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Cotton Textiles and the Industrial Revolution in a Global Context¹

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Abstract

In recent decades, economic historians have revisited the industrial revolution in a global context. Their interpretations rely mostly on comparative methods. This article shows instead that there is a profound and significant relationship between industrialisation and global exchange, and that consumption of cotton textiles was central to such a relationship. Yet, historians should not consider global trade in the context of separate world regions. The history of cotton textiles reveals the extent to which the worldwide integration of different spaces of commerce and consumption – most especially those of the Atlantic and the Indian oceans – brought advantages to European traders and manufacturers. Taking this view, the article argues that demand and consumption of textiles were important in determining the scale as well as the shape and specialisms of European textile production. This was not only the demand generated by European consumers – as supported by much of the European ‘consumer revolution’ literature – but also the demand of a wider group of users in the Atlantic region. The re-shaping of trade and consumption in turn had important consequences for the production of cotton textiles both in India and in Europe.

¹ Research for this article has been supported by the Philip Leverhulme Prize, the University of Warwick, and the European University Institute. My thanks to Maxine Berg, Trevor Burnard, Richard Butler, Helen Clifford, Robert DuPlessis, Anne Gerritsen, Pat Hudson, Beverly Lemire, Philippe Minard, Patrick K. O’Brien, Martina Salvante, Glenda Sluga, Peter Solar, Claudia Stein, and John Styles for their help and comments. Graphs have been designed by Eva Medina Medina at the European University Institute. Earlier versions of this article were presented at seminars and conferences at the Universities of Liverpool, Oxford and Southampton, the EHESS in Paris, the European University Institute, and at The Textile Society of America Conference in Savannah, Georgia.

For over a century the industrial revolution has been a concept that has enjoyed changing fortunes. From the heights of the post-war belief in growth, by the 1980s and 1990s several historians dismissed it as an outdated notion, insular in its conception and narrow in its coverage.² The rise of global history in the 2000s, propelled by an interest in the ‘Great Divergence’ paradigm, did much to bring back the industrial revolution as a key trope in the economic history of Britain and Europe.³ Since the 1880s when the term entered common use, one sector and product has embodied the industrial revolution: cotton textiles.⁴ Some of the major technologies and inventions of the classic period of British industrialisation clustered around cotton spinning and weaving and the sector became the highest growing manufacturing industry in the world.⁵

Over time the explanations as to the nature of the industrial revolution have profoundly changed. Post-war economic historians presented it as exceptional in its intensity and long-term change, and

² David S. Landes, ‘The Fable of the Dead Horse; or, the Industrial Revolution Revisited’, in Joel Mokyr (ed.), *The British Industrial Revolution: An Economic Perspective* (Boulder, CO, 2nd ed. 1999), 128-59.

³ Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (Princeton, 2000).

⁴ The term industrial revolution was first used in French at the end of the eighteenth century. On the genealogy of ‘Industrial Revolution’ see: Keith Tribe, *Genealogies of Capitalism* (London, 1981), 101–20; and Gareth Stedman Jones, *An End to Poverty? A Historical Debate* (New York, 2005), 163-98.

⁵ For an up-to-date analysis of technological change see Barbara Hahn, *Technology and the Industrial Revolution* (Cambridge, 2020).

conceived the industrial revolution as a phenomenon much broader than the remit of factories and steam-powered machines. W.W. Rostow, and before him historians of the so-called commercial revolution, argued that international trade was key to capital accumulation and that in turn capital was the essence of any process of industrialisation. In the 1950s to 1970s Phyllis Deane and Ralph Davis paid great attention to exogenous factors in industrialisation and saw the growth of trade in the Atlantic as strongly linked to economic growth, especially in Britain.⁶ By the 1970s and 1980s the industrial revolution was being reduced in importance and economic historians such as Joel Mokyr, Deirdre McCloskey and Nick Crafts emphasised the importance of factors endogenous to the British Isles – mostly in the shape of technological innovation – as the main drivers of economic change. They gave more weight to the cotton industry than historians emphasising the international reach of the concept.⁷

⁶ W. W. Rostow, *The Stages of Economic Growth: A Non-communist Manifesto* (Cambridge, 1960); Phyllis Deane, *The Industrial Revolution* (Cambridge, 1965); Ralph Davis, *The Rise of Atlantic Economies* (Ithaca, NY, 1972); and Id., *The Industrial Revolution and British Overseas Trade* (Leicester, 1979).

⁷ Joel Mokyr, 'Demand vs. Supply in the Industrial Revolution', *Journal of Economic History* 37 (1977), 981–1008; D. McCloskey, 'Britain's Loss from Foreign Industrialization: A Provisional Estimate', *Explorations in Economic History* 8 (1970-71), 141-52; N.F.R. Crafts, *British Industrial Revolution in an International Context* (Oxford, 1985). Patrick K. O'Brien, and Stanley L. Engerman, 'Exports and the Growth of the British Economy from the Glorious Revolution to the Peace of Amiens, in Barbara L. Solow (ed.), *Slavery and the Rise of the Atlantic System* (Cambridge, MA, 1991), 177-209 had a more balanced position.

This brief historiographical excursus helps us to understand why global history and Pomeranz's Great Divergence in particular were so important in the waning historical fortunes of the industrial revolution and most specifically the changing role of cotton textile manufacturing within it. Global history considers the industrial revolution across a much broader canvas, comparing and contrasting the economic trajectories of different parts of the world such as the Yanzi Delta and Western Europe. From this global perspective, differential access to resources (for instance raw cotton) and markets (for textiles) were seen as producing a range of paths towards economic development. This comparative framework relies on neoclassic economic models of price, income and wage differentials.⁸ The modelling qualities and factor-price analysis of this kind of global economic history of the industrial revolution are in contrast to much recent global history that underlines instead the importance of connections to explain political, cultural as well as global economic dynamics. For example, the broadening of Pomeranz's framework to include India and the Middle East has underlined the global dimension of cotton textile manufacturing well before the industrial revolution. This view in turn has rehabilitated the long-standing contribution of the cotton economy especially in South Asia.⁹ Maxine Berg has been the most prominent supporter of

⁸ See for instance the work of Robert C. Allen, *The British Industrial Revolution in Global Perspective* (Cambridge, 2009); Robert C. Allen et al., 'Wages, Prices and Living Standards in China, 1738-1925 Compared with Europe India and Japan', *Economic History Review* 64, Supplement (2011), 8-38; Stephen Broadberry et al., *British Economic Growth, 1270-1870* (Cambridge, 2015); Robert C. Allen, 'The High Wage Economy and the Industrial Revolution: A Restatement', *Economic History Review* 68 (2015), 1-22.

⁹ Giorgio Riello and Tirthankar Roy (eds.), *How India Clothed the World: The World of South Asian Textiles, 1500-1850* (Leiden, 2009); Prasannan Parthasarathi, *Why Europe Grew Rich and*

a reconceptualization of European industrialisation as a process connecting different parts of the world, economically but also materially. She emphasises the importance that the global exchange of technologies and trade in finished products had in promoting the European imitation of a series of Asian products, first among which bright and colourful Indian chintzes.¹⁰ The most relevant aspects of this scholarship are its Eurasian framework of analysis and a focus on the trade of consumer goods. These features are in striking contrast with another recent body of scholarship, the so-called New History of Capitalism, that emphasises instead the space of the Atlantic - though this time not for the accumulation of capital but for the provision of raw materials, most especially raw cotton from the American slave plantations to the rising cotton industry of industrial Britain.¹¹

Two points emerge from this cursory overview: first the fact that attempts at globalising the industrial revolution have relied a great deal on comparative methodologies. When connective methods are applied, analyses look either eastward towards the textile trade of the Indian Ocean, or westward towards the provision of raw materials from the Americas. Second, the existing scholarship - notwithstanding much research on consumption - remains conceptually and theoretically anchored in production-led narratives borrowed from traditional economic theory.¹²

Asia Did Not: Global Economic Divergence, 1600–1850 (Cambridge, 2011); Şevket Pamuk, *Uneven Centuries, Economic Development in Turkey since 1820* (Princeton, 2018).

¹⁰ Maxine Berg, ‘In Pursuit of Luxury: Global History and British Consumer Goods in the Eighteenth Century’, *Past & Present* 182 (2004), 85-142.

¹¹ Sven Beckert, *Empire of Cotton: A New Global History of Capitalism* (London, 2014).

¹² Maxine Berg, ‘Consumption and Global History in the Early Modern World’, in Tirthankar Roy and Giorgio Riello (eds.), *Global Economic History* (London, 2018), 118-36.

The intention of this article is to show that there is a profound and significant relationship between industrialisation (including technological change) and global trade, and that consumption of cotton textiles was central to such a relationship. It argues in particular that historians should not analyse trade in the context of separate world regions because the history of cotton textiles reveals the extent to which the *worldwide integration* of different spaces of commerce – most especially those of the Atlantic and the Indian oceans – brought advantages to European traders and manufacturers. Taking this view, it maintains that demand and consumption of textiles was important to determine the scale as well as the shape and specialisms of European textile production. Yet this was not just the demand generated by European consumers – as supported by much of the European ‘consumer revolution’ literature – but also the demand of a wider group of users in the Atlantic region. The re-shaping of trade and consumption in turn had important consequences for the production of cotton textiles both in India and in Europe.

This article is thus divided into four parts. First, it considers the trade in cotton textiles. Indian cotton textiles traded by the East India companies did not just reach the shores of Europe but also markets worldwide and most especially in the Atlantic. Cottons joined together the Indian and the Atlantic oceans and became the linchpin in a newly acquired position of power for European traders, especially in the eighteenth century. The first part of this article thus reflects theoretically and quantitatively on how this system of trade spanning the Indian Ocean and Atlantic looked. Borrowing from Eric Williams’ ‘triangular trade’, it makes a case for a ‘diamond-shape trade’ system as a way to conceptualise the articulation of trade between South Asia, West Africa, Western Europe and the Americas in the long eighteenth century. The second part of this article brings back ‘demand’ as a means of understanding industrialisation. Several historians have emphasised the role of British and European demand in shaping the new products of the industrial

revolution. Yet, too little attention has been paid to demand for Asian and later European cotton textiles in West Africa and the Americas. When demand by slave traders, colonists, enslaved and First Nation people is considered, the picture of the types of textiles that were central to industrialisation is profoundly revised. Plain, checked and striped cloth – and not just printed textiles – appear as key to understanding the path of European industrialisation in the cotton textile sector. Changes in demand and consumption in the Atlantic created new markets for cotton textiles from India and imitations of originals. The third part of this article goes back to manufacturing and concentrates on the relationship between Indian cottons and their European imitations and substitutes. The article concludes by arguing that the rise of British cotton manufacturing in the period 1750-1780 resulted from the connection between the ‘diamond-shape trade’ system and Atlantic demand. The new cotton spinning technologies that characterised the industrial revolution can be narrated as part of the story of the progressive replacement of linen by cotton yarn as cheap woven textiles were produced to be exported.

Because of the extent and number of topics covered in the short space of an article, the majority of the evidence used will refer to Britain and its process of industrialisation. This is supplemented by consideration of the trajectory of France and the Dutch Republic, albeit only cursorily. Methodologically this article relies on the integration of three different types of sources and analyses. The first part extends existing theoretical views of trade and provides quantitative proof as to the existence of an integrated system of exchange across the Atlantic and Indian oceans. The second and third parts use instead qualitative methodologies and adopt material culture methods by considering surviving artefacts. The concluding part of this article adopts new ‘micro-material methodologies’ to challenge established global narratives of economic change.

I

Trading Cottons Globally: From the Triangular to a Diamond-shape Exchange

The long eighteenth century – the period stretching from the mid-seventeenth to the early-nineteenth century – has been seen as one of expansion in world trade. Jan de Vries has called this a period of ‘soft globalisation’ in which Europeans came to play a new role in the Atlantic and Indian Ocean trade.¹³ The literature on trade on both oceans is now vast and includes works on the East India companies and the effect of the products that they traded on European consumption and the economic development. It also comprises an equally vast literature on Atlantic trades, including the slave trade and the creation of plantation economies, and the expansion of Colonial markets.

It is well known that cotton textiles - and textiles more generally - played a significant part in both the Indian and the Atlantic ocean trade. Indian cottons accounted for up to three quarters of everything that was traded from Asia to Europe by the different European trading companies and constituted the lion’s share of the intra-Asian (country) trade as well. Textiles were key commodities in the Atlantic trade accounting for up to two thirds of all commodities traded from Europe to Africa and more than fifty percent of goods traded from Europe to the West Indies and the North American colonies.¹⁴ Yet, so far the relationship between the Indian Ocean and the

¹³ Jan de Vries, ‘The Limits of Globalization in the Early Modern World’, *Economic History Review* 63 (2010), 710-33.

¹⁴ It should be noted however that cotton textiles accounted for a smaller proportion of the textiles exported to American markets from Britain as compared to West Africa.

Atlantic trade has been under-explored. This is particularly surprising when textiles are considered. Findley, for instance, in his general-equilibrium model of the eighteenth-century Atlantic trade, ignores a quarter of European trade to the Atlantic that was made up of manufactured goods imported from India.¹⁵ The two oceans remain separate also in overall characterisations: the European participation in the Indian Ocean has been described as dominated by regulated company trade, while merchants and merchant communities have been hailed as masters of free trade in the

¹⁵ Ronald Findley, 'The "Triangular Trade" and the Atlantic Economy of the Eighteenth Century: A Simple General-Equilibrium Model', *Essays in International Finance* (Princeton University, Department of Economic), no. 177 (1990), 2.

