

A Global Commodity within a Rising Empire:

The History of Bengali Raw Silk as Connective Interplay between the Company *Bahadur*, the Bengali Local Economy and Society, and the Universal Italian Model, c.1750 – c.1830

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Bengali raw silk and its global context

It is a well established fact that from the Middle Ages to the Early Modern period raw silk production gradually moved westward from China to Europe; less known is the fact that from the mid-eighteenth century raw silk technologies moved back from the West to the East.

In the sixth century Byzantium imported the technology to produce raw silk from China and developed an autonomous silk industry.¹ Later on, favoured by the Islamic expansion, sericulture developed in Gilan and in other areas close to the Caspian Sea, and Persia became a stable exporter of raw silks and silk textiles. From the shore of the Eastern and Southern Mediterranean, silk production spread into Europe. In the beginning an importer of raw silk from the East, Mediterranean Europe became an autonomous producer in the fifteenth century and the European silk textile industries, especially the Italian ones, started to flourish. In the sixteenth century, northern European countries (France, England and Holland) began to import silk threads from Mediterranean Europe and Persia in order to supply their rising silk textile industries.

Up to the end of the fifteenth century, the trade between Europe and the East was overland, and raw silks produced in China, Persia or Turkey had to travel along the caravan routes to be shipped in the Eastern Mediterranean ports. Once the Cape Route had become well established during the sixteenth century, the Europeans were able to leave the turbulent overland routes in the Safavid and Ottoman Empires for the new sea route in order to transport raw silk from East to West. From the end of the sixteenth century the Dutch and the English Companies tried to import silk from Persia using the ports of the Safavid Empire in the Indian Ocean.² However, the political turmoil that characterised that area in the second half of the seventeenth century made the Companies' plans unfeasible. In the meanwhile, commercial agents of the English and Dutch Companies had discovered the productive potentialities of Bengal – a place where commercial sericulture had been introduced in the first half of the sixteenth century during the Islamic political expansion in the eastern part of

¹ Robert Sabatino Lopez, 'Silk Industry in the Byzantine Empire', *Speculum*, 20:1 (Jan. 1945), pp.1-42.

² Niels Steensgaard, *The Asian Trade Revolution of the Seventeenth Century. The East India Companies and the Decline of the Caravan Trade*, Chicago: University of Chicago Press, 1974; Linda K. Steinmann, 'Shah Abbas and the Royal Silk Trade 1599-1629', *Bulletin of the British Society of Middle Eastern Studies*, 14:1 (1987), pp.68-74; R. W. Ferrier, 'The Armenians and the East India Company in Persia in the Seventeenth and Early Eighteenth Century', *Economic History Review*, 26:1 (1973), pp.38-62.

the Indian sub-continent – and settled there in order to trade in Bengali raw silk and silk textiles.³

During this first wave of globalisation, the production and marketing organisation of silk in Bengal was based on certain specific and originally integrated features. In a number of specialised villages scattered throughout the north-western part of the region independent peasants cultivated mulberry on their small plots of land, reared silk worms and reeled raw silk (*Putney*) within their households. In Kasimbazar, the principal market for raw silk, the *dadni* merchants – a local community specialised in the intermediation between the producers and the exporters of raw silk and silk textiles – received the advances from Asian and European export merchants and distributed them to the village producers. Then, at harvest time, they collected raw silk from the peasants and brought it to the manufactories (*arang*), where the export merchants could get the raw silk rewound and sorted by native artisans before sending it to their home markets. Although this production and marketing organisation was successful and effective, supplying the global market with increasing quantities of raw silks until the 1740s, the favourable trend was interrupted in the mid-eighteenth century, when the Bengali silk sector faced a crisis in production and supply.⁴

In the 1740s, the Maratha regularly invaded the western districts of Bengal with the explicit intention to intrude in their economic life and destroy their silk production.⁵ Moreover, the English East India Company – in the first half of the century, the main European exporter of Bengali raw silk – had discovered that Bengali raw silk was too un-standardised and that the finishing necessary to make it marketable in England made it too expensive and its use too limited for the English silk industry.⁶ Bengali raw silk had two defects that made it unsuitable for the European markets: the presence of different sorts of threads in the same skein; and the fact that the Bengali artisans did not cross the filaments of the cocoons when they reeled silk, as a result of which the thread did not possess the roundness and lightness indispensable to produce good thrown-silk (*organzine*).⁷

In the mid-eighteenth century, the Court of Directors realised that, in order to increase the sales of raw silks imported from Bengal, it had to change drastically the traditional Bengali reeling technology. The Company thought that both the introduction of the Piedmontese reeling machine, which performed the crossing of the silk filaments, and forcing artisans to work in the Company's filatures, which permitted a better control of their work, would solve all the problems Bengali raw silk had met in Europe. For this reason, when the Company gained political control of the province, the Court of Directors decided to take the radical step of *modernising* the Bengali silk industry by imposing the most advanced European methods upon the Bengali producers. In 1769, the Company contacted three Managers – an Italian, a Frenchman and an Englishman, all well acquainted with the use of

³ Om Prakash, *The Dutch East India Company and the Economy of Bengal 1630-1720*, Princeton: Princeton University Press, 1985; K. N. Chaudhuri, *The Trading World of Asia and the East India Company 1660-1769*, Cambridge: Cambridge University Press, 1978.

⁴ Rila Mukherjee, *Merchants and Companies in Bengal: Kasimbazar and Jugdia in the Eighteenth Century*, New Delhi: Pragati, 2006.

⁵ For a contemporary Bengali description of the Maratha invasions, see Edward C. Dimock & Pratul Chandra Gupta, *The Maharashtra Purana. An Eighteenth-Century Bengali Historical Text*, Honolulu: East-West Center Press, 1965.

⁶ *Reports and Documents connected with the Proceedings of the East India Company in regard to the Culture and Manufacture of Cotton-wool, Raw-Silk and Indigo in India*, London, 1836, p.i.

⁷ On the evolution of the commercial characteristics of the silk threads, see Carlo Poni, 'Misura contro misura: come il filo di seta divenne sottile e rotondo', *Quaderni Storici*, 47 (Aug. 1981), pp.385-423.

the Piedmontese reeling machine and the management of the filatures – and a group of experienced French and Italian reelers in order to introduce and teach the new method of reeling to native artisans.

