

# **The Asian Century: The Making of the Eighteenth-Century Consumer Revolution. 'Cultures of Porcelain between China and Europe'**

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## **1. The Asian Century**

When Lord Macartney, appointed Ambassador to China in 1792, set off on a voyage to open an embassy in Peking he embarked on a government mission which had been nearly ten years in the making. Macartney's Embassy considerably enhanced an earlier embassy led by Charles Cathcart in 1787-8, aborted when Cathcart died en route. It cost the East India Company, which largely financed the expedition, £78,000, even though the Chinese defrayed the costs of travel and accommodation while Macartney was in China. Hopes were high for an expedition that cost the equivalent of building ten grand country houses or double the number of large cotton mills. Macartney believed that the gifts he brought the Qiang-long emperor were the epitome of British production, symbols of enlightenment and civility. 'The gifts we had to offer would suffer by being confounded with mere curiosities, which however expensive or even ingenious were more glittering than useful'. Their merit was to be measured 'by their utility and deriving even a credit from the omission of splendid trifles.'<sup>1</sup>. Spurned by the Emperor with the response 'we have never valued ingenious articles, nor do we have the slightest need of your Country's

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<sup>1</sup> Macartney to Dundas, 9 November, 1793

manufactures,' he returned to England in 1794, the Embassy a failure. The Emperor's fatal response, endlessly repeated since to indicate China's repudiation of Western trade and technology, was not the end of the story. Macartney, stopping off in Canton on his way home, wrote a memorandum on potential Chinese markets for new British goods. 'Already worthless clocks and watches seem to be indispensable necessities to every Gentleman at Peking, and even to his principal attendants...' There were great possibilities of products for women, 'for the men here seem at all times anxious to procure ornaments of every kind; especially earrings and necklaces of different coloured stones or of glass, or gold, or gilt.' He concluded his reflections, 'when the number of Consumers in so vast and populous an Empire as China is considered there are few articles so low priced when singly taken, as collectively to be insignificant, and when demanded by millions they rise to be of value...'<sup>2</sup>

It is fashionable now to see the Macartney Expedition as a standoff between two civilizations, in terms of the discourse of 'the other'. But I think this is a misleading interpretation. Instead the Embassy needs to be set in the context of interaction and trade between China and Britain, indeed Europe - an interaction which I believe was crucial to the industrial development of the West.

The Embassy was in fact the culmination of a long period which I will call the Asian Century of continuous trade between Britain, China and India. Chinese and Indian merchants responded to distant markets and built up or adapted their production base; European companies and merchants in their turn, built their consumer markets at home and abroad. That trade, of course, for Europe as a whole extended much further back, but it had its

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<sup>2</sup> Macartney to the Chair and Deputy at Canton, India Office Correspondence. G/12/92, p. 375

most extensive impact on European material culture from the mid seventeenth century. It coincided in Britain with at least part of the key periods of transformation in consumer practices and of industrialization. A major part of that industrialization was about transforming production processes and creating new products in textiles, ceramics and glass and in useful and ornamental metal goods. China's and India's success in creating a major export ware sector in luxury and consumer goods appealing to Western consumers turned in the later eighteenth century into a British version of new consumer goods, modern quality goods dominating not just at home, but in consumer markets in Europe, the Americas and the empire.

The impact of that trade with Asia was experienced in this Asian century through imports, and imports not of the standard fare of the economic historian, of grain and iron or basic textiles, but of superfluous commodities, of luxuries, of tea, porcelain, printed calicoes and muslins. Merchants paid duty of £104,375 was paid on 2 million pieces of porcelain they imported into Britain in 1721 on voyages that had taken a year and half two years from start to finish. In the decade before the Tea Commutation Act of 1784 which reduced the tea import duties from 80-100 per cent down to 12.5 percent, 7-8 million tons of tea were smuggled into the country, double the amount of tea legally imported.<sup>3</sup> By this time, tea drinking was integrated into the daily routines of the middling classes: Catherine Hutton wrote 'Dr. Priestley admired my father [William Hutton], and frequently took tea with us, without ceremony.'<sup>4</sup>What impact did this trade with Asia have on

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<sup>3</sup> D.R. Lunsingh Scheurleer, *Chinese Export Porcelain* (London, 1974), pp. 24-8; Ho-Cheung & Lorna H. Mui, *Shops and Shopkeeping in Eighteenth-Century England* (London, 1989), p. 250; Id., 'Trends in Eighteenth-Century Smuggling Reconsidered', *Economic History Review* 28, 1975, pp. 28-43.

<sup>4</sup> Catherine Hutton, *A Narrative of the Riots at Birmingham, July 1791*, (Birmingham, 1875), p. 5.

consumer horizons in Britain as well as other parts of Europe, and what part did it play in changing the priorities of production at home?