Atlantic.¹⁶ Work on mercantilism has unwittingly reinforced the divide between the world of Asian trade perceived as monopolistic, and the Atlantic trade seen instead as highly competitive.¹⁷

Contemporaries had a similar bias. Sir Henry Pollexfen in his posthumous 1700 work on trade and bullion commented that ‘The Trade to Africa deserves all encouragement, being beneficial both in its Exports and Imports, Carries from us great quantities of our Draperies made of our Coursest Wools’.¹⁸ By contrast, he saw the trade with Asia as a hindrance, not just for the national balance of trade, but also in relation to home manufactures. He argued that imported ‘Callicoes, Muslins,

¹⁶ Notwithstanding frequent pleading for a stronger integration of narratives of the Atlantic and the Indian Oceans, the two spaces remain as divided as their historiographies. This division seems to be as strong even within the field of imperial history where few ‘have sought to incorporate the history of early modern British Asia in the broader history of “Greater Britain”’. Philip J. Stern, ‘British Asia and British Atlantic: Comparisons and Connections’, *William and Mary Quarterly*, 63 (2006), 696. Exceptions are P.J. Marshall, *The Making and Unmaking of Empires: Britain, India and America, c. 1750-1783* (Oxford, 2005); H.V. Bowen, Elizabeth Mancke, and John G. Reid (eds.), *Britain’s Oceanic Empire: Atlantic and Indian Ocean Worlds, c. 1550–1850* (Cambridge, 2012); and J. Bohorquez, ‘Linking the Atlantic and Indian Oceans: Asian textiles, Spanish silver, global capital, and the financing of the Portuguese–Brazilian slave trade (c.1760–1808)’, *Journal of Global History*, 15 (2020), 19-38.

¹⁷ For a revisionist approach see Philip J. Stern and Carl Wennerlind (eds.), *Mercantilism Reimagined: Political Economy in Early Modern Britain and Its Empire* (New York, 2014).

¹⁸ Sir Henry Pollexfen, *Of trade ... Also, of coyn. bullion. Of improving our woollen manufacture...* (London, 1700), 128-29.

and other Linnens, are a great obstacle to the improvement of our Linnen Manufactures'.¹⁹ Historians have perpetuated contemporaries' assumptions that Europe's trade with Asia was based on the import of Asian goods for 'unproductive' European consumption; at the same time European trade with Africa and the Americas encouraged the sale and ultimate expansion of European manufacturing.

While Asian trade with Europe has been seen as an exchange of bullion for commodities, the Atlantic trade has been interpreted through the so-called 'triangular trade' model (Figure 1A). Eric Williams in his *Capitalism & Slavery* (1944) put forward the idea of a connected system of exchange based on the trade of manufactured commodities, the labour of the enslaved, and the production of raw materials and intermediate goods. William's influential explanation was centred on the role played by human capital, namely the labour of African enslaved people brought to the Americas to produce raw cotton for the European cotton textile manufactures.²⁰ More recent interpretations have put instead greater emphasis on the European trade to Africa that allowed for the purchase of slaves in exchange for manufactured goods.²¹ This triangular trade shaped and consolidated a hierarchical system: Europe specialised in the manufacturing of finished goods for

¹⁹ Ibid., 126.

²⁰ Williams, *Capitalism & Slavery* (Chapel Hill, NC, 1944), esp. 68-72.

²¹ Joseph E. Inikori, 'Slavery and capitalism in Africa', *Indian Historical Review*, 15 (1988-89), 137-51; Id., 'Slavery and the Revolution in Cotton Textile production in England', *Social Science History*, 13 (1989), 343-79; Id., *Africans and the Industrial Revolution in England: A Study of International Trade and Economic Development* (Cambridge, 2002); Id., 'Africa and the Globalization Process: Western Africa, 1450-1850', *Journal of Global History*, 2 (2007), 63-86.

world trade; the Americas in the production of intermediate goods and produce; and Africa in the provision of abundant supplies of enslaved labour. Several economic historians - Joseph Inikori in particular - claimed that this triangular system structured an international division of labour and influenced the economic trajectories of these three world areas to the ultimate detriment of West Africa.²²

This article does not challenge these explanations; it uses instead cotton textiles to show that the logic of the triangular trade is incomplete without acknowledging the role played by Asia (Figure 1B). The very Asian textiles that Pollexfen believed decreased British manufacturing were instead important trade items in the Atlantic and a reason why a relatively recent sector such as cotton textile manufacturing developed in Britain and other parts of Continental Europe. The integration of the Atlantic and Indian Ocean trades was not just about their connectedness and intensity of commodity flows. This article explores the logic that united them, one in which Europe was not necessarily at the core of this system, though it undoubtedly benefitted from it. The trade in Asian goods was not solely destined to Europe but reached Atlantic markets. As a consequence, the early industrialisation of cotton textile production in Europe was strongly linked to the patterns of trade both from Asia and the Atlantic.

²² Id., *Africans and the Industrial Revolution*; Id., 'Reversal of Fortune and Socioeconomic Development in the Atlantic World: A Comparative Examination of West Africa and the Americas, 1400-1850', in Emmanuel Akyempong et al. (eds.), *Africa's Development in Historical Perspective* (New York, 2014), 57-88.

There is good statistical evidence supporting the hypothesis of the existence of a strong relationship between the Indian and Atlantic ocean trade.²³ Bringing together trade between

²³ The publications of K.N. Chaudhuri and more recently Jan de Vries and Huw Bowen have provided us with good statistical evidence on the trade in textiles and other commodities from Asia to Europe for the seventeenth and eighteenth centuries. In the 1980s, Marion Johnson compiled a complete dataset of British trade to West Africa that has been recently revised by the African Commodity Trade Database project. Trade with North America and the West Indies has still to be fully mapped onto the statistical evidence provided by Elizabeth Schumpeter more than half a century ago. K.N. Chaudhuri, *The Trading World of Asia and the English East India Company 1660-1760* (Cambridge, 1978); Jan de Vries, 'Connecting Europe and Asia: A Quantitative Analysis of the Cape-route Trade, 1497-1795', in Dennis O. Flynn, Arturo Giráldez and Richard von Glahn (eds.), *Global Connections and Monetary History, 1470-1800* (Ashford, 2003), 35-106; Huw Bowen, Database 'The East India Company: Trade and Domestic Financial Statistics, 1755-1838': <https://beta.ukdataservice.ac.uk/datacatalogue/studies/study?id=5690>; Marion Johnson, *Anglo-African Trade in the Eighteenth Century* (Leiden, 1990); Ewout Frankema et al., 'An Introduction to the African Commodity Trade Database, 1730–2010 Social and Economic History', *Research Data Journal for the Humanities and Social Sciences* (2018), 1-12 and <http://dansdatajournal.nl/rdp/dsdoc.html?id=frankema2018>; Joseph E. Inikori, 'West Africa's Seaborne Trade, 1750-1850: Volume, Structure and Implications', in G. Liesegang, H. Pasch and A. Jones (eds.), *Figuring African Trade: Proceedings of the Symposium on the Quantification and Structure of the Import and Export and Long Distance Trade in Africa, 1800-1913* (Berlin, 1986), 49-89; Id., *Africans and the Industrial Revolution*; Elizabeth Schumpeter, *English Overseas Trade Statistics, 1697-1808* (Oxford, 1960).

Europe, Asia, Africa and the Americas facilitates our understanding of the connections between different world areas.²⁴ The appendix considers in detail the methodologies used in the calculation of fluxes of British trade with West Africa, with North America and the West Indies, and with Asia at three points in time: the 1710s, 1750s and 1790s. This quantification enables us to understand the overall size of trade, its expansion and above all the role of cotton textiles in connecting the Asian and the Atlantic ‘triangles’ into a ‘diamond’ pattern. They show that over the course of the eighteenth century the Indian and the Atlantic oceans became increasingly integrated. In the 1710s, the textile trade from Britain to West Africa comprised £110,000 worth of Indian cottons, and £1.27 million worth of other British and European textiles, including a small quantity of British-made cottons worth £9,000.²⁵ By the 1750s things had changed significantly: cotton textiles accounted for 43 percent of the entire cargo to West Africa (or 63 percent of all textiles traded). The trade was now composed of £0.54 million worth of Indian textiles and £0.33 million of British-made cottons (respectively 27 and 16 percent of the entire cargo). By the 1790s,

²⁴ The focus on Britain is necessary as neither France nor The Netherlands have complete trade statistics for the eighteenth century, though some of the conclusion drawn from the British case can be extended to include other European countries.

²⁵ By ‘cottons’ I mean here a variety of textiles, the vast majority of which had linen warp and cotton wefts. See also part 4 of this article and John Styles, ‘What was Cotton? Fashion and Fibres in European Markets, 1500-1800’, Paper presented at the workshop ‘Global Cotton: Cotton as a Case of Precocious Globalization’, Nuffield College, Oxford University, 13-14 January 2017:

[https://researchprofiles.herts.ac.uk/portal/en/publications/what-was-cotton-fibers-markets-and-technology-in-the-british-industrial-revolution\(d27ffeb9-96a6-43b3-87ff-371cc13f3260\).html](https://researchprofiles.herts.ac.uk/portal/en/publications/what-was-cotton-fibers-markets-and-technology-in-the-british-industrial-revolution(d27ffeb9-96a6-43b3-87ff-371cc13f3260).html)

[last accessed 6 January 2021].

it was not just the size of trade that had changed, but also the fact that Britain had developed a large-scale cotton industry. In this decade cottons sold to Africa accounted for 58 percent of all traded commodities (or 80 percent of all textiles). British cottons were worth £2.9 million while Indian cottons were worth £3.4 million.

Throughout the eighteenth century, Indian cottons accounted for at least 20 percent of the textile trade to Africa, reaching 20 percent of the overall trade in the 1740s, and growing thereafter. The quantity of cotton textiles traded from England to West Africa increased 22 times during the course of the eighteenth century, compared to four times for woollens and three and a half times for linens.²⁶ For the most of the century – and even after the mechanisation of production in England – Indian cottons remained more important than British cottons for West African markets. Notwithstanding some smuggling of Indian cotton textiles into France and England – especially after their consumption was banned in both countries – a big share of total import was exported to Atlantic markets.²⁷ It was only in the first decade of the nineteenth century that this relationship between the Asia-bound trade and the Atlantic cotton trade changed as British-made cottons superseded Indian goods both in Africa and in the Americas.

²⁶ Johnson, *Anglo-African Trade*, 43.

²⁷ On the smuggling of cotton textiles, especially in France, see Michael Kwass, *Contraband: Louis Mandrin and the Making of a Global Underground* (Cambridge, MA, 2014), esp. 54-68 and 293-94; and Felicia Gottmann, *Global Trade, Smuggling, and the Making of Economic Liberalism: Asian Textiles in France, 1680-1760* (London, 2016), esp. part 2.

Three points are worth highlighting. First, the conclusions derived from British trade statistics can be extended to other European countries. The Dutch, for instance, were also major traders of textiles, including Indian cottons to the Atlantic, as were the French especially during the second half of the eighteenth century. The late-eighteenth-century French scholar of the Indian south-east coast Coromandel trade, Legoux de Flaix, did not fail to observe a strong connection between India and the Americas when he remarked upon the fact that the demand for cotton textiles in the West Africa supported production in India of cloth used to purchase slaves and that ‘if the colonies in the Antilles cease to buy slaves, one can say without doubt, that this article [Indian cottons] will decline’.²⁸ Limited statistical evidence confirms that this was an important component of trade for the Coromandel Coast with six million pieces of Indian blue *guinées* (striped or checked low-cost cottons produced in Western India especially for the West African market) being exported to the Atlantic between 1672 to 1791.²⁹

Second, we still know far too little about the composition of the textile trade from Britain (and even more so from Continental Europe) to North America.³⁰ A snapshot analysis of the year 1753

²⁸ A. Legoux de Flaix, *Essai historique, géographique et politique sur l’Hindoustan* (Paris, 1807), ii: 134-35. See also Richard Roberts, ‘Guinée Cloth: Linked Transformations with France’s Empire in the ‘Nineteenth Century, *Cahiers d’Études Africaines*, 128/32/4 (1992), esp. 597-602.

²⁹ Roberts, ‘Guinée Cloth’, p. 602.

³⁰ Because of the complexity of Customs figures, there is no yet a comprehensive quantitative study of British trade to North America. There are however regional or qualitative studies such as James F. Shepherd and Gary M. Walton, *Shipping, Maritime Trade and the Economic Development of Colonial North America* (New York, 1972); Jacob Price, ‘New Time Series for

shows the high demand for cotton handkerchiefs in New England, New York, Pennsylvania, Virginia, and Barbados, and for bandannas (square-shaped cotton and sometime silk cloths) in places such as Pennsylvania and New England. Indian and English cotton textiles sold to North America in 1753 were worth £60,000 (compared with £80,000 for West Africa).³¹ The overall trade to all the colonies was worth £1.2 million (compared with £230,000 for West Africa).³² In the American colonies as in West Africa the role of cotton textiles increased markedly over in the following couple of decades.³³

Finally, it is also important to observe that the ‘diamond-shape trade’ system here described was constituted by flows of a very different magnitude. Although the trade from Asia to Britain has commanded a great deal of attention in recent years, it was worth no more than 60 percent of the export trade to North America in the early decade of the eighteenth century, a third by the mid-century, and just over 20 percent in the last decade of the eighteenth century. Similarly, the British

Scotland and Britain’s Trade with the Thirteen Colonies and States, 1740-1791’, *William & Mary Quarterly*, 32 (1975), 307-25; and Kenneth Morgan, ‘Robert Dinwiddie’s Report on the British American Colonies’, *William & Mary Quarterly*, 65 (2008), 305-46.

³¹ The National Archives, Kew (London), CUST 3 (1753-54).

³² John J. McCusker, *Essays in the Economic History of the Atlantic World* (London, 1997), 242 for trade to the North American colonies; and Johnson, *Anglo-African Trade*, pp. 53-5 for trade to West Africa.

³³ See the 1768-72 analysis of British trade to North America in John J. McCusker and Russell R. Manard, *The Economy of British America, 1607-1789* (Chapel Hill, 1985) based on the analysis of the Ledgers of Import and Export to America. TNA, CUST 16/1.

trade to Africa was worth only 10 percent of the value of the export trade to North America in the course of the century (Appendix 1).³⁴

II

Atlantic Demand for Cotton Textiles

Seaborne commerce was not a simple matter of shipping goods from one world area to another. The inner workings and rationale of the ‘diamond-shape trade’ can only be understood by investigating its qualitative dimension. Demand, taste and the role of consumers have been fruitfully considered in studies of pre-modern textiles cultures.³⁵ This has unwittingly led to believe that the majority of Asian cottons and other manufactured goods were consumed within the boundaries of Europe itself.³⁶ Only in recent years have historians pointed to the fact that Asian textiles were more likely to adorn the bodies and domestic interiors of African, West Indian, and North American rather than European consumers.³⁷

³⁴ This constitutes one of the major problems in Inikori’s interpretation of the importance of Africa in the development of British industries. Cfr. Inikori, *Africans and the Industrial Revolution*.