The introduction and spreading of the Piedmontese reeling method brought about a revolution in both Bengali cottage productions and marketing organisations of raw silk. The method involved a complete substitution of the pre-existing reeling technology and a complete change in the labour conditions of the Bengali peasantry. The new method also brought about significant transformations in the daily working life of the Company's factories. The requirements of the new reeling machine and the organisation of work in the filatures created many problems for the Servants in charge of the Company's raw silk investment. They were dealing with a new comprehensive system of sericulture and raw silk production derived from actual Piedmontese models, including radically new technologies, reformed management and work organisation, quality control and overall supervision of production according to rigorous standards of efficiency.

This paper deals with the difficulties the Company's Servants met in their attempts to introduce and spread the new method, and the solutions they adopted to solve these. In particular, it illustrates the problems the Company's Servants had in obtaining cocoons from the peasants and the problems they had in managing the filatures where raw silk was to be produced according to the new Italian method.

The Piedmontese Model as a universal model

As mentioned above, in the mid-eighteenth century the commercialisation of exported Bengali raw silk operated within a long established and very lively, highly competitive and fast expanding global and interconnected market for raw silk and silk products, linking scores of specialised production areas spread all over the Euro-Asian continent. In this market, rules and quality standards were well defined and the high value-added content per unit weight of raw silk rendered long-distance transport costs a rather minor hindrance for far-away silks to be traded in the main exchange centres. Competition in price and in quality was therefore unrelenting and, at the same time, silk-fabric production centres were rapidly multiplying, generating everywhere a growing trend in the demand for silk threads.

The fact that the Europeans were well aware of the scope and the goal of the Company shows how the silk market was globally interconnected in the eighteenth century; Mediterranean producers of lower quality raw silk anxiously watched the British experiment in Bengal. A first wave of panic was experienced in the 1780s by areas as diverse as Lombardy, the lower Rhone valley, Calabria and Valencia when it became clear that improved Bengali raw silks were driving equivalent Mediterranean low quality silks out of the London market.⁸ A similar wave of panic took place in late 1820s.

Another indication of the global character of the silk market is the fact that plans to circumvent the Piedmontese semi-monopolisation of high quality raw silks, similar to the one attempted by the Company in Bengal, were put in practice in several other parts of the world

⁸ Angelo Moioli, *La gelsibachicoltura nelle campagne lombarde dal seicento alla prima metà dell'ottocento. Parte Prima. La diffusione del gelso e la crescita produttiva della sericoltura*, Trento: Libera università degli studi di Trento, 1981.

during this time. British merchants and administrators attempted to introduce Piedmontese regulations and upgraded reeling machinery in their American colonies (Georgia and Virginia), while others tried to convince Persian producers on the Caspian Sea coast to upgrade their obsolete reeling machinery. For their part, the French authorities embarked upon a long and costly programme of supporting the *Manufactures Royales* in Midi France in order to spread technologies and methods of silk production as close as possible to those of Piedmont. In the same period, similar costly amelioration programmes were enacted in the important area of Trés-Os-Montes in North Portugal, where Piedmontese reeling technology was introduced to supply good raw silks to the hydraulic mill built in the city of Chacim.⁹ Similar strategies were also followed in the Duchy of Parma, in Calabria, in Valencia, in Budapest, in the Austrian side of Friuli in North-Eastern Italy and even in Egypt.

On the one hand, all these instances suggest the idea that, in this global and interconnected world, Piedmont represented an ideal model with a universal capacity to ameliorate and modernise local production: a model that was acknowledged even in the eighteenth century's compendium of advanced technological knowledge, the *Encyclopedie* of D'Alembert and Diderot.¹⁰ On the other hand, the mild to disappointing outcome of these experiments and the enduring Piedmontese dominant position in the field, broken only in the 1840s, point to the high degree of relevance the locally, historically determined and culturally constructed contexts of production had upon the outcomes of the application of hegemonic, universalistic principles of modernisation.¹¹

From town to countryside. The historical trajectory of Italian raw silk

In any analysis of global interconnecting processes, a comparative approach is necessary to understand and put in the same theoretical framework geographically distant regions possessing very different historical trajectories and cultural traditions. A comparative approach may also help to contextualise more precisely the problems the Company's Servants met in putting their plans into practice. Indeed, this was something that the Servants themselves practiced in their dealings with the peasants and in their experiments in reeling within the factories' precincts: comparing their theoretical knowledge of the Piedmontese model with their experience in the local context, in an attempt to understand their failures and correct their mistakes.

⁹ The Portuguese instance is particularly relevant in the sense that it saw the establishment of a partnership between the Portuguese government and an important dynasty of Piedmontese silk merchants, the Arnaud, who were contacted in the 1770s by the Portuguese ambassador in Turin, and moved to the town of Chacim in North Bengal, where till the 1830s they attempted with little success to introduce modern Piedmontese sericulture and reeling technologies. On this, see José M. Lopes Cordeiro, 'The Royal Silk Twisting Mill of Chacim (Portugal)', *Textile History* 23 (1992), pp. 177-198; Fernando de Sousa, 'The Silk Industry in Trás-Os-Montes during the Ancient Regime', *Journal of Portuguese History*, 3 (2005), pp.1-14.

¹⁰ For an analysis of the technical characteristics of the Piedmontese model, see Claudio Zanier, 'L'evoluzione delle tecniche di trattura e di torcitura della seta in Europa nei secoli XVII e XVIII: modello cinese o modello sabauda?', in Simonetta Cavaciocchi (ed.), *La seta in Europa Sec. XIII-XX*, Florence: Prato, 1993, pp. 363-366. See also Francesco Battistini, 'Origini e fortuna di un'innovazione: la "bacinella alla piemontese" per la trattura della seta (secc. XV-XVIII)', *Nuova Rivista Storica*, 81:1 (1997), pp.19-100.

¹¹ On the heuristic fecundity of seeing global history as an interaction between universals and locals, see A. G. Hopkins (ed), *Global History. Interactions between the Universal and the Local*, New York: Palgrave Macmillan, 2006.

In Italy, the gradual process of diffusion of sericulture and the parallel developments in reeling technologies can be divided into two phases. During the first phase, from the twelfth until the late sixteenth century, sericulture and reeling technologies developed under the stimulus of the flourishing silk-textile industries of the Italian towns. This was a period during which the Italian silk textiles were in great demand all over Europe. First Lucca, and then Florence, Genoa, Venice, Milan, Bologna and many other Italian cities, became leading industrial centres of silk textiles serving the European markets.¹² It is worth stressing the fact that in the beginning, mulberry cultivation and silk worm rearing were located in the vicinity of the urban centres, if not within town walls.¹³ With the growing demand for raw silk by the urban silk textile industries, these two first stages of the silk-production cycle moved into the countryside; and by the end of the fifteenth century mulberry cultivation and silk-worm rearing were lasting and important elements of Italian agriculture.¹⁴

From the mid-seventeenth century, a second phase began in the diffusion of sericulture and reeling technologies in Italy. With the rise of the North European silk-textile industries in Lyons, Paris and London, Piedmont reoriented its silk economy and focused on the production of silk threads for these new textile industries.¹⁵

While the third stage of the silk production cycle, the reeling of cocoons, remained an urban activity in most of southern and central Italy, from the mid-seventeenth century a gradual process of relocation from town to countryside took place in Piedmont. Along with it came a parallel process of concentration of the labour force in industrial working places known as 'filatures', located in the countryside close to the peasants' settlements where sericulture was practiced.

