to halt further expansion.¹²²

The two and a half decades between the approval of Hiamtse's "perfect map" in 1685 and the restriction in 1710 were a definitive period in the formation of a Batavian sugar plantation society. Leaving behind a violent and tumultuous past, a unique plantation society emerged. This Batavian plantation society developed differently from the small-household sugar economy in South China where Chinese sugar production began.¹²³ Instead of being divided up for use by many peasants, its space was controlled by professional sugar entrepreneurs whose land rights were clearly defined by cadastral maps registered by the Dutch colonial company-state. It was different, too, from the slave plantations producing sugar in the Atlantic World, because the Batavian plantations drew their workforce from Javanese rural society. That society was deprived by the Company of full landownership and placed under Company-designated commanders, some of whom turned themselves into labour recruiters, mobilizing their own followers as plantation labour

119. Breman, *Mobilizing Labour for the Global Coffee Market*, pp. 40–41, 339–342; Peter Boomgaard, "Why Work for Wages? Free Labour in Java, 1600–1900", *Economic and Social History in the Netherlands*, 2 (1991), p. 46; Teisseire, "Verhandeling over den tegenwoordigen staat der zuikermolens", pp. 129–130.

120. 1 *picul* was 125 pounds.

121. Van Swoll and Van Zwaarderkroon, "Uittreksel uit een rapport en uit de bijlagen over de suijkercultuur", p. 164.

122. ANRI, Hoge Regering, Generale resoluties 930, 10 October 1710, fo. 504. For the VOC's sugar trade, see Kristof Glamann, *Dutch-Asiatic Trade, 1620–1740* (The Hague, 1981), pp. 152–166; Ghulam A. Nadri, "The Dutch Intra-Asian Trade in Sugar in the Eighteenth Century", *International Journal of Maritime History*, 20:1 (2008), pp. 63–96.

123. Sucheta Mazumdar, *Sugar and Society in China: Peasants, Technology, and the World Market* (Cambridge, MA, 1998).

for which the recruiters signed collective wage contracts with Chinese sugar entrepreneurs.

Hiamtse's "perfect map" offers a unique angle from which to observe how such a plantation society took shape on the ground. It manifests a reconfiguration of land and labour in rural Batavia in the wake of the colonial expansion of the Dutch empire in the early 1680s. That expansion secured Batavian sugar from war and competition, on the one hand, thereby preparing the way for the industry to benefit from a sugar boom; on the other hand, it transferred Dutch land culture to Batavia, which gave a prominent role to the cadastral maps comprehensively measured by European land surveyors, known as "perfect maps". Those changes were soon appropriated by plantation owners like Hiamtse, who actively negotiated with the reformed Dutch rural council (College of Heemraden) to acquire perfect maps to enable herself not only to secure the precarious sugar enterprise she had inherited from her late husband but, moreover, to expand it. Nevertheless, perfect maps also played a role in the marginalization of the Javanese rural community, whose leaders usually held only vaguely defined land documents. Without full land ownership but with many followers, they therefore joined the booming sugar economy as labour suppliers. Collective wage agreements with Chinese entrepreneurs enabled them to exploit their followers as plantation labour. As a result of this chain of interactions, a Batavian sugar plantation society emerged in early modern Southeast Asia combining comprehensively mapped space and villagers-turned-labourers.

Such a case should also encourage us to rethink plantations in early modern global history, for it serves as a healthy reminder to destabilize an overarching framework that ties early modern plantations with the Atlantic World, slavery, sugar, and European colonial expansion. It reminds us that beyond that framework lay different configurations of land, labour, commodities, and power, leading to multiple models of plantations related to different local interactions with different kinds of early modern globalizations. For instance, Batavian sugar plantations were merely one type of plantation among others in early modern Southeast Asia. In the *perkenier* system in Banda, from the early seventeenth century, the VOC assigned slaves and land to nutmeg planters (*perkenier*) for a monopolistic and restrictive model of production.¹²⁴ In late seventeenth- and early eighteenth-century Jepara and Kudus on the north coast of central Java, Chinese sugar entrepreneurs contracted the land and labour of entire villages from local Javanese rulers, and enjoyed "a share of the villagers' *corvée*".¹²⁵ Amid a new wave of Chinese overseas agricultural expansion beginning in the mid-eighteenth century, pepper and gambier

124. Willard A. Hanna, *Indonesia Banda: Colonialism and Its Aftermath in the Nutmeg Islands* (Philadelphia, PA, 1978); Vincent C. Loth, "Pioneers and Perkeniers: The Banda Islands in the 17th Century", *Cakalele*, 6 (1995), pp. 13–35.

125. Nagtegaal, *Riding the Dutch Tiger*, pp. 138–139.

plantations employing migrant labour from China appeared in Riau.¹²⁶ We may expect more scholarly attention being paid to such non-Atlantic early modern plantations to shed further light on the plurality of plantations in global history.

126. Carl A. Trocki, "The Origins of the Kangchu System 1740–1860", *Journal of the Malaysian Branch of the Royal Asiatic Society*, 49:2 (1976), pp. 132–155; *idem*, "Chinese Pioneering in Eighteenth-Century Southeast Asia", in Anthony Reid (ed.), *The Last Stand of Asian Autonomies: Responses to Modernity in the Diverse States of Southeast Asia and Korea, 1750–1900* (London, 1997), pp. 83–102; Leonard Blussé, "Chinese Century: The Eighteenth Century in the China Sea Region", *Archipel*, 58 (1999), pp. 107–129, 121–128.