³⁵ There is a vast scholarship on the adoption of Indian cotton textiles in Europe. See in particular: Beverly Lemire, *Fashion's Favourite: The Cotton Trade and the Consumer in Britain, 1660-1800* (Oxford, 1991), Id., *Cotton* (Oxford, 2003); John Styles, *The Dress of the People: Everyday Fashion in Eighteenth-Century England* (London and New Haven, 2007).

³⁶ Giorgio Riello, *Cotton: The Fabric that Made the Modern World* (Cambridge, 2013).

³⁷ See in particular Robert S. DuPlessis, *The Material Atlantic. Clothing, Commerce, and Colonization in the Atlantic World, 1650–1800* (Cambridge, 2015); Jonathan Eacott, *Selling*

Smuggling of textiles into several European countries could only be rife, but the bulk of Indian cottons sold in Europe and the Atlantic were legally traded (though with increasing prohibitions) by the English and other European East India companies. All companies, including the Portuguese *Carreira da Índia* forbade direct trade from Asia to Africa and the Americas. Once in London, Amsterdam, Lorient or Lisbon, Asian commodities were sold at public auctions. An English East India Company's London auction in 1660 shows that the textiles for sale included broad and narrow chintz (painted or printed and sometimes glazed cottons), quilts and 'calicoes' (a generic denomination for Indian cottons), as well as a bewildering range of other less well-known varieties, including 'broad and narrow blue and white baftas, niccanees, pintado quilts' etc.³⁸ These were popular Indian textiles produced in different areas of the Subcontinent. The English Company had easy access to the ports of Gujarat and the Malabar coast in the seventeenth century and by the

Empire: India in the Making of Britain and America, 1600-1830 (Chapel Hill, NC, 2016); Beverly Lemire, *Global Trade and the Transformation of Consumer Cultures: The Material World Remade, c.1500–1820* (Cambridge, 2018); and Kazuo Kobayashi, *Indian Cotton Textiles in West Africa: African Agency, Consumer Demand and the Making of the Global Economy, 1750–1850* (London, 2019); Danielle C. Skeeahan, *The Fabric of Empire: Material and Literary Cultures of the Global Atlantic, 1650-1850* (Baltimore, 2020).

³⁸ 'A General Court of Sales, August 5, 1662 (Court Book, vol. 24, p. 510)', in Ethel Bruce Sainsbury (ed.), *A Calendar of the Court Minutes of the East India Company, 1660-1663* (Oxford, 1922), 243. Baftas are white or piece-dyed cottons from Gujarat; niccanees are low-priced striped cotton cloth, and pintado is an Indian painted calico where the dyes and mordants were applied freehand with a brush.

early eighteenth century the Company had expanded its procurement to the Coromandel Coast and especially the area of Madras, and Masulipatnam in Andhra Pradesh from where the Company could be supplied with chintz, morees, long cloth, allejars and salamporis.³⁹ These, as we will see, were the most important types of cloths sold in Atlantic markets.

I divide the north Atlantic market for cotton textiles into three large areas: West African markets; the West Indies; and the North American colonies.⁴⁰ In the early eighteenth century the African

³⁹ Giorgio Riello, 'The Indian Apprenticeship: The Trade of Indian Textiles and the Making of European Cottons', in Riello and Roy (eds.), *How India Clothed the World*, 309-346. Moree cloth is a superior quality and much in demand in Europe as a substitute for linen cloth produced on the Coromandel Coast of India; long cloth is a white or piece-dyed cotton textile c.37 yards long, hence the name; allejar is a cotton handkerchief, mostly striped blue and white or red and white; and salamporis is a white cloth with red borders 4 yards long and one yard wide.

⁴⁰ Here I exclude Latin America for which some good research has been produced in recent years, though still missing quantification. See Marta V. Vicente, *Clothing the Spanish Empire* (New York, 2006). Latin American consumers received large quantities of textiles (cotton textiles from India and silk textiles from China) as well as porcelain and other luxuries via the Manilla to Acapulco Pacific route. See in particular Donna Pierce, 'Popular and Prevalent: Asian Trade Goods in Northern New Spain, 1590-1850', *Colonial Latin American Review*, 25 (2016), 77-97; Meha Priyadarshini, *Chinese Porcelain in Colonial Mexico: The Material Worlds of an Early Modern Trade* (Basingstoke, 2018); and José Luis Gasch-Tomás, *The Atlantic World and the Manila Galleons: Circulation, Market, and Consumption of Asian Goods in the Spanish Empire, 1565–1650* (Leiden, 2019).

market for textiles was probably the most complex and sophisticated. The European trade in textiles to West Africa was already well developed by the time British, French and Dutch traders arrived in the mid-sixteenth century.⁴¹ In the period between 1480 and 1540 the Portuguese traded an impressive variety of cloth to the coast of West Africa. Between 80-100 varieties of cloth were for sale, the majority of which were English, French and Flemish woollens, linens, coarse sailcloth and sacks, as well as a number of Indian cottons such as *Pano da India* (literally Indian cotton), *beatilhas* (Deccan muslin), *caudeis* (Bengali muslin), and *mantases* (cotton blankets from Cambay).⁴² This trade expanded in the second half of the sixteenth century and together with grain, textiles were at the core of the Portuguese slave trade coordinated from the outpost of São Jorge da Mina (Elmina castle).⁴³ By the mid-seventeenth century the Gold Coast imported around 20,000 metres of European and Asian cloth per year. Yet this has been estimated to account for no more than two percent of the total consumption of cloth on the Coast at this period.⁴⁴

⁴¹ Ann DuPont, 'Captives of Colored Cloth: The Role of Cotton Trade Goods in the North Atlantic Slave Trade (1600-1808)', *Ars Textrina*, 24 (1995), 178.

⁴² John Vogt, 'Notes on the Portuguese Cloth Trade in West Africa, 1480-1540', *International Journal of African Historical Studies*, 8 (1975), 644; James C. Boyajian, *Portuguese Trade in Asia under the Habsburgs, 1580-1640* (Baltimore and London, 1993), 141.

⁴³ Afzal Ahmad, *Indo-Portuguese Trade in the Seventeenth Century (1600-1663)* (New Delhi, 1991), 91.

⁴⁴ John Thornton, *Africa and Africans in the Making of the Atlantic World, 1400-1680* (Cambridge, 1992), 49-50. This is based on an estimate of c. 1.5 million inhabitants, of which half are adults and a total production of cloth of c. 750,000 metres. There is disagreement as to the quantities and the importance of Asian cloth traded to West Africa more generally. Postma for instance with

The African trade was also extremely competitive. In the mid-seventeenth century both the English and the Dutch sold cloth (from Europe and from other parts of Africa) on the Gold Coast.⁴⁵ In the following decades, the English and French entered this busy market by setting up the Royal African Company (1660) and the Compagnie du Sénégal (1673).⁴⁶ Until the 1730s, however, it was the Dutch who retained a strong position, only to be challenged by the expansion of Liverpool's slave-trading activities.⁴⁷ Imported textiles were together with iron and copper

reference to the Dutch West India Company in the early eighteenth century claims that 'some of these textiles were exotic items from Asia, but these goods were regarded as too dear for the African market. The vast majority of the textiles appeared to be manufactured in Holland'. David Eltis estimated that in the 1780s 9.5 million yards of cloth a year might have been imported into West Africa, but this amounted to as little as half a yard per person. Johannes Menne Postma, *The Dutch in the Atlantic Slave Trade, 1600-1815* (Cambridge, 1990), 104; and David Eltis, 'Precolonial Western Africa and the Atlantic Economy', in Solow (ed.), *Slavery and the Rise of the Atlantic System*, 108.

⁴⁵ Ray Kea, *Settlements, Trade and Politics on the Seventeenth Century Gold Coast* (Baltimore, 1982), 209.

⁴⁶ William Pettigrew, *Freedom's Debt: The Royal African Company and the Politics of the Atlantic Slave Trade, 1672-1752* (Cambridge, 2013); Abdoulaye Ly, *La Compagnie du Sénégal* (Paris, 2000).

⁴⁷ David Richardson, 'West African Consumption Patterns and Their Influence on the Eighteenth-Century English Slave Trade', in Henry A. Gemery and Jan S. Hogendorn (eds.), *The Uncommon Market: Essays in the Economic History of the Atlantic Slave Trade* (London, 1979), 307-8.

implements, knives, basins, kettles, corals, and beads, key items of trade as African consumers bought ‘great store of Red, Blew, Yellow, and Green Rupinish Cloth, which they use for Girdles about their middle to hang their Knives, Purses, Poniards, and such like things at’, as well as white Spanish serges ‘to wear upon their bodies, instead of Cloaks’.⁴⁸ Out of the 150 different commodities needed to trade on the Gold Coast textiles accounted for perhaps half of the entire cargo of the Dutch, English, French and Middelburg traders.⁴⁹

From the mid-eighteenth century, cottons’ share of the total trade increased steadily as there was high demand for Indian- and European-made cloth from African consumers. This is not surprising: Indian cottons were in no sense new commodities as African consumers had purchased Asian cloth for centuries thanks to a thriving Saharan caravan trade.⁵⁰ The structuring of a ‘diamond-shape

⁴⁸ *The Golden coast, or, A description of Guinney...* (London, 1665), 18. On metals and the Atlantic slave trade see Chris Evans and Göran Ryden, “‘Voyage Iron’: An Atlantic Slave Trade Currency, Its European Origin, and West African Impact”, *Past & Present* 239 (2018), 41-70.

⁴⁹ Kea, *Settlements, Trade and Politics*, 207. On the Dutch trade see Henk de Heijer, ‘The West African Trade of the Dutch West India Company, 1674-1740’, in Johannes Postma and Victor Enthove (eds.), *Riches from Atlantic Commerce: Dutch Transatlantic Trade and Shipping, 1585-1817* (Leiden, 2003), 151-54.

⁵⁰ Cloth – both imported and locally produced – was key to interregional commerce in Western Africa from at least the eleventh century. The exact routes taken by Indian textiles via the Sahara are not known with precision but it is likely that striped cloth traded to Ethiopia found its way to West Africa. George E. Brooks, *Landlords and Strangers: Ecology, Society, and Trade in Western Africa, 1000-1643* (Boulder, CO, 1993), p. 55; Philip Curtin, *Economic Change in Precolonial*

trade' did not bring a new commodity to West Africa. Rather – as argued by Inikori and others – the new Atlantic system brought a restructuring of the main routes of trade away from the African interior towards the Atlantic and the consequent decline of the trans-Saharan trade.⁵¹

It is difficult to provide an overarching picture. As Kazuo Kobayashi has noted, there was no general pattern of textile consumption across West Africa. Senegal, for instance, was exceptional in that the region imported more Indian *guinées* than European textiles well into the first half of the nineteenth century.⁵² Printed cottons (chintzes and pintados) were in demand especially in the Bight of Benin.⁵³ The bulk of cloth traded were however loom-patterned cottons, and more generic categories such as Guinea cloths, and negro-cloth, and plain or piece-dyed cottons such as baftas, calico, and cannekins.⁵⁴ Cloth was a profitable item with superior barter terms of trade compared

Africa: Senegambia in the Era of the Slave Trade (Wisconsin, MA, 1975), 211-15; Shri Pramod Sangar, 'Export of Indian Textiles to Middle East and Africa in the Seventeenth Century', *Journal of Historical Research*, 17 (1974), 5. West Africa had also a thriving cotton textile industry. Colleen E. Kriger, "'Guinea Cloth": Production and Consumption in West Africa before and during the Atlantic Slave Trade', in Riello and Parthasarathi (eds.), *Spinning World*, 105-26.

⁵¹ Inikori, 'Africa and the Globalization Process', esp. 72-3.

⁵² Kobayashi, *Indian Cotton Textiles in West Africa*, chs. 2-3.

⁵³ Colleen E Kriger., 'Mapping the History of Cotton Textile Production in PreColonial West Africa', *African Economic History*, 33 (2005), 107.

⁵⁴ See table 3 in Kriger, 'Mapping the History of Cotton', 106. Cannekins are low-priced, coarse piece dyed blue or black cotton cloths not dissimilar to baftas.

to other commodities.⁵⁵ A piece of ‘flowered’ cotton of 24 ells, or a piece of chello, or bajuttenpauts or half a piece of striped taffeta were worth 10 thalers, a musket could fetch six thalers, a brass basin four thalers, and a tin basin just one thaler.⁵⁶

The textile trade to West Africa was therefore a profitable if complex business: the preferences of African consumers were not dissimilar from those of American colonists. Both groups wanted textiles, metalware, alcohol, tobacco, firearms and luxuries.⁵⁷ The North American component of European trade developed much later than the African one. Demography might partly explain the distinctiveness of North America. In 1690 the population of British America included no more than 200,000 settlers, though the estimates for the Native American population vary dramatically.⁵⁸ The population of West Africa is estimated instead at eight million in the same

⁵⁵ David Eltis and Lawrence C. Jennings, ‘Trade between Western Africa and the Atlantic World in the Pre-Colonial Era’, *American Historical Review*, 93 (1988), 943.

⁵⁶ ‘Fort Kønigstein at Ada on Rio Voltain Guine, 24 Sept 1784’, in Selena Axelrod Winsnes (ed. and trans.), *Letters on West Africa and the Slave Trade: Paul Erdmann Isert’s Journey to Guinea and the Caribbean Islands in Columbia (1788)* (Ghana, [1992] 2007), 82-3. Chello is cotton handkerchief usually striped or chequered; Bajuttenpauts was a coarse white cotton cloth. See also figure 2.

⁵⁷ Philip Morgan, ‘Africa and the Atlantic, c. 1450-1820’, in Jack P. Green and Philip D. Morgan (eds.), *Atlantic History: A Critical Appraisal* (Oxford, 2009), 226.