The two processes were the result of many different contributions. From the urban centres the merchants moved to the countryside in search of a cheaper labour force and new sources of raw material to cope with the increasing demand for raw silk threads. The increasing importance of silk also attracted the interest of the major landlords – most of them resident in the capital and connected with the King's court – who tried to obtain a share of the profits derived from the flourishing economic sector by both supporting and forcing the introduction of sericulture in their lands. Finally, the protectionist policies of Piedmontese governments helped make the production of raw silk the leading economic sector of the country.

¹² See Luca Molà, 'L'industria della seta a Lucca nel tardo Medioevo: emigrazione della manodopera e creazione di una rete produttiva a Bologna e Venezia', in Cavaciocchi (1993), pp.435-444.; Luca Molà, *The Silk Industry of Renaissance Venice*, Baltimore & London: Johns Hopkins University Press, 2000; Paolo Grillo, 'Le origini della manifattura serica in Milano (1400-1450)', *Quaderni Storici*, 35 (Oct-Dec 1994), pp.897-916.

¹³ Mario Bettelli Bergamaschi, "'Morarii'" e "celsi": la gelsicoltura in Italia nell'alto medioevo', *Nuova Rivista Storica*, 73:1-2 (Jan.-Apr. 1989), pp.1-22; Patrizia Chierici, 'Una città della seta: industrializzazione e trasformazioni urbane in Racconici tra Sei e Settecento', *Storia Urbana*, 6:20 (July-Sept. 1982), pp.3-44; Laura Palmucci Quaglino, 'Gli insediamenti proto-industriali in Piemonte tra sei e settecento: aspetti localizzativi e scelte tipologiche', *Storia Urbana*, 6:20 (July-Sept. 1982), pp.47-75.

¹⁴ Francesco Battistini, 'Un esempio di protoindustria: le prime fasi della produzione di sete nelle campagne lucchesi del settecento', *Società e storia*, 9:41 (July-Sept. 1988), pp.535-558; 'La diffusione della gelsibachicoltura nell'Italia centrosettentrionale: un tentativo di ricostruzione', *Società e storia*, 15:36 (Apr.-June 1992), pp.393-399; 'La gelsibachicoltura e la trattura della seta in Toscana (secc. XIII-XVIII)', in Cavaciocchi (1993), pp.293-299; *Gelsi, bozzoli e caldaie. L'industria della seta in Toscana tra città, borghi e campagne (sec. XVI-XVIII)*, Florence: Olschki, 1997; Paolo Malanima, *La decadenza di un'economia cittadina. L'industria di Firenze nei secoli XVI-XVIII*, Bologna: Il Mulino, 1982; *La fine del primato. Crisi e riconversione nell'Italia del Seicento*, Milan: Bruno Mondadori, 1998; Bruno Caizzi, *Storia dell'industria italiana dal XVII secolo ai giorni nostri*, Turin: Utet, 1965; Moioli (1981).

¹⁵ See G. Chicco, *La seta in Piemonte. 1650-1800*, Milan: Franco Angeli, 1995.

Between the 1670's and the 1830's silk production in Piedmont was directed by the interests of a single political and economic actor. This was a group of merchants and financiers supported by the government, who controlled all elements of the system: the production and marketing of cocoons; and the production and export of silk threads. In the capital, major export merchants and owners of filatures and hydraulic silk-twisting mills, whose only interest was in trading the *organzino*,¹⁶ financed most cocoon production, giving advances to the peasantry in the winter season and receiving cocoons at the beginning of the following summer. Any further cocoons required were bought at the end of the harvest season in the main rural markets. The *commune*, the price the cocoons fetched in all rural markets, equalled what the peasants received as advances in winter for their cocoons. But this was not a market price; rather, it was the one dictated by the merchants, who were able to regulate their purchases of cocoons in the rural markets on the basis of the knowledge, available only to them, of the current demand for silk thread in the international markets of Lyon and London. In Piedmont only the best cocoons went to the filatures, and these then supplied raw silks to the hydraulic mills where they were twisted into *organzino*. Second-rate cocoons went to smaller rural manufacturers; while some did not reach the market, but were reeled in the peasants' houses. These coarser raw silks were then twisted into *trama* (weft) in the old hand mills and then exported to Lyon and London, or used in the local textile industry. The government of Piedmont supported this bipartite division of the system, on the one hand protecting the export of quality silk threads with a ban on the export of raw silks; and on the other, discouraging local textile industries, only interested in the inferior quality threads. Moreover, the government controlled the quality standard of raw silk production by monitoring the professional level of the artisans with regulations and regular visits by government agents to the filatures and the hydraulic mills. In Piedmont, everything was done to support the production and export of the finest quality silk threads.¹⁷

Bengali raw silk production as a free and independent peasant activity

The less technologically refined production in Piedmont did not develop any structural friction with the more advanced production. In comparison, the result of the importation of Piedmontese technologies to Bengal was very different, resulting in a complicated and confused conflict between the original Bengali cottage system and the new Piedmontese filature system, overlapping and intermixing as well as causing friction and tension because of the widely differing interests of the players involved.

While the process of the diffusion of sericulture and cocoon reeling in Italy was primarily urban, in Bengal it was rural. In mid-eighteenth century Bengal, sericulture and production of raw silk for the global market were relatively new rural activities. Commercial sericulture was introduced in the province in the first half of the sixteenth century, under the last sultans of the Husain Shai dynasty, and its production rapidly accelerated during the seventeenth first half of the eighteenth century under Mughal and Nawabite rule.¹⁸ Unlike the gradual passage of sericulture from an urban to a rural setting supported by hegemonic sectors of urban society in Italy, Bengali raw silk production continued to be part of an independent

¹⁶ Organzino was used as warp for making the finest quality silk textiles,

¹⁷ For a complete analysis of the evolution of the silk sector in Piedmont, see Chicco (1995); Mukherjee (2006).