⁵⁸ Gary Warrick, *A Population History of the Huron-Petun, A.D. 500-1650* (Cambridge, 2008), 2-3; Alvin Rabushka, *Taxation in Colonial America* (Princeton, 2008), 67.

period.⁵⁹ However, demand for textiles and other manufactured goods rose in line with the intensification of trade with indigenous populations and the booming settler population of North America that grew rapidly to reach 5.3 million in 1800.⁶⁰

At the end of the seventeenth century, it was the West Indies market that purchased large quantities of woollens, linens and ready-to-wear clothing items (shoes, drawers, jackets, and petticoats for the plantations) as well as printed and painted cotton cloth.⁶¹ These items were also popular in the North American colonies and in parts of West Africa as for instance at Cape Coast Castle. Asian cottons such as red and blue calico cloth, ‘calico neckcloths’, but also silks such as ‘Bengal tafety’, and garments in both materials had made some inroads into the consuming habits of the inhabitants in New York, Albany and several Massachusetts towns.⁶² Yet, as Robert DuPlessis has shown, the adoption of cottons remained limited. His analysis of textile consumption from inventories in

⁵⁹ Patrick Manning, ‘African Population, 1650 – 1950: Methods for New Estimates by Region’, Unpublished paper 2013: <https://www.mortenjerven.com/wp-content/uploads/2013/04/AfricanPopulation.Methods.pdf>.

⁶⁰ Kenneth Morgan, ‘Business Networks in the British Export Trade to North America, 1750-1800’, in John J. McCusker and Kenneth Morgan (eds.), *The Early Modern Atlantic Economy* (Cambridge, 2000), 37.

⁶¹ Nuala Zahedieh, *The Capital and the Colonies: London and the Atlantic Economy, 1660-1700* (Cambridge, 2010), 269.

⁶² Amelia Peck, ‘“India Chints” and “China Taffany”’: East India Company Textiles from the North American Market’, in Amelia Peck (ed.), *Interwoven Globe: The Worldwide Textile Trade, 1500-1800* (London, 2013), 106.

Montreal, Philadelphia, Charleston and New Orleans shows how in the 1680s and 1690s cottons were as rare as silks and with the exceptions of New Orleans constituted no more than eight percent of wardrobes. European linens and woollens were staple cloths used by colonists and enslaved people.⁶³ It is likely that they became also common types of cloths also among Native Americans, though it is impossible to quantify this trade.

By the turn of the eighteenth century the importance of trade in the economies of New England and the West Indies did not escape the attention of commentators. Charles Davenant in his many tracts on trade commented upon the fact that it was American bullion that paid for the importation of a variety of goods among which Indian cloth ‘of useful wear at Home, and in our own Plantations’. He elaborated on this point by pointing to the fact that the consumption of ‘cloaths, and House-hold Furniture’ was in America three times as large per capita than in England.⁶⁴ The consumption of Asian cloth in the British American colonies increased in the following decades partly as a result of what Jonathan Eacott has defined an ‘Imperial compromise’.⁶⁵ The 1701 and 1721 bans enacted in England to limit the wearing of Indian cottons and Chinese silks were not extended to the dominions. American colonists had therefore easier access to Asian cloth than

⁶³ DuPlessis, ‘Cloth and the Emergence of the Atlantic Economy’, 73-5; Id., ‘Cottons Consumption in the Seventeenth- and Eighteenth-Century North Atlantic’, in Riello and Parthasarathi (eds.), *Spinning World*, 227-46; Id., *Material Atlantic*, 53-81.

⁶⁴ Cit. in Jonathan Eacott, ‘Making an Imperial Compromise: The Calico Acts, the Atlantic Colonies, and the Structure of the British Empire’, *William and Mary Quarterly*, 69 (2012), 740.

⁶⁵ Eacott, *Selling Empire*, ch. 2.

English and most other European consumers.⁶⁶ They continued to import calicos, chelos and the silk-cotton blend ‘sousae’ used for gowns, petticoats, curtains and bed linens.⁶⁷ In fact this measure came to strengthen the link between India and the Americas as it established that all Asian cloth imported into the colonies had to be re-exported from Britain.⁶⁸

Over the following decades – very much at the same time as the expansion of the trade of Indian textiles to Africa – the trade to the American colonies boomed. This was a period of endogenous demographic growth for the colonies but also one in which a million enslaved people were transported to the American colonies. A marked expansion of the slave trade occurred in particular in the period 1740-80 when Jamaica and the other Caribbean islands were at their peak.⁶⁹ As in the case of Africa, the variety of cloth for sale was very large, though checked cloth both made of cotton, linen, and cotton-linen mixes was particularly in high demand.⁷⁰ By the 1770s consumers

⁶⁶ In 1718 Spain banned the wearing of Indian cloth both in the mother country and all its colonies. Vincente, *Clothing in the Spanish Empire*, 11.

⁶⁷ Christina J. Hodge, *Consumerism and the Emergence of the Middle Class in Colonial America* (New York, 2014), 138-39. Sousae/soozy are patterned cloth of higher quality than chelos.

⁶⁸ Eacott, ‘Making an Imperial Compromise’, 731-62; Id., *Selling Empire*, 72-116.

⁶⁹ Brinley Thomas, *The Industrial Revolution and the Atlantic Economy* (London and New York, 1993), 37.

⁷⁰ Beverly Lemire mentions how Peach & Pierce, a Bristol merchant house dealing in Lancashire textiles, in 1753-57 sold to the North American markets 16 varieties of linen checks compared to only 8 of cotton check partially because the former were cheaper. Beverly Lemire, ‘Transforming Consumer Custom: Linen, Cotton, and the English Market, 1660-1800’, in Brenda Collins and

had a choice between cloths of ‘2 Colours and Blue [2 yards]’ costing 26s a piece, compared to 32s for ‘3 Colours and blue’ of the same size, and 40s for a 5 Colour’.⁷¹

Rural consumers in Colonial America tended to act conservatively, relying on linens and especially woollens. Slowly, however, cottons acquired increasing popularity. Whilst in the late seventeenth century cotton textiles were used for the rare kerchief and cravat, by the 1770s skirts, vests, jackets, breeches, gowns and shirts were all made in cotton as well as linen. Cotton garments were popular in particular in Louisiana, though colonists in South Carolina preferred woollens.⁷² Enslaved people in mainland America were also dressed in linen as well as cotton.⁷³ In 1774, for instance, a sixteen-year-old Cuban slave who had run away from her Massachusetts mistress wore ‘a cotton and linen shift, quilted callicoe Petticoat, coarse Apron, and a Mob [cap, or round ruffled bonnet, ... N.B. She was seen last Week in Town Boston, and had on a strip’d Gown. She also sometimes

Philip Ollerenshaw (eds.), *The European Linen Industry in Historical Perspective* (Oxford, 2003), 199-200.

⁷¹ ‘To B. Pomeroy and S. Hodgkin, London, Dec. 6, 1770’, in Philip L. White (ed.), *The Beekman Mercantile Papers, 1746-1799*, 3 vols. (New York, 1956), ii: 929-31.

⁷² DuPlessis, *Material Atlantic*, 211-12.

⁷³ Linda Baumgarten, ‘Plains, Plaid and Cotton: Woollens for Slave Clothing’, *Ars Textrina*, 15 (1991), 203-21; Sophie White, ‘Geographies of Slave Consumption’, *Winterthur Portfolio* 45 (2011), 229-48, esp. 242-43; Id. ‘Dressing Enslaved Africans in Colonial Louisiana’, in Beverly Lemire and Giorgio Riello (eds.), *Dressing Global Bodies: The Political Power of Dress in Global History* (Abingdon, 2020), 85-102.

wears a Plad Gown, and sometimes striped linen, and a black silk Bonnet'.⁷⁴ Native Americans remained keen consumers of woollens and generally enslaved people were often dressed in linen, a fabric cheaper than cotton.⁷⁵

Large quantities of European and Indian textiles were also central to the exchange between Europeans and First Nation people in the riverine and Greater Lakes area trade. This was the case for instance in the Mohawk Valley of New York where in the 1750s the Irish fur trader and merchant William Johnson developed diplomatic and trade relationships with the Mohawks by supplying blue, red, and black woollens, flowered serge and striped calicoes in 'lively Colours'.⁷⁶ A generation later, in the 1790s, another Irishman, the explorer Isaac Weld noted that the men and women of Lower Canada 'put on a short shirt, loose at the neck and wrists, generally made of coarse cotton or calico of some gaudy pattern, not unlike what would be used for window or bed curtains at a common inn in England'.⁷⁷ These were most likely checks and striped textiles whose use had been common in the region for over a century. The textile exchange with Native Americans

⁷⁴ Cit. in Hodge, *Consumerism*, 138-39.

⁷⁵ DuPlessis, 'Cloth and the Emergence of the Atlantic Economy', 80-1. See also Shane White and Graham White, 'Slave Clothing and African-American Culture in the Eighteenth and Nineteenth Centuries', *Past & Present* 148 (1995), 149-186.

⁷⁶ Timothy J. Shannon, 'Dressing for Success on the Mohawk Frontier: Hendrick, William Johnson, and the Indian Fashion', *William and Mary Quarterly* 53 (1996), 21.

⁷⁷ Isaac Weld, *Travels through the States of North America and the Provinces of Upper and Lower Canada during the years 1795, 1796, and 1797* (London, 1799), 234.

extended to northern locations. The Hudson's Bay Company used Indian cloths of different types to entice indigenous hunters to sell their fur catch. Since the late seventeenth century these included roman handkerchiefs, white and painted calico shirts, printed chintzes and longee sashes and pieces. So important were the specifications and qualities of these textiles that the entire negotiation for the season depended on them.⁷⁸

Reconnecting and reconfiguring the Atlantic and the Indian oceans allows us to challenge and extend some of the consumer-led narratives that have recently positioned European consumers as the key to the re-shaping of global markets for Indian cottons and their imitations in the seventeenth and eighteenth centuries.⁷⁹ Atlantic consumers were as articulate – if not more – than their European counterparts. African consumers who were in no sense passive accepters of what was sent to them from Europe, discriminately chose from a vast array of products from Europe, Asia and from other areas in Africa.⁸⁰ They consumed light woollens (in bright blue and green), silks with purple and vermillion flowers, medium and fine quality linens, and Indian cottons, but

⁷⁸ Lemire, *Global Trade*, 60-61, 274-75. Longee is a cloth generally white but also found in blue or brown. It was traded widely in east-central Africa

⁷⁹ See for instance the original formulation of a 'consumer revolution' by Neil McKendrick, John Brewer and J. H. Plumb, *The Birth of a Consumer Society: The Commercialization of Eighteenth-Century England* (London, 1982), and John Brewer and Roy Porter (eds.), *Consumption and the World of Goods* (London, 1993). For a critique see: Craig Clunas, 'Modernity Global and Local: Consumption and the Rise of the West', *American Historical Review*, 104 (1999), 1497-1509.

⁸⁰ Carolyn Keyes Adenaike, 'West African Textiles, 1500-1800', in Maureen Fennell Mazzaoui (ed.), *Textiles: Production, Trade and Demand* (Aldershot, 1998), 260; Evans and Göran Ryden, "'Voyage Iron'", 41-2.

rejected course linens, and any cloth of dull colours. West African consumers were as demanding as their American contemporaries as underlined by a European trader in Guinea: ‘when they buy any Linnen-Cloath, they look if it be not too slight and thin, and whether it bee white and broad, for they are very curious to buy white and broad Linnen, and respect not the strength so much as the breadth of it.... Secondly, They take Woolen-Cloath and hold it up against the light, to see if it bee thin... they make trial of all other Wares, as curiously as is done in Europe’.⁸¹ The North American market was one characterised by complex demands and a preference for all-cotton cloth that required manufacturers’ and agents’ abilities to provide the required patterns, colours and up-to-date merchandise.⁸² An American merchant remarked in 1773 that in Boston ‘people here are very particular in the choice of cloths, they burn & scrape to see if the thread is even, round & fine & choose those that are mellow & well dress’d, with a good Gloss upon them. These qualities are what will recommend them, & no regard is paid to the Maker’s name’.⁸³

An important methodological issue arises when the demand for cloth in the Atlantic is considered: archival evidence provides a series of exotic names, but *materially* what kind of textiles are they? The somewhat complex terminology used in commercial correspondence can be supplemented by

⁸¹ *The Golden coast, or, A description of Guinney...* (London, 1665), 19.

⁸² John Styles suggests that North American markets was a major market for woven as well as cotton cloth printed either in India or in Europe. John Styles, ‘Fashion, Textiles and the Origins of Industrial Revolution’, *The East Asian Journal of British History* 5 (2016), 161-89; Id., ‘How Colonial America’s Taste for Printed Calicoes Drove the British Industrial Revolution’ (Paper presented at Colonial Williamsburg, 27-18 March 2017).

⁸³ Cit. in Morgan, ‘Business Networks’, 59.

considering material evidence and visual sources.⁸⁴ Unlike the extensive collections of Indian chintzes and calicoes produced for the European market, material examples of the types of cloth traded in the Atlantic are hard to find. Some samples of the cloth traded to West Africa and the Americas are however to be found in archives and museums in Europe and North America. This is the case of the cloth samples sent by the Dutch West India Company to Elmina (in present-day Ghana) in 1788 (Figure 2). Thirty-five varieties of cloth were sent to West Africa including ‘cambayen’, ‘blue salemurs’ and stripes and checks such as bajutapauts and rumals.⁸⁵ These were either imported cloths from India or imitations produced in the Netherlands and England. The nearly contemporaneous sample book that included 500 swatches of cloths produced in 1771 by the Manchester manufacturing firm of Benjamin and John Bower show how similar the textiles traded to America were to those destined for Africa (Figure 3). These were cheap varieties worn by sailors, artisans, and enslaved people. 40 percent of such swatches were colourful checks and striped textiles made of cotton and linen in imitation of Indian and African cloths.⁸⁶

⁸⁴ This is the methodology used in glossary of Indian textiles. See Satyaprakasa Sangara, *Indian Textiles in the Seventeenth Century* (New Delhi, 1998); ‘Glossary’, in Riello and Parthasarathi (eds.), *Spinning World*, 409-420; and the Textile Database of the University of Warwick’s ERC Project ‘Europe’s Asian Centuries: Trading Eurasia 1600-1830’ coordinated by Maxine Berg: <https://warwick.ac.uk/fac/arts/history/ghcc/eac/databases/textiles/>

⁸⁵ Rumals are small thin squares, woven of cotton or silk, usually decorated with painting, printing, or embroidery (see figure 2). A list with relative prices is to be found on the MCC Slave Voyage “The Unity” website: <http://eenigheid.slavenhandelmcc.nl/trajecten-van-de-reis-en/afrika-en/samenstelling-cargazoentextiel-slavenhandel/?lang=en> [last accessed 6 January 2021]

⁸⁶ Amelia Peck (ed.), *Interwoven Globe*, 283-84 (catalogue).