¹⁸ Mukherjee (2006). See also Lotika Varadarajan, 'Silk in Northern and Eastern India: The Indigenous Tradition', *Modern Asian Studies*, 22:3 (1988), pp.561-570.

peasant economy. During the Mughal and the Nawabite period, the State was mainly interested in the revenues from the land and those derived from the imposition of duties on the circulation of goods; peasant production as such was not one of its interests, so much so that when the Governors paid attention to sericulture, they were more interested in imposing higher tributes on mulberry lands and duties on the internal circulation and exportation of raw silk and silk textile than to improving silk production. Further, the merchants and the bankers did not intervene in the organisation of peasant labour, limiting their role to the marketing and export of raw silks.¹⁹ Finally, the major landlords – the *zamindars* and *talugdars* – were not directly involved in sericulture, preferring to cultivate rice in their private demesnes and collect taxes from the peasants (*rayats*) on behalf of the government.²⁰ As far as raw silk was concerned, Bengali peasants were free independent producers.²¹

Italian and Bengali sericulture were different in another important respect. In Italy sericulture was a marginal, low intensity activity. The peasants faced only one harvest of cocoons and the silk season went from April to July-September. Mulberry was cultivated on the edges of the fields or intermixed with other crops, while there was no plantation dedicated solely to mulberry and no need to specialise a plot of land in that activity. Moreover, the mulberries were permitted to grow as a tree and did not need much care for most of the year. In comparison, Bengali sericulture was an intensive activity requiring a great amount of capital and labour inputs. The peasants harvested cocoons four or five times in a year, the mulberry was cultivated on the best lands and its cultivation was intensive, with all members of the family involved.²² Thus when Bengali peasants began this activity, their choice was much more binding than that of their Italian counterparts, well-aware that they were going to engage the totality of their familial labour force over a long period. Moreover, in making the decision to enter the silk sector, the peasants had to take into consideration the fact that they were going to use part of their best land – land that could be cultivated with alternatives such as rice or other commercial crops – and they needed an up-to-date knowledge of the benefits of producing silk compared to other possible choices.

The next stage of the operation, reeling, was also under the control of the peasants, who at this point had two options: they could either have their cocoons reeled within the familiar network (by the women of the family); or they could have them worked in *Putney* by the *Cuttani*, the reelers visiting the village market (*hath*) during the harvest season. Only after the cocoons were reeled in *Putney* would the peasant deliver them to the merchant's agents, and only when the merchants had the *Putney* rewound and sorted by the winders (*nacauds*) in

¹⁹ In general, the interregional and international trade during the first half of the eighteenth century was carried out by foreign merchants. Gujarati, Multani, Patan, Armenians and Europeans were the principal exporters, while the community of the Bengali *dadni* merchants specialised in the intermediation between the exporters and the producers. See Mukherjee (2006).

²⁰ On the Zamindars' interest in cultivating rice instead of 'commercial crops' on their lands, see Rajat Datta, *Society, Economy and the Market. Commercialization in Rural Bengal c. 1760-1800*, Delhi: Manohar, 2000.

²¹ See Harbans Mukhia, 'Was there Feudalism in Indian History?' in Hermann Kulke (ed.), *The State in India, 1000-1700*, Delhi: Oxford University Press, 1997, pp.86-133; David Ludden, *Peasant History in South India*, Princeton: Princeton University Press, 1986.

²² Before the introduction of the Piedmontese technology, the peasants, after having received the advances from the agent of the exporter merchants, started the cultivation of the mulberry with which when grown, the women and younger members of the family fed the silk worms. The ideal conditions for mulberry cultivation were highly fertile lands close to the settlement and water reservoirs in order to facilitate both the watering of the plants and the transport of the leaves from the plantation to the huts, where cocoons were reared.

the manufacturing centres (*arang*), could they know the exact value of what they had bought.²³

In other words, the peasants had complete control over all stages of production until the *Putney* was delivered to the merchant. There is no indication that this method of organisation of raw silk production was subjected to internal transformations during the first half of the eighteenth century.²⁴ The only examples of transformation for which we have certain evidence relate to the stages of production under the control of the merchants – the rewinding and the weaving, in which export merchants concentrated under their direct control large numbers of *nacauds*. The first three stages of the process (mulberry cultivation, cocoon rearing and raw silk reeling) remained substantially under the control of the peasants and within the realm of the peasant economy. Further, under the traditional Bengali cottage organisation, the peasants had complete autonomy over the quality they wanted to achieve. They decided whether to obtain a fast-reeled coarse silk, or a finer quality manufactured through slower and more accurate reeling. These decisions were influenced by factors they were aware of: first, the original quality of the cocoons, which depended mostly on meteorological factors that influenced both the cultivation of mulberry and the rearing of cocoons; second, the market trends. They knew the demand from the different communities of raw silk exporters, a demand that varied in relation to the place where the silk was subsequently woven.

Sericulture and forced commercialisation

It has been argued that the Company was successful in conquering most of the Bengali sericulture through a commercialisation process imposed upon a subsistence peasant economy by making it dependent on usury capital. According to this interpretation, from the 1790s onwards, the peasants were forced to sell the cocoons to the Company's agents at a very low price that they were compelled to accept because they had to pay higher and higher land rents. The low price the Company offered served both its interest in producing raw silk at the lowest cost, and its interest in keeping the peasants dependent on its agents by means of a debt-bond created by the advances. Finally, a logical conclusion of this interpretation would be that the peasants had no alternative market relation except the one with the Company.²⁵

Dependence, subsistence, usury and the absence of any link with the market are the main signs of a process of forced commercialisation of a rural economy. These have been used by Immanuel Wallerstein to explain how, during the colonial period, large sectors of Indian agriculture were incorporated into the world capitalistic economy and forced to produce for core European economies.²⁶ However, recent analyses have put into question this

²³ George Williamson, *Address to the Court of Directors, together with his Proposals to them for improving the Manufacture of Silk in Bengal, so as to preclude the Necessity of importing Raw silk into England from Italy, Turkey, etc.*, London, 1775, pp.15-18; N. G. Mukerji, *Monograph on the Silk Fabrics of Bengal*, Calcutta: Bengali Secretariat Press, 1903, p.23.

²⁴ Mukherjee (2006).

²⁵ Bashkar Mukhopadhyay, 'Orientalism, Genealogy and the Writing of History: The Idea of Resistance to Silk Filature in Eighteenth Century Bengal', *Studies in History*, 11:2 (1995), pp.189-226. In particular, Mukhopadhyay argues that "the Company alone issued cash advances to the chassars in regular instalments and by virtue of these advances would try to buy silk at absurdly low prices without any reference to the market price" (p.211).