The importance of checks and striped cloth is undeniable. This is clearly shown by rare surviving samples as well as visual sources such as the well-known ‘Linen Market’ in Dominica, c. 1780 by Agostino Brunias (Figure 4). Like many of his paintings, Brunias presents an idyllic view of plantation economies. The accusation of unrealism has often been extended to the variety of cloths presented in his pictures. Yet, a closer look shows that Brunias was attentive to the diversity of materials available. One can see the bandannas, the romal handkerchiefs, guinea cloth, and other checked and striped cloths.⁸⁷ Brunias does not show us any cottons or linens printed with floral motifs, and dresses only the European woman in the right-hand side of the picture in fine muslin. Clearly he used cloth in a stylised way and as a marker of social hierarchy. The Atlantic preference for checked and striped cloths is often explained as the legacy of African taste.⁸⁸ Though the use of chintzes and other printed cloths were not absent in West Africa, consumers preferred geometric patterns. Some textile historians believe this was the result of the long influence of Islamic geometric designs in West Africa and in the area of El Mina in particular.⁸⁹

⁸⁷ Beth Fowkes Tobin, *Picturing Imperial Power: Colonial Subjects in Eighteenth-Century British Paintings* (Durham NC and London, 1999), 139-73.

⁸⁸ For the wider role of textiles, especially in Kongo and Angola, see Cécile Fromont, ‘Common Threads: Cloth, Colour, and the Slave Trade in Early Modern Kongo and Angola’, *Art History* 41 (2018), 838-67.

⁸⁹ Vogt, ‘Notes on the Portuguese Cloth Trade’, 630. See also *Weaving through Spanish History, 13th-17th Centuries* (Washington, DC, 1972-73). See also the cotton textile fragments from the Bandiagara caves in Mali exhibited in the exhibition ‘Sahel: Art and Empires on the Shores of the Sahara’ (The Metropolitan Museum, New York, 30 January – 26 October 2020). These date from

Three conclusions can be drawn. First, the fact that Indian cotton textiles accounted for a large share of European trade to the Atlantic. American and African textile buyers did not follow European demand but developed their own distinct preferences. Like Europeans, they used a mix of ‘original’ Indian cloths and their European (Dutch, English, French, Swiss, etc.) imitations. The latter found inroads into Atlantic markets even though they remained relatively poor copies of Indian fabrics, being often mixes of linen and cotton, rather than pure cotton cloth. Second, Atlantic users showed a distinct preference for patterned rather than printed textiles. While European consumers seemed to have preferred calicos and chintzes that imitated the floral patterns of silk and embroidered textiles, in the Atlantic checked and striped cloths were in demand. Finally, cotton textiles were key in the reconfiguration of British trade across the Atlantic. Cottons’ importance increased over the course of the eighteenth century particularly as they came to replace woollens and linens.

III

From Trade to Manufacturing

the eleventh-fifteenth century and incorporate chequered patterns not dissimilar to later textiles discussed in this article. Several examples are to be found in the collections of the Nationaal Museum van Wereldculturen in The Netherlands. See for instance: <https://collectie.wereldculturen.nl/#/query/0281ce66-0e99-4d84-9edf-1da6f4f34bf8> [last accessed 9 January 2021]

What were the consequences of Atlantic trade and consumption for European manufacturing and its eventual path towards industrialisation? My hypothesis is that the integration of the Indian and Atlantic ocean trade reconfigured commerce and manufacturing *before* the mechanisation of cotton textiles. My concern is British industrialisation, as changes in trade and demand affected English and to a certain extent Scottish manufacturing more than other nations in Europe. The century between 1675 and 1775 witnessed two major changes in British trade. First, the sustained growth in trade was accompanied by an unequivocal shift away from European partners to cater instead for Atlantic and colonial markets, a point already noted in the literature. Second, as Atlantic trade expanded, the staple product of British trade – woollen cloth – decreased in relative importance, requiring a diversification of exports that came to include metalware and cotton textiles.⁹⁰

In the eighteenth century the British economy became more international as its trade increased more than five-fold while the Island's population increased only two and a half times.⁹¹ British

⁹⁰ This interpretation is partly challenged by Pat Hudson who points to the fact that woollen and worsteds remained integral to manufacturing, trade and the political economy of Britain before and after the rise of cottons. Their export increased in absolute terms though their relative decline (in percentage of total trade) was real. Pat Hudson, 'The Limits of Wool and the Potential of Cotton in the Eighteenth and Early Nineteenth Centuries', in Riello and Parthasarathi (eds.), *Spinning World*, 327-350.

⁹¹ R.P. Thomas and D. N. McCloskey, 'Overseas Trade and Empire, 1700-1860', in Roderick Floud and D. McCloskey (eds.), *The Economic History of Britain since 1700. Vol. 1. 1700-1860* (Cambridge, 1981), 88-9.

trade also became more global. The extra-European share of British trade moved from just 13 percent in 1701-5 to 44 percent of all exports in 1796-1800 and imports from outside Europe increased from 31 to 53 percent.⁹² For centuries English trade had been quintessentially continental. In 1700-1 English exports and re-exports to Continental Europe were worth £5.3 million (80.3 percent of all total export and re-exports) while North America and the West Indies received just £726,000 worth of goods a year (11 percent of the total). A century later the situation had changed dramatically. Partially as a result of continental warfare, in 1797-98 British exports and re-exports were worth £40.1 million (six times as much as a century earlier) but Continental Europe received goods worth just £13 million (32.5 percent of total export and re-export).⁹³

The shift towards the Atlantic – what O’Brien and Engerman have called the ‘Americanization of British trade’ - was even more pronounced for manufactured goods.⁹⁴ In 1700, 63 percent of exports of manufactured goods went to Continental Europe and only 33 percent to the Atlantic. On the eve of American independence, the proportion of trade had swapped: only 27 percent of English manufactured goods were exported to the Continent and 65 percent to the Atlantic.⁹⁵ Exports to Virginia, Maryland, Carolina and Georgia trebled between 1745 and 1773 and those to

⁹² Johnson, *Anglo-African Trade*, 31.

⁹³ See TNA, CUST 3 (1701-2; 1702-3; 1703-4; 1704-5; 1797-98).

⁹⁴ O’Brien and Engerman, ‘Exports and the Growth of the British Economy’, 182 and 185.

⁹⁵ Thomas, *Industrial Revolution*, 36. See also Phyllis Deane and W. A. Cole, *British Economic Growth, 1688-1959: Trends and Structure* (Cambridge, 2nd ed. 1967), 87; and Davis, *The Industrial Revolution*.

New York, New England and Pennsylvania increased four-fold.⁹⁶ Strong colonial links, the ability to supply a complex and diversified market, mercantilism, and the decreasing prices of American commodities made the Atlantic an area of thriving trade for Britain.⁹⁷

The second major shift in British trade was from woollens to cottons. Until the late seventeenth century, British trade had relied on the export of raw wool and manufactured woollens and worsteds. Yet, during the eighteenth century wool cloth accounted for a decreasing share of expanding Atlantic markets. In the early seventeenth century woollens had been the staple of English trade, accounting for up to 90 percent of the port of London's export. In the mid-1680s textiles still accounted for 50 percent of the export of English goods from London to the West Indies and two-thirds of the exports of English goods from London to North America. Yet, in the quarter of century between 1663 and 1686 the export of English woollens to colonial markets decreased from 27 percent of all goods exported to below 20 percent, a trend that was visible also in the African market.⁹⁸ The vocal position of the British woollen manufacturers in protecting domestic markets in this period is therefore not surprising considering the modest performance of their staple product on international markets.⁹⁹

⁹⁶ Thomas, *Industrial Revolution*, 49.

⁹⁷ Inikori, 'Reversal of Fortune', 72.

⁹⁸ Zahedieh, *Capital and the Colonies*, 263-65.

⁹⁹ This explains why the woollen interests were so vociferous in protecting their ware against domestic completion of Asian silks and cottons and at the same time lobbied government to force the English East India Company to sell woolens in Asia. Chaudhuri, *Trading World of Asia*, 215-36.

Cotton and linen textiles were part of a trend of diversification in the range of products exported or re-exported from Britain to North America. Yet, in both cases – and especially for cotton textiles – Britain had to rely on the re-export of foreign cloth rather than the export of cloth of its own manufacture. The period from the beginning of the eighteenth century to the 1780s saw a transformation of British trade with re-exports acquiring a substantial share of the overall trade.¹⁰⁰ This period, however, can be seen as comprising two phases. From 1700 to the 1740s Britain was effectively a ‘peddler nation’ in the same way in which the Low Countries had been in the previous century. Increasing quantities of textiles from Asia entered into the product mix offered by British traders. By the 1750s, however, this position changed as an increasing share of Britain’s trade in linen and cottons came to be composed of home manufactures.

In the early eighteenth century, the replacement of Indian cottons with European-made ones was a technological and entrepreneurial challenge for textile manufacturers. One solution was found in printing on plain Indian cotton cloth or on European-made linen. Results were promising but several issues hampered the development of a large-scale calico-printing industry, one among which was the fact that the quality of the printed cloth was not as good as that imported from India.¹⁰¹ The 1721 prohibition of Indian loom-patterned cloth excluded from the domestic British

¹⁰⁰ Carole Shammas, ‘The Revolutionary Impact of European Demand for Tropical Goods’, in McCusker and Morgan (eds.), *The Early Modern Atlantic Economy*, 170.

¹⁰¹ George Bryan Souza, ‘The French Connection: Indian Cottons and Their Early Modern Technology’, in Riello and Roy (eds.), *How India Clothed the World*, 347-64; and for France:

market not only printed fabrics but also Indian all-cotton checks and stripes thus encouraging domestic production. Yet, as Daniel Defoe underlined, taxation (2s. 6d in import and 16d navigation duties as well as 6d duty on printing per pound) made it difficult for British producers to compete with imported cloth.¹⁰² Competitiveness was not just a problem for the British: French manufacturers also complained that imitations of Indian cloths produced in France were up to 70 percent more expensive and were often not as good as Indian originals.¹⁰³ What made European substitutes increasing appealing was instead the dynamics of procurement in India by the East India companies. Servants of the European companies protested that the price of Indian cotton cloth was increasing year by year while they seemed unable to fulfil orders.¹⁰⁴ The collapse of Indian production especially in the 1730s and 1740s in areas such as Gujarat made it difficult to

Olivier Raveux, 'The Birth of a New European Industry: l'indiennage in Seventeenth-century Marseilles', in Riello and Parthasarathi (eds.), *Spinning World*, 291-306.

¹⁰² Daniel Defoe, *A Brief State of the Question, between the Printed and Painted Callicoets, and the Woollen and Silk Manufacture, as far as it relates to the wearing and using of printed and painted callicoets in Great-Britain* (London, 1719), 9.

¹⁰³ *Réflexions des marchands merciers, drapiers, et corps unis de la ville de Rouen, sur l'impossibilité de fabriquer en France des toiles propres pour l'impression, en concurrence avec celles des Indes* (Rouen ?, n.l [1750s]), 3.

¹⁰⁴ Chris Nierstrasz, *Rivalry for Trade in Tea and Textiles: The English and Dutch East India Companies (1700-1800)* (London, 2015), 124-53; Giorgio Riello, 'Failure and the Industrial Revolution: The East India Companies' Procurement and the Rise of the British Cotton Textile Industry', in Joseph Inikori (ed.), *British Imperialism and Globalization: Essays in Honor of Patrick K. O'Brien* (Woodbridge, 2021), 43-64.

be supplied with cheap and abundant quantities of Indian cloth.¹⁰⁵ The European companies competed against each other in the procurement of textiles in South Asia and suffered from inelastic supply, increasing costs of labour and declining profit margins. The cheap checked and striped cloths produced on the Malabar and Coromandel coasts of India that were much in demand in the Atlantic were also sought after by Indian-ocean merchants to be traded to Southeast Asia and Japan.¹⁰⁶ All of this provided a unique opportunity for the production of European cottons and linen-cotton products to replace Indian imported goods.

European-made products found however a mixed reception on the Atlantic market. In 1677 the Royal African Company ventured into the production of annabasses, cloth with woollen warp and cotton weft developed in Holland in imitation of Indian or African striped cloth. Although they competed with Dutch and Indian equivalents, they encountered some success in the 1680s when 20,000 pieces of English annabasses produced in Spitalfields were sent to Africa each year.¹⁰⁷ In the first couple of decades of the eighteenth century English manufacturers attempted to replace Indian cottons with mixed cotton-wool but as the Governor of Cape Coast Castle explained in

¹⁰⁵ Ghulam A. Nadri, *Eighteenth-Century Gujarat: The Dynamics of its Political Economy, 1750-1800* (Leiden and Boston, 2009), 120-22.

¹⁰⁶ Kayoko Fujita, 'Japan Indianized: The Material Culture of Imported Textiles in Japan, 1550-1850', in Riello and Parthasarathi (eds.), *The Spinning World*, 181-203; John Guy, "'One Thing Leads to Another": Indian Textiles and the Early Globalization of Style', in Peck (ed.), *Interwoven Globe*, 12-27.

¹⁰⁷ Zahedieh, *Capital and the Colonies*, 266.

1706 'East India goods only and not those imitated are saleable'.¹⁰⁸ Yet, the African Company persisted in attempts at popularising British-made linen-cotton cloths such as jeans and stripes by sending 20,000 and 17,000 pieces to West Africa in 1698-1702 and in 1720-22 respectively.