²⁶ Immanuel Wallerstein, *The Modern World-System III: The Second Era of Great Expansion of the Capitalist Economy, 1730-1840*, New York: Academic Press, 1989. See also: Ravi Palat *et al.*, 'The Incorporation and Peripheralization of South Asia, 1600-1950', *Review*, 10:1 (Summer 1986), pp.171-208.

universal capacity of the forced commercialisation thesis to explain both the peasants' economic condition and the transition from pre-colonial to colonial economies. Some revisions have portrayed a more detailed picture of the peasants' conditions and a more accurate understanding of the different phases of the commercialisation process of Indian agriculture during the colonial period, thus emphasising the active and autonomous role local economies and societies had in dealing with political and economic Western interests.²⁷ Benoy Chowdhuri has recently argued that, in general, it is possible to interpret the Bengali peasants' decision to enter into or to exit from the commercial sector as attempts to allocate their resources (the land and the labour force within the household) in the best possible way; in other words, as attempts by the peasants to improve their economic conditions.²⁸

On many occasions during the early colonial period, the Bengali mulberry cultivators demonstrated this capacity for bettering their economic conditions, entering the silk sector when the price of other crops was low and abandoning that production as soon as other alternative crops offered them more favourable opportunities. For instance, at the beginning of the 1780s, those peasants who in the previous decade had entered the silk sector because of the Company's interest in their cocoons and the still high demand for *Putney*, autonomously took the decision to stop their involvement in silk. The war between France and the American colonies was felt in India, and the Company practically stopped its investment in silk. At the same time, there was a rice shortage in Northern India, leading to a rise in the price of Bengal rice. This resulted in most of the mulberry cultivators reconverting their lands, and starting the cultivation of rice.

The Company's chronic problem in procuring cocoons

With the new and unfamiliar filature system introduced by the Company, peasants were supposed to deliver their best cocoons to the Company's filatures. However, on the one hand they were always reluctant to sell them to the Company; while, on the other, any attempt by the Company's Servants to control directly the organisation of peasant labour was a failure. As a result, throughout the period the Company continually had to deal with the problem of procuring cocoons for their filatures. I will analyse this issue from two distinct perspectives: first, from the point of view of the peasants, with the purpose of understanding the economic rationality behind their behaviour in dealing with Company's agents; and second, I will consider the political economy the Company's Servants adopted in order to convince the peasants to sell their cocoons instead of producing raw silk.

Boughton Rous, the Revenue Collector of Rajshai, explained in 1771 the reluctance of the peasants to sell their cocoons to the Company's filatures, by the fact that they received a higher price in selling their production as *Putney* to the agents' merchants. According to Rous, the reluctance of the peasants depended on the fact that they could more efficiently employ the labour resources of their families by producing *Putney* instead of cocoons, and he concluded his letter arguing that the Commercial Residents could convince the peasants only

²⁷ David Washbrook, 'South Asia, the World System, and World Capitalism', *Journal of Asian Studies*, 49:3 (Aug., 1990), pp.479-508; Sugata Bose, *The New Cambridge History of India. III: 2. Peasant labour and Colonial Capital. Rural Bengal since 1770*, Cambridge: Cambridge University Press, 1993: pp.38-45.

²⁸ Benoy Chowdhury, 'The Process of Agricultural Commercialization in Eastern India During British Rule: A Reconsideration of the Notions of Forced Commercialisation and Dependent Peasantry', in Peter Robb (ed.), *Meanings of Agriculture. Essays in South Asian History and Economics*, Delhi: Oxford University Press, 1998: pp. 71-91.

by offering them a higher price.²⁹ In other words, it seems that peasants were able to relate the market price of *Putney* to the quantity of labour their family could employ in sericulture. Moreover, the fact that *Putney* was always in demand gave them the opportunity to negotiate the price of their cocoons with the Company, through an independent calculation of the relative costs and benefits.³⁰

The speculative acumen of the peasants in negotiating the price of their cocoons with the Company was soon experienced by the Servants. In the first experimental period, in the early 1770s, when the Company was trying for the first time to overcome the reluctance of the peasants to sell their cocoons, the Controlling Committee of Commerce suggested offering them the same price they would receive if they had sold their production as *Putney*. In July 1771, the Committee was arguing that:

the chassars who rear the worms will always be ready to supply them at the market price of *Putney* as their labour to bring them into that state is entirely saved and may be employed in rearing the worms and encouraging the growth of the Mulberry Plantations.³¹

But, in a context with so many competitors interested in the traditional silks, the decisions reached by the Committee produced exactly the opposite result. In fact, when the Company made a deal with the peasants at the beginning of the harvest season (*bund*), and offered advances regulated by a price for the cocoons equal to the one that *Putney* fetched at that moment, the real trend of the season was not yet known by the Company.³² In actual fact, during the final part of the same harvest season, when more agents of the Indian merchants were ready to buy their *Putney* and were offering higher prices for it, the peasants could start to speculate and ask the Company's agents for a higher price for their cocoons. Thomas Pattle, the Resident of the Factory of Baulea, wrote to the Committee of Circuit in November 1772 saying that one of the reasons for the rise in the price of cocoons was the decision taken by the Controlling Committee of Commerce the year before, arguing that it was sufficient to have someone in the village who was selling *Putney* instead of cocoons to start the speculative trend.³³ The peasants were playing the two markets off against each other: that old one for traditional silks; and the modern one created by the Company.

²⁹ West Bengal State Archive (WBSA), CCC, Prcds 12 February 1772. Letter from the Broughton Rous, Supervisor of Rajshay to Council of Revenue at Moorshedabad, 5 November 1771. From a measure of 4800 cocoons (a *khaun*) a peasant, having the cocoons reeled by someone within the family, could produce *Putney* for a value of 3 Rupees, while in that period the Company paid for the same quantity of cocoons only 1 rupee and 8 annas. Thus peasants could gain between 25% and 50% more selling *Putney* instead of cocoons.

³⁰ The idea that peasants living at the subsistence level could maximise productivity by using the labour resources of their family is crucial for the characterisation of an involutory process of 'subsistence commercialisation' in rural contexts where demographic and social pressures drive the peasantry to turn to the cultivation of high value and labour intensive cash crops in an attempt to supplement a diminishing income from smaller plots of lands. See Philip Hung, *The Peasant Economy and Social Change in North China*, Stanford: Stanford University Press, 1985, pp.121-37; and *The Peasant Family and Rural Development in the Yangzi Delta*, Stanford: Stanford University Press, 1990. Also Sugata Bose (1993), pp.41-42; and David Washbrook, 'India in the early modern world economy: modes of production, reproduction and exchange', *Journal of Global History*, 2 (2007), pp.87-111. Washbrook characterises the Indian economy as framed by "subsistence-via-exchange", though he seems to refer more to the economy of rural artisans (weavers, spinners etc.) rather than to peasants.

³¹ WBSA, CCC Vol. I, Prcds 11 July 1771. Letter to Cossimbazar.

³² The Company had to start to negotiate with the peasants at the beginning of the season, giving them advances in order to be able to buy up the greater part of the harvest before the others competitors came.

³³ WBSA, CCC, Vol. 2, Prcds 18 November 1772.

In general, the Company was only able to refine the purchase of the majority of cocoons of each harvest. However, the Servants were not able to control directly either the quality or the price of what they bought, and they often had the impression that the peasants used the best part of their cocoons to produce *Putney*.

Where the demand for traditional silks was high – as, for example, in the area around Kasimbazar – the Resident always had to take into consideration the price of the *Putney* to bargain for the price of the cocoons with his intermediaries. In March 1817, the Resident of Kasimbazar explained to the Board of Trade the reasons why he could not exercise any kind of effective control over the prices of the cocoons. He said that he could not impose his price on his intermediaries because the prices of cocoons in the *Aurungs* – the manufacturing centres in the countryside where the Resident had his agents and his warehouses to store the cocoons – “invariably fluctuate according... to the degree of competition encountered from the contending interests of rival traders.” He tried to convince the Board that without allowing the factory intermediaries a higher price they would refuse to work. At the same time his intermediaries, in a petition sent to the Resident, underlined the difficulties of working in an area where the traditional demand was so high:

Cossimbazar is a Putney Aurung where merchants and weavers equally purchase their thannah [warp] thread. We like others are obliged to consult the market and buy cocoons accordingly.

To reach an agreement with the intermediaries and to be able to make an investment of raw silk for the March bund, the Resident had to acquire more information about the situation of the local market and to compare the price of *Putney* there, with the cocoon price the intermediaries had proposed to him. Thus, he wrote to the Board:

the Resident and his Gomastah by frequent trials and enquiries [on the Price of Putney and Tannah Thread] in the Aurung markets from time to time during the bund equally ascertain the sale value of the cocoons, and thus draw an estimated average for the entire Bund.³⁴

This phenomenon was not limited to the neighbourhood of the Kasimbazar Factory; in fact, it was typical of most of the factories the Company had in the sericulture areas of western Bengal. For instance, in those years the Gonatea Factory, with a productive capacity of 1,200 reeling machines, was the Company’s biggest filature (and possibly the largest in the world at this time), and the Resident of Soonamooky, John Cheap, who was responsible for the Gonatea filature, was used to fixing the cocoon price in relation to the price *Putney* fetched in the bazaars of Kasimbazar.³⁵

The prudent attitude of the East India Company’s political economy (1770s – 1820s)

In trying to understand the economic behaviour of the peasants in their dealings with the Company, as well as the obstacles the Servants met in attempting to convince them to sell cocoons, it is crucial to underline the fact that in the early colonial period the economic conditions of the Bengali sericulture areas were very different, in one fundamental respect, from those in Piedmont. In Bengali sericulture areas there was a relative scarcity of labour in

³⁴ WBSA, BoT (Comm) Prcds 21 March 1817. Letter from Cossimbazar, 11 March 1817.

³⁵ WBSA, Bot (Comm) prcds 11 September 1821, Letter from Soonamooky, John Cheap, 30 August 1821.

relation to the land available, whereas in Piedmont there was a scarcity of available, good quality land fit for the cultivation of mulberry and a relative abundance of agrarian labour.³⁶ This led to a very different social and economic background for putting into operation the modernisation plan of Bengali sericulture, and reduced the effective power of the Company in controlling the producers in comparison with that of the Piedmontese government.

In Bengal, the incursions of the Maratha in the 1740s, the famine of 1768-1769, and the intensive floods of 1787 hit silk areas particularly hard. In 1769, the year the Company decided to introduce the new method of reeling cocoons, the famine had taken away one third of the agrarian population of Bengal.³⁷ However, the recovery of the Bengali rural economy and society was impressive, and by the 1820s the demographic situation was completely reversed.³⁸ It might be asked what role the Company had in this process.

In the pre-colonial period, while the use of force to settle the peasants in particular places might have been considered by the rulers as a last resort to be adopted only in the face of explicit and evident peasant rebellions, in Bengal the role of the State in controlling the movement of the peasants and enforcing regulations on them was always cautious, and informed by a politics of prudence. That was especially true in times of emergency, as was the case after scarcity, famine or depopulation brought about by wars. The East India Company inherited this prudent approach. According to recent revisions the recovery from the famines of the 1770s and 1780s was supported by prudent politics of protection and inducement such as low rents and cash advances (*taqavi*) adopted by the government. Moreover, even if the Regulations introduced by the Permanent Settlement of 1793 conferred to landlords considerable powers of eviction, they could not use them and had to adopt similar prudent policies in order to limit the mobility of the cultivators or to attract new ones into a specific area.³⁹

Limiting our observations to the silk areas, in the early 1770s the Company's Servants were well aware of the fact that the depopulated conditions of the Bengali countryside, caused by the famine, were the real obstacle to their plan to modernise Bengali sericulture. Some of the Servants thought that it would be possible to exercise direct control over the peasants, and that the government could force the peasants to move to the depopulated areas and then make them pay them in cocoons. Others supported the radical idea of asking for land from the *Zamindars* and *Talucqdars* in the neighbourhood of the factories, moving the peasants there, and forcing them to cultivate mulberry and rear silk worms. At the end of a long debate that involved both the Commercial Department and the Revenue Department, it was decided to set aside all these drastic solutions and to listen to the cautious suggestion of the *Naib Dewan* Muzzafar Khan, who, in a letter written at the end of 1771, argued that any kind of coercive measure, applied to the present conditions of the countryside, was destined to be a failure and would have as the only sure outcome the flight of the peasants from the fields. Muzafhar Kahn concluded his remarks suggesting that:

the Cultivators of the Mulberry Plants and Breeder of the Silk Worms should be only encouraged and protected so that knowing their own interest and [the]

³⁶ In Piedmont in the mid of the eighteenth century there were very few new areas of sericulture and these were located on marginal lands, particularly on the hills close to the Alps (Chicco 1995).

³⁷ B. B. Chaudhuri, 'Agriculture Growth in Bengal and Bihar, 1770-1860. Growth of cultivation since the famine of 1770', *Bengal Past and Present* (Jan.-June 1976), pp.290-340.