The Dutch, by contrast, had made inroads into the substitution of Asian cloth by developing a thriving calico printing industry around Amsterdam in the last quarter of the seventeenth century. By the early eighteenth century, they had an entire branch of their textile manufacture dedicated to producing copies of Asian fabrics for sale to Africa.¹⁰⁹ They produced prints in two or three colours that were imitated by printers locally and in Hamburg.¹¹⁰ Regional centres of production of Indian imitations emerged also in England and France. Nuala Zahedieh cites the case of Richard Holt, a London colonial merchant who supplied both credit and raw materials for the nascent English cotton industry. Already in the 1680s, Holt imported raw cotton from Jamaica and had it put out via a Manchester factor to nearby spinners and fustian makers. The finished cloth was then exported to the Caribbean. Over the course of the next thirty years at least 700 workers were employed to produce niccannees, tapsseils and brawls for the Atlantic markets, though their success against Indian products was limited.¹¹¹ Rouen, a prominent woollen cloth centre and port on the French Atlantic coast, also emerged as a node of cotton textile production thanks to imports

¹⁰⁸ TNA, T70/22, 1 March 1706.

¹⁰⁹ Keyes Adenaike, 'West African Textiles', 258. See also the examples of 'imitation' textiles preserved in the Zeeland Archives. Fromont, 'Common Threads', 857-58.

¹¹⁰ Stanley S. Chapman and Serge Chassagne, *European Textile Printers in the Eighteenth Century: A Study of Peel and Oberkampf* (London, 1981), 13.

¹¹¹ Zahedieh, *Capital and the Colonies*, 227, 266.

of raw cotton from the Levant. Annabasses started to be produced in the city and nearby countryside in 1727 in imitation of both African and Indian products and their copies made in the Netherlands since the late seventeenth century.¹¹² Like annabasses, French imitations of guinée cloth did not find ready markets in West Africa as they did not have the same smell as the original Indian products while Manchester goods were considered inferior to their Indian equivalents.¹¹³

IV

A European Industry

Recent global history scholarship on the industrial revolution and the role that cotton textile manufacturing played in it, has paid scant attention to patterns of consumption and overseas markets. Robert Allen considers the industrialisation of cotton textile manufacturing in Britain during the last quarter of the eighteenth century as resulting from the mechanisation of cotton spinning. He argues that wage differentials explain the adoption of capital-intensive and labour-saving new spinning technologies in areas of high wages such as England, thus increasing productivity and decreasing the total wage bill. This allowed the newly established cotton industry of the North of England to compete (on price) with the cotton industry of India.¹¹⁴ Allen's

¹¹² A.P. Wadsworth and J. de Lacy Mann, *Cotton Trade and Industrial Lancashire, 1600-1780* (Manchester, 1931), 150, note 4 and 151. On Rouen see also Parthasarathi, *Why Europe Grew Rich*, 149-50; and Riello, *Cotton*, 154-59.

¹¹³ Riello, *Cotton*, 156.

¹¹⁴ Allen, *The British Industrial Revolution in Global Perspective*, 182-216.

explanation has been criticised from an empirical as well as a theoretical point of view.¹¹⁵ Its focus on yarn production, rather than on the production and consumption of cloth, confirms a traditional narrative of technological innovation that has been central to industrial histories for several generations. It also narrates a story of industrialisation that is both insular (geographically and metaphorically) and based on a major discontinuity reified by the great machines patented by Hargreaves, Arkwright and Crompton. Joel Mokyr also proposes a technologically-driven narrative, in which efficient institutions for knowledge creation allowed for the development of a variety of technologies among them those that transformed cotton spinning and later weaving.¹¹⁶ Both Allen and Mokyr couch their stories within a global context, but in doing so they go back to views of the British industrial revolution as an exceptional moment of economic transformation.

This article proposes instead a different interpretation both in its chronologies and key features. Technological innovation was indeed important but the reasons for its adoption have to include a reflection on why cotton textile manufacturing might have been seen as a fertile terrain for their application. This question is particularly puzzling if we think that cotton textile production in Europe was a marginal sector compared to either woollen or linen manufacturing. The search for a cotton yarn of sufficient fineness and tensile strength to be used as warp was indeed a major

¹¹⁵ John Styles, 'The Rise and Fall of the Spinning Jenny: Domestic Mechanisation in Eighteenth-century Cotton Spinning', *Textile History*, 52/1 (2021), 1-43.

¹¹⁶ Joel Mokyr, *The Enlightened Economy: An Economic History of Britain, 1700-1850* (New Haven, 2009); Id., *A Culture of Growth: The Origins of the Modern Economy* (Princeton, 2017).

challenge.¹¹⁷ The production of pure cotton (cotton ‘both ways’ in their warp and weft) in Europe was a long-standing project that had its origin in the shifts in trade and consumption considered in this article. Rather than a narrative of technological triumph, the production of cotton cloth in Europe was one of tribulation, trial and error and continuous replacement of cotton for linen.

In this framework Manchester is not the cradle of mechanised spinning but the birthplace of an industry that provided inexpensive but good-quality cloth for domestic as well as Atlantic market. In Manchester the production of chintzes (printed on Indian cotton cloth or European linen and line-cotton mixes) did not develop into a large industry until the 1750s. An anonymous report, possibly written in the 1760s, explained the early starts of Manchester in the 1720s following the ban on the import of checks and striped cloth from India when the city attempted ‘the manufactures of various sorts of cotton stripes’, adding that these had ‘have been so much improv’d of late years, as to beat out the wear of Turkey strip’d goods in Britain, and nearly of India strip’d goods in America, where they [i.e. India striped goods] are allow’d to be wore, and now great quantities are exported to the coast of Africa, which was wholly supplied with India goods ‘till within 15 years past’.¹¹⁸

Unlike Manchester where the production plain-weave fabrics developed from a long-standing tradition in fustian manufacturing, in Rouen cotton manufacturing was a totally new industry. Both

¹¹⁷ Maxine Berg, ‘Quality, Cotton and the Global Luxury Trade’, in Riello and Roy (eds.), *How India Clothed the World*, 391-414.

¹¹⁸ British Library (BL), Add MS. 38342. Liverpool Papers, vol. 153, ‘History of the Cotton Trade’, ff. 232r-233v. I thank John Styles for sharing this document with me.

areas developed a textile production of a product that was manufactured by spinning cotton imported from the Americas (and the Levant in the case of Rouen), and mixing it with linen to produce a finished cloth. What was produced was a patterned rather than a printed cloth of the kind produced in the main calico-printing centres of London, Amsterdam, Mulhouse and Orange. This remained a relatively small industry: estimates in 1750 put the Manchester production at no more than 50,000 pieces of printed fabrics per year.¹¹⁹ The Lancashire cotton industry was part of a patchwork of regional specialisation of production for export, especially to North America. Calimancoes were procured from Leeds, Coventry and Halifax; hosiery from Leicester and Nottingham; buttons from the North of England and Scotland; dark coloured crapes from Norwich; imported Indian and Persians satins, calicos and chintz from London; Cyprus gauze, tapes, dimities, drawboys and bobbins were produced in Manchester and other woollens came from Kendal in Westmoreland.¹²⁰

The shift from Indian to European cloth started in the late 1740s and was fostered by the expansion of the African market first and after 1760 by North American demand.¹²¹ The same decades were a period of buoyant demand on domestic markets and of fall in Indian supply. These conditions effectively created a market for textiles that could supplement Indian varieties. Expanding markets

¹¹⁹ Edmund Potter, *Calico Printing as an Art Manufacture. A lecture Read before the Society of Arts* (London, 1852), 8. A decade later, in the 1760s, the production of printed cloth had expanded to account for c. 20% of the output value of the Lancashire cotton industry.

¹²⁰ Kenneth Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century* (Cambridge, 1993), 105-6.

¹²¹ Schumpeter, *English Overseas Trade Statistics*, 29-34 tables 10 and 11.

pushed up the productive capacity of the industry and served as an ‘apprenticeship’ for the successful engagement of Britain in the European and North American markets in the later part of the eighteenth century. The argument here is that the stimulus for the development of European cotton textile manufacturing before mechanisation was market led. This is particularly important for a textile such as cotton, the production of which in Europe was still marginal in the mid eighteenth century. Several European countries were in the process of replacing Indian with European cottons. However, without the stimulus provided by foreign markets, the import substitution in domestic markets of Indian cottons with home products would have not been able to support the long-term development of European cotton textile production and its eventual path towards mechanisation and industrialisation.

Rather than printing Indian cloth, Manchester and its surroundings improved their traditional fustian (linen warp and cotton weft) and other mixed textile production to make them viable alternatives to Indian goods in the Atlantic markets. The new ‘cottons’ (cotton-linen mixes) produced in Lancashire were yarn-dyed or printed and lighter than traditional fustians.¹²² Material sources help us to understand the dynamics of production in Manchester in the early 1750s. These come in the shape of a large book containing 115 textile swatches of cloth produced in the Manchester area in 1750-51. This album is now at the Musée des Arts Décoratifs in Paris, originally it was created as a report to the Bureau de Commerce, the major commercial government

¹²² On fustian production in Europe going back to the middle ages see Maureen Fennell Mazzaoui, ‘The First European Cotton Industry: Italy and Germany, 1100-1800’, in Riello and Parthasarathi (eds.), *The Spinning World*, 63-88.

institution in eighteenth-century France.¹²³ Its author was the Lancastrian John Holker, a Jacobite who had escaped to France with the Young Pretender after the 1745 rebellion, and who later became a major figure in the French civil service when he was appointed as one of the *inspecteurs généraux des manufactures*.¹²⁴

Holker's book is a work of industrial espionage; its author even claimed to have risked his life to collect its samples. For our purposes, it shows that Manchester's production in the early years of the 1750s included checks for furniture and dress (mostly linen with cotton threads), hooping (similar to checks but made entirely of linen), striped 'Cotton Holland' (cotton and linen), ticking (for linings), chereyderys (silk warp and cotton weft), fustians, cotton and Manchester velvets, grandurelles (cotton-linen for the colonies), nankins, dimities, silk velvets, jeans, handkerchiefs, and chintzes.¹²⁵ Samples 5-8 (Figure 5) for instance are checks 'made for home consumption and

¹²³ Bibliothèque de la Union Centrale des Arts Décoratifs, Paris, G.C. 2: 'Le Livre d'Echantillons de John Holker, c. 1750'.

¹²⁴ André Rémond, *John Holker: Manufacturier et grand fonctionnaire en France au XVIIIe siècle, 1719-1786* (Paris, 1946); John R. Harris, *Industrial Espionage and Technology Transfer: Britain and France in the Eighteenth Century* (Aldershot, 1998), esp. 43-78. A critical edition of Holker's book is forthcoming by Ariane Fennetaux and John Styles (eds.), *Le Livre d'Echantillons de John Holker* (Paris, forthcoming 2022).

¹²⁵ I thank John Styles for sharing with me the results of his electronic microscopy study on the fibre composition of Holker's book. On Holker's book see: Florence M. Montgomery, *Printed Textiles: English and American Cottons and Linens, 1700-1850* (New York, 1970), 25-6; Id., 'English Swatches of the Mid-Eighteenth Century', *Burlington Magazine* 102 (1960), 240-43; Id.,

for export, especially to the colonies, and used for sailors' blouses, children's clothing and linings'. They are made in imitation of Indian cloth but mostly of linen. Only the blue thread is made of cotton. Samples 79 and 82 (Figure 6) are instead handkerchiefs, the first patterned and the second resist printed.¹²⁶

Micro-material analysis is a useful tool of research: 94 of Holker's 115 samples are in no sense statistically representative of the production of cotton and linen textiles in Manchester; nevertheless their digital microscope examination confirms general findings so far. It suggests that Manchester's production was based on checked and striped cloths (44 percent), with plain (jeans, some fustians and ticking), diaper (dimity) and napped (some fustians and Manchester velvets) accounting for the remainder of the cloth produced. Printed chintzes and calicoes appeared

'John Holker's Mid-Eighteenth-Century *Livre d'échantillons*', in Veronika Gervers (ed.), *Studies in Textile History in Memory of Harold B. Burnham* (Toronto, 1977), 214-31; Serge Chassagne, *Le coton et ses patrons. France, 1760-1840* (Paris, 1991), 45-9.

¹²⁶ Sample 79: 'Made entirely of linen in 'Manchester and surrounding towns, were extensively sold at home, abroad, and in the colonies.' A full piece included five dozen handkerchiefs'. Sample 82: 'in London the English print fine linen cloth (Fr. batiste) from Cambrai, Valenciennes, and St. Quentin for home consumption as well as for export to Europe and the colonies'. AD, G.C. 2: 'Le Livre d'échantillons de John Holker, c. 1750'. Whether these chintzes were printed in Manchester is unclear. The book is dated 1750-51 and the first source attesting the presence of printing in Lancashire is 1753. Chapman and Chassagne, *European Textile Printers*, pp. 25-6.

to be a relatively small part of Manchester's production at the time.¹²⁷ An analysis of the fibre is equally informative as it shows that two thirds of Manchester's production was made of cotton-linen mixes. Some of them, like the checks in Figure 5, were cloths made totally of linen with the exception of blue thread. Cotton was used only for the parts of the cloth to be dyed in red, blue and other colours as cotton absorbs dyes more easily than linen yarn. Only a small percentage of goods were made entirely of cotton. The way to obviate the inability to produce a cotton warp was to double the yarn as in the case of Manchester velvets.¹²⁸ This produced a cloth that was heavier than any Indian cotton cloth and surely more expensive because of the doubling of the warp.

The Holker book is an important document as it shows that the Manchester 'cotton' industry in the early 1750s was a hybrid of cotton and linen production.¹²⁹ It is not unimaginable that the proportion between the two yarns might have been a factor in the relative cost of both fibres on the Liverpool market.¹³⁰ We know for instance that in c.1760 the Manchester hinterland production of fustians, dimities, checks and other 'cottons' was worth £1.2 million and used Irish, German,

¹²⁷ Holker might have somewhat exaggerated the importance of checked and striped cloths to suits the concerns of his French employer, especially Daniel-Charles Trudaine in his capacity as Intendant des finances.

¹²⁸ It is said that 'cotton velvets' were first manufactured in Manchester in 1745. TNA, E34/25Geo2/Hil2 (Exchequer: King's Remembrancer: Daniel Andrew, Daniel Smith...).

¹²⁹ Lemire, 'Transforming Consumer Custom', 199.

¹³⁰ This was true of checks and striped cloth but not of other varieties of cotton-linen mixes but not the so-called Blackburn greys for printing that had a fixed 50:50 cotton to linen ratio. Styles, 'The Rise and Fall of the Spinning Jenny', 18-19.

Baltic and Scottish linen worth £250,000 and an equal value of raw cotton mostly from British and French plantations.¹³¹ It is not inconceivable that over time an incentive might have appeared to use more cotton than flax (linen) as the relative price of cotton compared to linen declined in the period from the mid-1750s to the mid-1770s.¹³² The rise of Manchester can be read as one of ‘fibre substitution’, that is the weaving of more cotton yarn, especially as this allowed the production of better-quality checks and stripes. Holker’s secret study captured the dynamics of a promising industry which the French thought they could imitate. Unlike its predecessors in the early eighteenth century, by the early 1750s the products of Manchester were able to compete in international markets: Thomas Melvil, the new governor of Cape Coast Castle, even saw an opportunity to replace Indian textiles with Manchester products in West Africa.¹³³ By this date Robert Livesey claimed that he and his brother gave work to three thousand people in the

¹³¹ BL, Add MS. 38342, f. 234r.

¹³² Peter M. Solar, ‘American Ingenuity and the Transformation of the Market for Cotton’ (unpublished paper, May 2019), 12, fig. 4. I thank Peter Solar for sharing this paper with me. The figures refer to the price ratio cotton to flax in Hamburg with cotton imported from the West Indies and flax used as a proxy for hemp. While this data is not comprehensive, it shows a period before the mid-1770s when cotton was relatively inexpensive compared to linen. This changes from the 1770s to the early years of the nineteenth century when cotton was in high demand and US South elastic supplies not yet in place.

¹³³ Judith Blow Williams, ‘The Development of British Trade with West Africa, 1750 to 1850’, *Political Science Quarterly*, 50 (1935), 195.

Blackburn area and that 90 percent of the fustians he produced were sold to printers, most probably in London.¹³⁴

Manchester's cotton manufacturers were rarely directly involved in the slave trade and African commerce, though a figure such as Samuel Touchet is important to understand the relationship between Manchester and the Atlantic economy. Between 1740 and 1763 he was the owner of one of Manchester's 'checkmaking houses' and a member of the African Company.¹³⁵ His business interests span from Africa to the West Indies. He owned jointly with his brother twenty ships in the West Indian trade.¹³⁶ He had interests as an insurance broker, sugar merchant and slave trader and was also a speculator and Government contractor. Touchet understood the importance of cotton textiles for the various branches of his business affairs. In a search for products made increasingly if not entirely of cotton, Touchet became the patron of Lewis Paul one of the first inventors to develop a cotton spinning machine in the early 1740s.¹³⁷ Touchet also tried (unsuccessfully) to monopolise the import of raw cotton into Britain. He was not just interested in

¹³⁴ Chapman and Chassagne, *European Textile Printers*, 28.

¹³⁵ Wadsworth and Mann, *Cotton Trade*, 149.

¹³⁶ Ronald Bailey, 'Slave(ry) Trade and the Development of Capitalism in the United States: The Textile Industry in New England', in Joseph E. Inikori and Stanley L. Engerman (eds.), *The Atlantic Slave Trade: Effects on Economies, Societies and Peoples in Africa, the Americas, and Europe* (Durham, NC, 1992), 240 note 19. Another Lancashire man, Sir William Fazackerly was also a member of the African company and a dealer in fustians in London. Wadsworth and Mann, *Cotton Trade*, 149.

¹³⁷ Wadsworth and Mann, *Cotton Industry*, 419-48.

the improvement of British cottons, he also wanted to profit from the expanding calico printing industry. This is why he attempted (once again unsuccessfully) to secure a monopoly of the African market in order to control the profitable Senegal gum trade, a substance used in the printing of linen and cotton.¹³⁸

The development of Manchester as a major industrial area as a result of the mechanisation of production in the late eighteenth and early nineteenth century has tended to eclipse its importance in the generation before 1780. Manchester and the Lancashire region had already emerged in this earlier period as a major entrepôt for the production of cotton and linen products for Atlantic markets. The Mersey and Irwell Navigation provided easy access to the port of Liverpool. Before 1780 Liverpool sent more than 640,000 yards of British linen and nearly 43,000 pieces of cotton and linen checks to the American colonies, compared to just 559 bales of linen and no cottons sent by Bristol.¹³⁹ Liverpool merchants replaced London wholesalers and merchants who worked on their own account or on order. By 1780 they had become dominant on the American market.¹⁴⁰

V

Conclusion: Cotton Textiles in a Global Context

¹³⁸ Sir Lewis Namier, 'Touchet, Samuel (c.1705-73), of Epping, Essex', in Lewis Namier and John Brooke (eds.), *The History of Parliament: The House of Commons, 1754-1790* (London, 1964).

¹³⁹ Morgan, *Bristol and the Atlantic Trade*, 107.

¹⁴⁰ R. C. Nash, 'The Organization of Trade and Finance in the British Atlantic Economy, 1600-1830', in Coclans (ed.), *Atlantic Economy*, 116-17.

The interpretation of the industrial revolution has changed over time. In recent decades global histories of economic divergence and capitalist development between Europe and Asia have revived the role that cotton textile manufacturing played in what had long been a rather Anglo-centred story of the British industrial revolution. Yet global interpretations of the industrial revolution continue to rely on static comparative approaches and on the importance of selective global entanglements and connections. This article does not dispute that the mechanisation and industrialisation of cotton textile manufacturing was localised and can be read within a national remit. Yet it shows that the global context of trade and consumption were important in shaping the trajectory of a new sector such as cotton textile manufacturing in Europe and in Britain in particular.

This first part of this article mapped the connection between the Atlantic and Indian ocean trade in the period from c. 1650-1800. Cotton textiles produced in India formed an important part of the trade carried out by Europeans in West Africa, the West Indies and in North America. I have extended the logic and workings of the so-called triangular trade to include a 'fourth leg' in what I call a 'diamond-shape' trade. I have also provided a qualitative dimension to this broad conceptualisation by showing the specific nature of the products considered and the importance that cotton cloths had in connecting the Indian and Atlantic ocean trades. The 'diamond-shape trade' system here applied to cotton textiles is a 'model' and as such does not include the Middle East, the Baltic region, Latin America and West Central Africa, all areas in which substantial amounts of Asian cotton textiles were consumed. Furthermore, other commodities such as tobacco, sugar (a staple Atlantic commodity since the sixteenth century), raw cotton, metals such as copper and iron, bullion, as well as manufactured goods from Asia were equally important to the trade

across the Atlantic and Indian oceans and to the structuring of a multi-commodity ‘diamond shape’ trade.¹⁴¹

The second part of this article moved from a macro-quantitative perspective to a qualitative focus on the consumption of different types of cloths. A now vast literature on consumption in western societies underlines the importance of taste, the power of fashion and the agency of consumers. I have here shown the complexity of markets and the variety of products in West Africa and the Americas. A shift from Europe to the space of the Atlantic allows us to rethink critically the conceptual toolkit used. A great deal of the cloth used in the Atlantic did not result from an act of consumption per se: cloth was a medium of exchange, a material embedded in social rituals and the fabric for decoration of social spaces as much as for individual wearing. The very act of wearing cloth had also different meanings across communities and cultures in the Atlantic, a feature that European traders did not always appreciate especially in their trade with First Nation people.¹⁴²

¹⁴¹ Still missing is a commodity-based analysis of Atlantic trade. For a broad conceptualisation, see: S.D. Smith, ‘British Exports to Colonial North America and the Mercantilist Fallacy’, *Business History* 37 (1995), 45-63; and on the role of bullion: Dennis O. Flynn and Arturo Giráldez, ‘Cycles of Silver: Global Economic Unity through the mid18th Century’, *Journal of World History*, 13 (2002), 391-42.

¹⁴² See for instance Sophie White, *Wild Frenchmen and Frenchified Indians: Material Culture and Race in Colonial Louisiana* (Philadelphia, 2012); Miki Sugiura, ‘Garments in Circulation: The Economies of Slave Clothing in the Eighteenth-Century Dutch Cape Colony’, in Lemire and Riello

The final part of the article linked global trade and consumption to changes in production. The expanding Atlantic markets aided the development of a new industry in Europe in imitation of Indian products. This was not just the well-known calico printing industry but also a ‘checks and stripes’ industry that catered in particular for African and American consumers. It emerged in areas such as Manchester and Rouen and over the course of a generation from the 1740s onwards it expanded to become a major ‘re-export’ industry, especially for Britain. It was therefore the competition with Indian cloth in the Atlantic as well as on domestic markets that prompted a search for a ‘product upgrade’ and that led to the manufacturing of more sophisticated textile products that needed a higher proportion of cotton fibre. This in turn provided impetus for a technological shift in spinning and weaving as narrated by classic accounts of the British industrial revolution.

Methodologically this article has approached the global from at least three different scales of analysis. First, the broad macro-conceptualisation of global trade fluxes has relied on quantification and modelling. This is a classic approach in economic history that has been plotted against a more precise understanding of space and the relationship between different world areas. Second, whilst it has not been possible to provide a complete analysis of the different characteristics of each area and their precise locales, consumption and use have been adopted as qualitative ways to explore in more detail the broad conceptualisation sketched and assess material differences across the Africa, Europe, Asia and the Americas. Finally, material culture methodologies and the very materiality of things have been mobilised to complement more

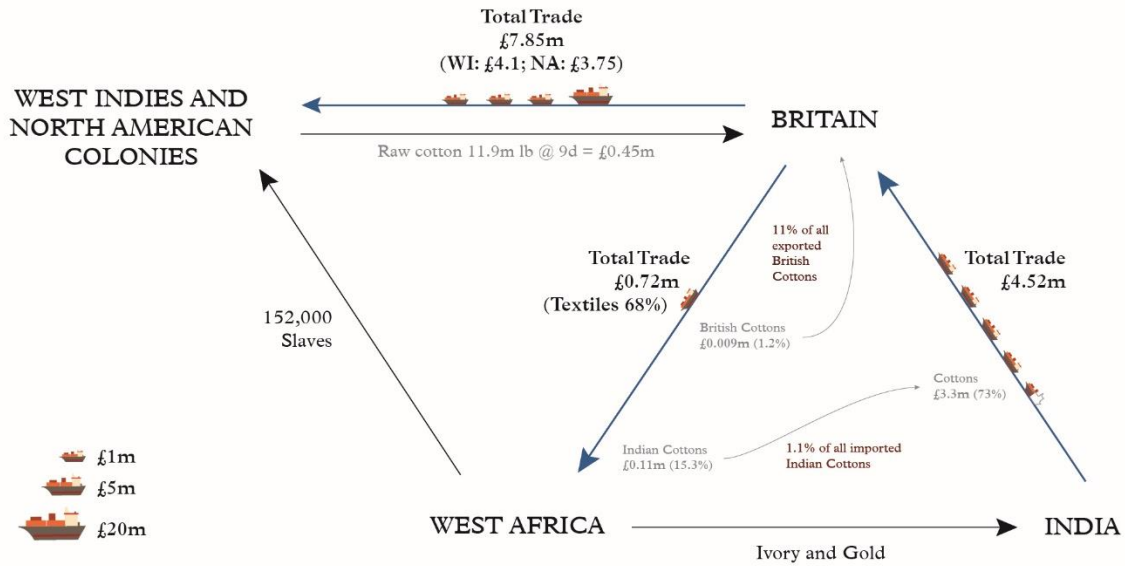
(eds.), *Dressing Global Bodies*, 104-30; and Lemire, *Global Trade and the Transformation of Consumer Cultures*, esp. 87-136.

traditional documentary and quantitative approaches. My analysis has concentrated on textiles that are not exhibition pieces: they are instead smaller swatches of cloth used in commercial correspondence and information gathering. They have allowed for a micro-historical analysis that encompasses the level of individual actors and products. This analysis is therefore not informed by aesthetic or art historical methodologies but by an applied method that considers both artefacts and their materiality.

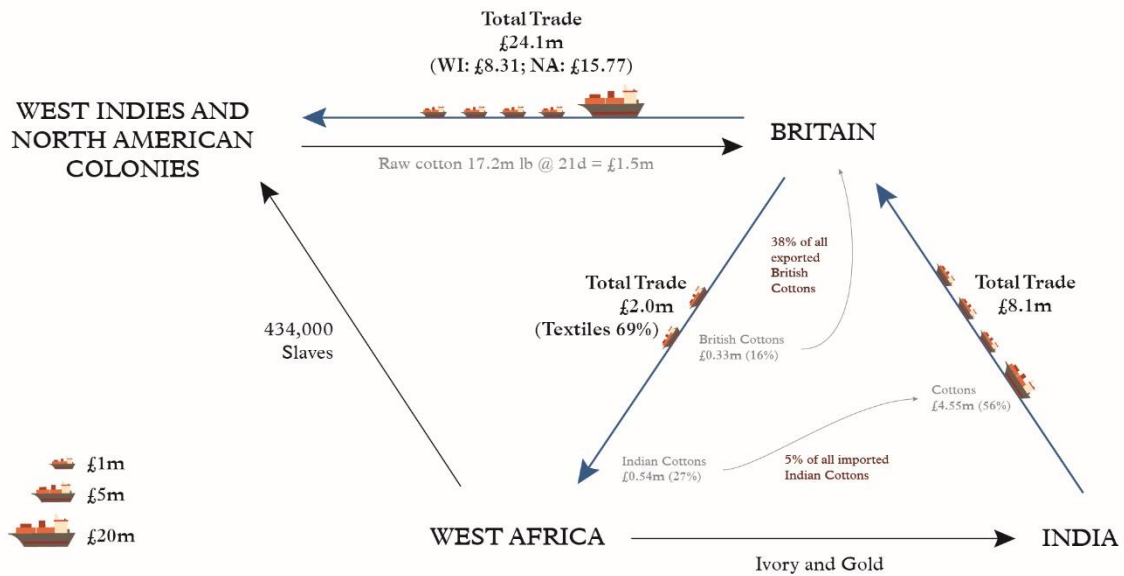
This article is part of a new wave in global history integrating traditional economic analyses and more granular examinations of economic actors and the material goods that they exchanged and consumed. Rather than explaining economic change, industrialisation and mechanisation as endogenous to the British Isles, it highlights instead the global entanglements between Asia, Africa, the Americas and Europe. The emergence of a British cotton textile sector can be explained by technological change as much as from the choices of African or American consumers, the production of Indian cotton textiles, and the global reach of trade in the early modern period.