³⁸ The Bengal population grew from 22 million in 1789, to 37.6 million in 1822: an increase of 170.9 % (Bose 1993, pp.19-20).

³⁹ Bose (1993), pp.115-116; Datta (2000).

welfare [of the Company] to consist in this branch they would apply themselves with the greatest industry towards its increase and become plentiful and cheap...⁴⁰

The suggestion of Muzzafar Khan was accepted *in toto*; and so, in August 1772, the Committee of Circuit established that, in order to increase the mulberry cultivations and to make peasants understand that the Company was seriously interested in that particular sector of the peasant economy, the government would introduce a policy of fair incentives. In the regulations framed by the Committee of Circuit it is explicitly affirmed that force would never be exercised to coerce the cultivators to cultivate mulberry and sell the cocoons to the factories' agents. Also, the government would give particularly favourable rents to those who decided to enter the sericulture sector. This regulation contributed to the increase of mulberry cultivation during the 1770s. In 1789, in a similar situation of decline in the cultivation of mulberry and of sericulture in general – due to the unfavourable interregional and international conjunctures at the beginning of the 1780s and the 1787 floods – the Company again needed to convince the peasants to return to sericulture and proposed the same regulations as in 1772. Most of the residents and collectors, who were asked to report on the condition of sericulture in their districts, were convinced that in 1780 mulberry cultivation had reached its maximum possible extension thanks to the implementation of these regulations. They understood the politics of incentive much better than before, and suggested that favourable rents were not enough because, as had already been seen, sericulture being a costly activity, requiring considerable initial capital, the government not only had to allow for favourable rents, but also cash incentives in (*taqavi*).⁴¹ Given the depopulated conditions of the sericulture areas, any kind of physical or economical coercion would not be effective. The peasants were protected by the regulations and by the interest of the Company in increasing the production of raw silk.

It is interesting to note that peasants were well aware of the possibilities opened by the scarcity of rural labour, referring to it in negotiating their permanence on the lands with any external political power. Very often the petitions the peasants sent to the Board of Trade or the Board of Revenue mentioned that, were the causes of their complaints not removed, they would be compelled “to leave their place of abode”. This was a subtle threat that informed their dealings with external political powers, putting a structural limit to any attempt to use coercive methods. For instance, this last resort, which could be chosen in particularly hard times, was taken into consideration by the mulberry cultivators and cocoon rearers of Lushkeerpore in the 1790s. At the beginning of the 1790s the condition of cocoon production were becoming unbearable for them. They accused the intermediaries of the Factory of Boalia of using any possible means to control them through their debts, including having the *mahajans*, the village money lenders, inserted in the official list of the intermediaries working for the Factory. This way the *mahajans*, under the protection of the Factory of Boalia, could ask for higher interests on the advances on both the rice and the cocoon harvests. The *mahajans* could also practice a higher discount on the exchange of the several kinds of rupees that the peasants received as advances. In the end, the Company's intermediaries and the village *mahajans* could use physical force and confine the peasants in their houses if they did

⁴⁰ WBSA, CCC, V2, Prcds 12 February 1772, Letter from the Naid Dewan to the Council of Revenue at Murshidabad, Murshidabad, n.d., enclosed in Letter from the Council of Revenue at Murshidabad to the President and Council at Calcutta, Murshidabad, 11 November 1771.

⁴¹ WBSA, BoR (Miscel), Procds 25 June 1789, Letter from Mr. Mercier, Burdwan, 6 February 1789; WBSA, BoR (Miscel), Procds 25 June 1789, Letter from Mr. H.H. Dowall, Rungpore, 26 March 1789; BoR (miscel), Prcds 25 June 1789, Letter from the Acting Collector of Murshidabad, dated 29 March 1789; WBSA, BoR (Miscell) Prcds 25 June 1789, Letter from the Collector of Rajshay Mr. Speke, dated Calcutta 21st June 1789.

not give them their produce. In 1791, the peasants petitioned the collector of Murshidabad for protection and at the end of their petition they wrote:

“We have laid our grievances before you; if you will not hear our complaints, permit us to depart – We will go to another place; if we gain redress we will return, if not, we will never return to the country.⁴²

In Piedmont, this last resort was not contemplated by the peasantry involved in sericulture. The land was scarce there and the peasants could not easily find other places to settle. In other words, the theoretical threat of the Lushkerpoore peasants to move elsewhere shows that in desperate conditions they could at least plan somewhat strategically, and whenever it was possible they were able to turn the weakness of the political economy of the external powers to their own advantage.

The problem of the professional code of the Company’s reelers

I now turn to the labour conditions in the Company’s filatures and the relations between the Servants and the Bengali artisans under their responsibility.

Italian historians who have studied the development and the diffusion of the organisation of the reeling in the filatures have stressed that the management and the directors-workers relations reveal many archetypical features of modern industrial production. As far as the workers are concerned, it has been noted that, in Piedmont, the reelers of the filatures received a salary according to the time spent working instead of being paid *a cottimo*, on the basis of the daily quantity of silk produced.⁴³ It has also been stressed that the filature directors exercised an inflexible discipline exemplified by the fact that during working hours the reelers could not speak to each other in order to concentrate on the reeling operations. Finally, there was a functional internal managerial hierarchy and the law was completely on the directors’ side. The inflexible discipline the director applied in his filature was supported by official government regulations that specified all technical aspects of the work of the professional reelers, as well as fines and punishments the directors could administer in the case they failed to follow the official rules.

In Bengal, the problems the Residents of the Company’s filatures met in dealing with their reelers were not at all related to any lack of skill of the native artisans, who from their first attempts at the beginning of the 1770s quickly learnt how to use the Piedmontese reeling machine.⁴⁴ In reality, what the Servants had to deal with was the chronic turnover of their workers, either because reelers could go to work elsewhere once they became well acquainted with the techniques and the other aspects of the filature’s work; or because they were not professional artisans specialised in silk reeling, and were interested in other rural activities.

⁴² WBSA, BoR (Miscellan) Prcds 14 January 1791, Complaints of the Ryotts belonging to the three shares of the Pergunnah Lushkerpore against the Merchants. Enclosed in Letter from the Collector of Moorshedabad , 11 January 1791

⁴³ The move from one method of payment to the other was extremely important because when the reeler was paid a *cottimo* he had an interest in reeling fast, and so carelessly (Chicco 1995).

⁴⁴ WBSA, Controlling Committee of Commerce, Vol. I, Prcds 31st May 1771.