Appendix 1. British Trade on the Atlantic and Indian Oceans in the Eighteenth Century

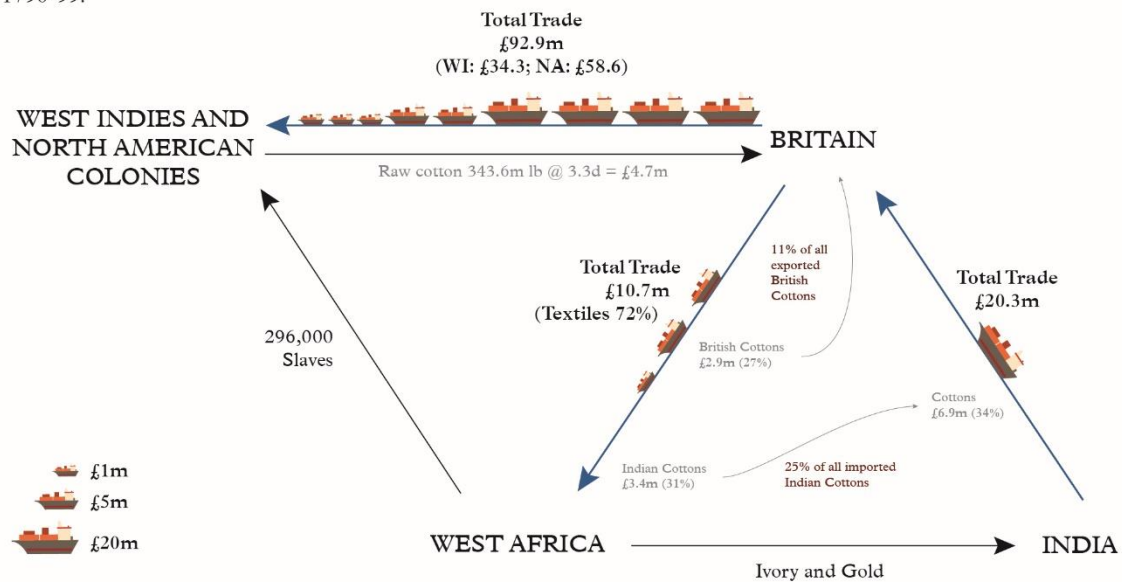
1710-19.



1750-59.



1790-99.



Sources: Total imports and cottons imports from India to Britain: K.N. Chaudhuri, *The Trading World of Asia and the English East India Company 1660-1760* (Cambridge, 1978), 540-41 for 1710-19 and 1750-59; Database ‘The East India Company: Trade and Domestic Financial Statistics, 1755-1838’ compiled by Huw Bowen for 1790-99. Total exports, textile exports and export of Indian and British cottons from Britain to West Africa: Marion Johnson, *Anglo-African Trade in the Eighteenth Century: English Statistics on African Trade 1699-1808* (Leiden, 1990), 53-61. Total British cotton export: Elizabeth Schumpeter, *English Overseas Trade statistics 1697-1808* (Oxford, 1960), 30 table X and 33 table 11. Total number of slaves traded from West Africa to the Americas: David Eltis, ‘The Volume and Structure of the Transatlantic Slave Trade: A Reassessment’, *William and Mary Quarterly*, 58 (2001), table 1. Total British export to the West Indies and North America: Schumpeter, *English Overseas Trade*, tables 5, 10 and 11. Quantity of raw cotton imported into England from the Americas: Alfred P. Wadsworth and Julia de Lacy Mann, *The Cotton Trade and Industrial Lancashire 1600-1780* (Manchester, 1931), 522 Appendix

G; B. R. Mitchell, *British Historical statistics* (Cambridge, 1988), 330-31 table 'Textiles 1'. Prices of raw cotton: Wadsworth and Mann, *Cotton Trade*, 522-23 appendix H, and Peter C. Mancall, Joshua L. Rosenbloom and Thomas Weiss, 'Exports and the Economy of the Lower Southern Region, 1720-1770', *Research in Economic History* 25 (2008), 60.

Method: 1. All figures are per decade. 2. The size of the African trade as a percentage of total Indian cottons imported into Britain is calculated by multiplying the import value of Indian cotton for the mark-up on sale in London. This is 2.8 times in 1710-19, 2.34 times in 1750-59 (from Chaudhuri) and is estimated at 2 times in 1790-99. The use of a mark-up is based on the fact that cottons for the African market were bought on the London market and therefore should be evaluated at sale and not purchase price. 3. The prices of West Indian raw cotton are 9d per lb in 1710-19 and 21d per lb in 1750-59 (from Wadsworth and Mann 1931) and 3.3d per lb in 1790-99 (from Mancall, Rosenbloom and Weiss 2008). 4. The number of enslaved people is calculated by dividing figures over the relative quarter of a century and estimating the size of the trade per decade.

Explanation

In the 1710s the total value of commodities imported from India into Britain was worth £4.52 million, 73 percent of which (£3.3 million) were cotton textiles. English trade to Africa was worth no more than 15 percent of the Asian trade (£720,000). Although 68 percent of the West African cargoes were composed of Indian cottons and other European textiles in this decade, the textiles and other commodities sold to Africa realised sufficient revenue to purchase 152,000 slaves that were transported to the West Indies. Other commodities such as ivory and gold were traded from Africa to India and Europe. The cultivation of raw cotton in the West Indies was still in its infancy in the early eighteenth century and it is estimated that the 12 million pounds of cotton imported into Britain in this decade were worth less than half a million pounds sterling. This was just 5

percent of the value of the trade in raw materials and finished commodities from Britain to North America and the West Indies (for a total of £7.85million that was equally divided between the West Indies and the North American colonies) although that was already a substantial figure when compared to the value of the trade to Africa. By the 1750s trade had trebled in most of its constituting parts. Trade to North America increased from £7.85 to £24.1 million (207% increase); trade to Africa increased from £0.72 to £2 million (177%); the number of slaves transported from Africa to the Americas passed from 152,000 to 434,000 (185%); and the value of raw cotton imported into Britain increased from £0.45 to £1.5 million (an increase in quantity of 44%). The trade from Asia increased at a slower pace and its value grew from £4.52 to £8.1 million (79% increase). Textiles remained key to the entire system accounting for 69 percent of all commodities sent to Africa and 56 percent of all commodities Britain received from India. The next thirty years were a period of enormous expansion for British trade. The American trade was worth in the 1790s the best of £93 million, having increased 285 percent since the 1750s. The West African trade increased 435 percent to reach a figure in excess of £10 million. Even the Asian trade had a healthy increase of 150 percent reaching the value of £20 million. The true expansion was in the trade of raw cotton with the value of cotton imported into Britain increasing 230 percent. Quantities however, give a clearer idea of the scale of the expansion of cotton production in the British Isles already achieved by the 1790s with an import of raw materials twenty times larger than a generation earlier. By then, Britain had developed a prosperous domestic cotton industry.

Figure 1A. The Atlantic Triangular Trade Model

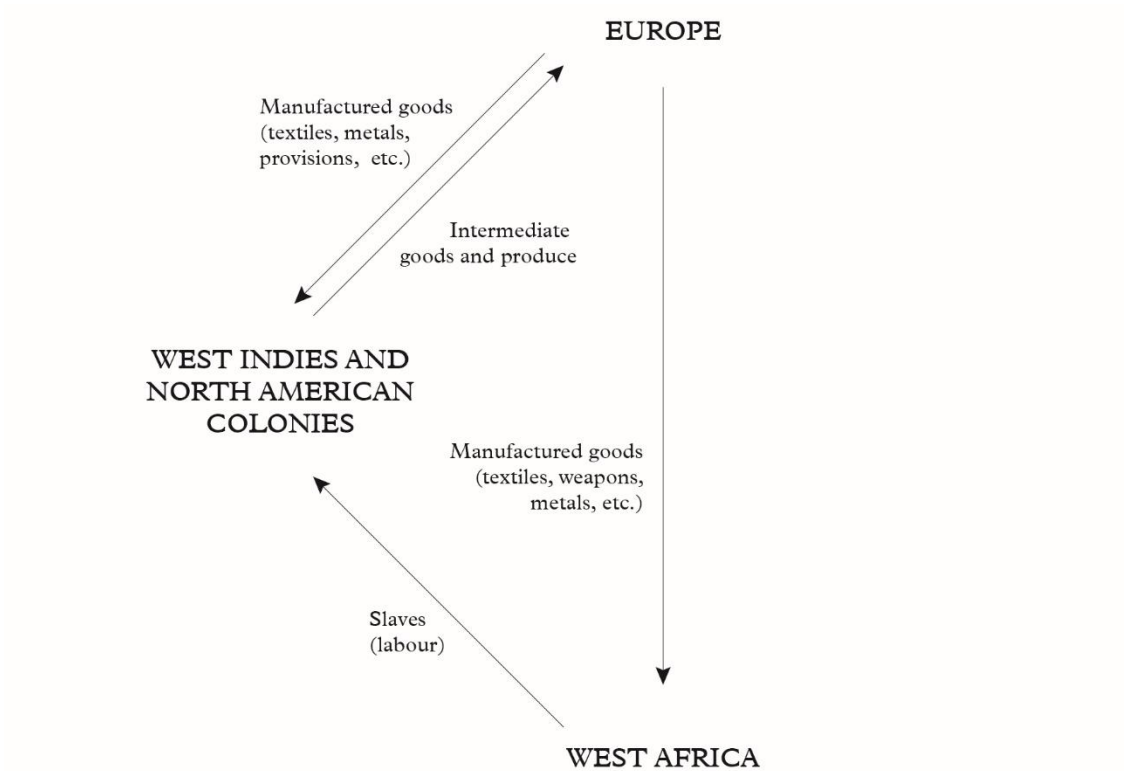


Figure 1B. The Asian-Atlantic Diamond-Shape Trade as an Alternative Model

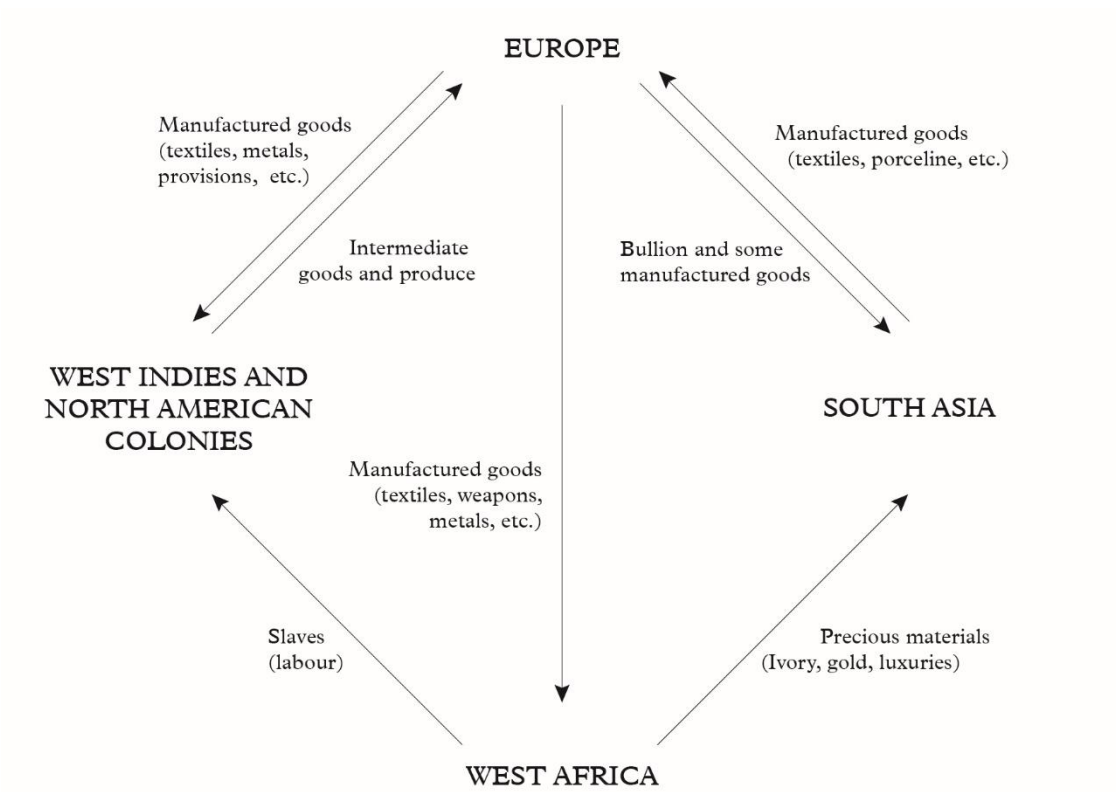


Figure 2. Textiles traded by the Dutch WIC to Elmina (Ghana) in 1788. These includes plain and red Bajutapauts, red cambayen, and English red and blue mixed rumals

Source: Nationaal Archief, The Hague, Second WIC Archives, inv.nr 179: ‘Ship papers and other documents, enclosed with “de Vrouw Maria Geertruida”, sailed out on January 7, 1788, with destination the coast of Guinea. Transcripts and minutes’.

Figure 3. Sample Book (Bower Book) of textiles made by the Manchester firm Benjamin and John Bower, 1771. Metropolitan Museum of Art, Rogers Fund, 156.4 T31.

Figure 4. A linen market, Dominica by Agostino Brunias, c. 1780. 60 × 78.7 cm. Yale Center for British Art, Paul Mellon Collection B1981.25.76

Figure 5. ‘Le Livre d'Echantillons de John Holker, c. 1750’. Samples 5-8. Checks (linen with cotton threads). Bibliothèque de la Union Centrale des Arts Décoratifs, Paris, G.C. 2.

Figure 6 A-B. ‘Le Livre d'Echantillons de John Holker, c. 1750’. Sample 79. Handkerchief Checks (linen both ways) and 82-83 Handkerchieves (linen both ways). Bibliothèque de la Union Centrale des Arts Décoratifs, Paris, G.C. 2.

Figure 7. Magnification of sample 5 from Le Livre d'Echantillons de John Holker, c. 1750’ showing the doubling of the cotton yarn. Bibliothèque de la Union Centrale des Arts Décoratifs, Paris, G.C. 2.