The Residents, over the years, became more and more aware of the causes of the flight of their reelers and of their lack of control over them. For example, in 1789 the Resident of the Factory of Rangamati argued that these kinds of problems were linked to the fact that his reelers did not work for him all year around. During those months in which the filature of Rangamati worked at a slower pace, the reelers could follow alternative professions that required less agility in the fingers or no manual dexterity at all.⁴⁵ The phenomenon of the loss of manual dexterity because of alternative or subsidiary occupations during the year became much more dramatic when a different commercial manufacturer was present nearby. In this case the irregular production of the Company's filature could reinforce the capacity of the new manufacturer to attract the workers from the filature. This is what the Resident of Janghipur bemoaned in 1818, when he wrote, very alarmed, of the difficulties he had because of the competition of a new indigo manufacture recently built close to his factory.⁴⁶

On the issue of keeping a sufficient number of specialised reelers under control Droz, the Commercial Resident of Kassimbazar Factory in the 1810s, made a rather interesting series of remarks. First, he confirmed the fact also underlined by other Residents that the Bengali artisans were not specialised while the European ones "perform no other task, are literally professional men, and depend exclusively on this branch of commerce for the weekly support of their families."⁴⁷ Then, he argued that the excessive turnover of the artisans who worked in his filature was due in reality to his structural lack of authority.

Droz was referring to the fact that in Europe a manager, if not satisfied by the work of his workers, could legitimately dismiss them, and this prospect was considered by the worker a sufficient motivation to have honourable and correct professional behaviour. The loss of work because of unprofessional behaviour could be a catastrophe in the life of the worker, quite literally the end of his professional life; and given that the worker's role in Europe was a specialised one, he would have been unable to find a different source of income. In Bengal the families of the Company's reelers were never completely dependent on the workers' salaries, as they could use the crops from their fields to survive during periods of unemployment. Further, contrary to the situation in Europe, if a Company filature reeler was dismissed, he could enjoy a better bargaining position compared to that of the other rural workers, because the demand for workers with knowledge and practice of Piedmont technology was becoming high in the rural labour market of the 1810s.⁴⁸

What the Resident of Kassimbazar was denouncing was the absence of an institutional and legal framework, where managers and workers could share a common professional code, and regulations and penalties could be effectively imposed upon workers. One solution to the problem of the excessive turnover was to resort to forms of physical punishment, a solution explicitly contemplated by Droz in the same letter, but soon rejected. Violence was not such a good solution in a context in which the reelers' households were not completely dependent on their salaries and competition to attract the best workers was so keen.⁴⁹

In order to exploit usefully the huge productive capacity of the Bengali sericulture areas, the Servants had only one effective solution: to give the workers higher salaries, the

⁴⁵ WBSA, BoT (Comm), Prcds, 6 February 1789, Letter from Rangamatty, 26 January 1789.

⁴⁶ WBSA BoT (Comm) Prcds 6 November 1818, Letter from Jungypore, 22 October 1818.

⁴⁷ WBSA BoT (Comm) Prcds 20 June 1817, Letter from Cossimbazar, 10 June 1817.

⁴⁸ WBSA BoT (Comm) Prcds 24 April 1812, Letter from Cossimbazar, 11 April 1812. It is worth remembering that the East India Company lost its monopoly in 1813, and with the new royal charter private English merchants were allowed to own filatures in Bengal and export raw silk to London.

⁴⁹ WBSA BoT (Comm) Prcds 24 April 1812, Letter from Cossimbazar, 11 April 1812.

only real encouragement to retain them. However, not always was the Company able to do this.

Conclusion

It has been the aim of this paper to focus on a set of problematic features of the dealings between the Company and the native producers and artisans involved in the production of raw silk during the formative period of the British colonial empire in India. What has been underlined is the fact that the introduction of the Piedmontese technologies had a catalytic effect on the relations the Company had with the peasants, and those it had to maintain with its artisans: the Company had to change and control the production cycle of the former and the professional codes of the latter. The attempts at this made by the Company stimulated the reactions of the natives and revealed the difficulty face by the Company's Servants in trying to secure obedience and discipline. These technologies needed a discipline on the part of the artisans and the peasants that was absent in the Bengali countryside of the eighteenth century. The pre-existing conditions of labour organisation did not constitute a favourable context where the Piedmontese technologies could give good results. The outcome of this technological transfer was also influenced by demographic conditions in Bengal in the late-eighteenth and early-nineteenth centuries. Given the scarcity of labour, it was evident to the Company's Servants that force and explicit compulsion could not succeed, and that prudence and caution were the only possible approaches for dealing with rural producers. This study of the peasant response to the Company's intrusion is a useful starting point in attempting to expose the impact global universalising processes had upon the economies of local societies in the early phases of British colonial rule in India.

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Commodities of Empire is a joint research collaboration between the Open University's **Ferguson Centre for African and Asian Studies** and London Metropolitan University's **Caribbean Studies Centre**. These two institutions form the nucleus of a growing international network of researchers and research centres.

The mutually reinforcing relationship between 'commodities' and 'empires' has long been recognised. Over the last six centuries the quest for profits has driven imperial expansion, with the global trade in commodities fuelling the ongoing industrial revolution. These 'commodities of empire', which became transnationally mobilised in ever larger quantities, included foodstuffs (wheat, rice, bananas); industrial crops (cotton, rubber, linseed and palm oils); stimulants (sugar, tea, coffee, cocoa, tobacco and opium); and ores (tin, copper, gold, diamonds). Their expanded production and global movements brought vast spatial, social, economic and cultural changes to both metropolises and colonies.

In the Commodities of Empire project we explore the networks through which such commodities circulated within, and in the spaces between, empires. We are particularly attentive to local processes – originating in Africa, Asia, the Caribbean and Latin America – which significantly influenced the outcome of the encounter between the world economy and regional societies, doing so through a comparative approach that explores the experiences of peoples subjected to different imperial hegemonies.

The following key research questions inform the work of project:

- 1) The networks through which commodities were produced and circulated within, between and beyond empires;
- 2) The interlinking 'systems' (political-military, agricultural labour, commercial, maritime, industrial production, social communication, technological knowledge) that were themselves evolving during the colonial period, and through which these commodity networks functioned;
- 3) The impact of agents in the periphery on the establishment and development of commodity networks: as instigators and promoters; through their social, cultural and technological resistance; or through the production of anti-commodities;
- 4) The impact of commodity circulation both on the periphery, and on the economic, social and cultural life of the metropolises;
- 5) The interrogation of the concept of 'globalisation' through the study of the historical movement and impact of commodities.

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