A question like this must lead us to consider the economic and wider cultural role of luxury goods; it must also lead us to look more carefully at the goods themselves – their characteristics, qualities and aesthetics. J.R. Hicks in his *A Theory of Economic History* (1969) pointed to the route from gifts and tribute to commodities and trade. A great king receives embassies bearing gifts; he sees among these gifts some which he would like more of. He sends an embassy in return with his own gifts, and also specifies the type he would like in return. Thus it is that diplomacy and presents turn into international trade. Hicks appeals by way of example to two well-known Chinese stories. the first, the treasure fleets led by Zheng He from China across the Indian Ocean and down the coast of Africa between 1405 and 1433 to exchange tribute; and the second, the the Qiang-long emperor's reception of Macartney's goods in 1793 as 'tribute' to confirm the subordinate status of the British before the Emperor.

Hicks thought of tribute not in terms of 'inalienable' possession, removed from economic circulation, but as special luxury products whose value was enhanced by the long distance from which they had come, and by the intrinsic physical and aesthetic qualities of the objects. His model of the mercantile economy, based on the city state, showed trade that grows and diversifies, Gains accrued to some, though not all social groups as merchants accessed new commodities. These commodities and their qualities brought great gains from trade, but gains which the economist and quantitative economic historian could not measure; they therefore rarely discussed these. As he put it, 'The variety of goods available increased, with all the widening of life that that entails. This is a gain which "quantitative

economic history” which works with index-numbers of real income, is ill-fitted to measure, or even to describe.’<sup>5</sup>

Goods brought from long distances, goods of special qualities made a difference, he argues, and yet global trade is not usually considered to be a key stimulus to the industrial revolution, even less so a global trade in luxury goods. Where we do consider trade, too often we look no further back than the seventeenth and eighteenth centuries where we find features we associate with industrialized communities: large scale production, standardized products and long distance trade. Trade before this, those such as Christopher Bayly argue, were forms of ‘archaic globalization’ focussed on the rarified collecting of charismatic goods and substances, or luxuries and honorific goods from distant lands, such as Kashmiri shawls, Chinese silks, Arab horses and precious stones.<sup>6</sup>

Yet these conditions of large-scale production directed to long-distance trade prevailed in Bronze Age societies going back to the fourth millennium BC. The archaeological records which Andrew Sherratt so vividly depicted show bronze beakers in sites across the whole of Europe by 2000 BC. The ‘quest for things that were remote, valuable and useless’ such as obsidian, amber and gold opened the routes for other prestige objects such as bronze drinking vessels. These were especially things for bodily adornment and fine things to eat and drink, as well as to serve these in.<sup>7</sup>

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<sup>5</sup> J.R. Hicks, *A Theory of Economic History* (Oxford, 1969), pp. 30,56).

<sup>6</sup> C.A. Bayly, *The Birth of the Modern World 1780-1914* (Oxford, 2004), p. 42).

<sup>7</sup> Andrew Sherratt, ‘The emergence of elites: earlier bronze age Europe 2500-1300 BC’, in Barry Cunliffe, ed. *Prehistoric Europe*, (Oxford, 1998), pp. 244-276; Andrew Sherratt, ‘Gordon Childe: Right or Wrong?’ in Andrew Sherratt, *Economy and Society in Prehistoric Europe. changing perspectives* (Edinburgh, 1997), pp. 490-505. Andrew Sherratt, ‘Reviving the grand narrative: archaeology and long-term change’, *Journal of European Archaeology*, vol. 3 (1995), pp. 1-32.

And 1500 to 2000 years after this, export ware, sold in quantity over long distances, furnished the substantial luxury and middle market for high-quality functional products right across the Roman Empire. The quality and standardization of Roman pottery, large proportions of it made in one production site at la Graufesenque in southern France, were not to be seen again in Europe. argues Bryan Ward-Perkins until the fourteenth century AD.<sup>8</sup> But Europe forgot its own heritage of quality consumer goods, produced on a large scale for discerning middle markets; instead it was to Asia she turned for quality ceramics, experienced by the early eighteenth century, no longer as exotic curiosities, but as prestige items of use for the polite middle ranks and by the middle of the century even for the trading and artisan classes. They were imported in tons, and produced in concentrated kiln complexes and factories deploying extensive division of labour.

## **2. Consumer revolutions**

The trade from Asia by the mid eighteenth century was providing quality ware for Europe's middle ranks. How extensive were those markets, and what was distinctive about them in the later seventeenth and eighteenth centuries? I included 'consumer revolution' in my title, but I use this concept only to convey increases in the act of consumption. I am not concerned to debate the extent to which this phase of consumption was a precursor of the industrial revolution. Too much of our historical discussion on consumption has been caught up in questions of the origins of consumer society. Every historical interest group now wants to claim its own consumer society: historians of ancient Rome and Sung China vie with those of Renaissance

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<sup>8</sup> Bryan Ward-Perkins, *The fall of Rome and the end of civilization* (Oxford, 2005), pp. 87-120.

Italy and mid twentieth-century Britain, divesting the concept of all historical specificity. We do not need to associate consumer revolution with the confined period of sudden change implied by Neil McKendrick. Indeed I agree with John Brewer's conclusion in his paper, 'The Error of our Ways: Historians and the Birth of Consumer Society' that the question of whether the eighteenth century saw the birth of consumer society is misplaced. The concept carries a whole political baggage ranging from the market and modernity to mass society and post-modernist resignation and despair.<sup>9</sup> But there is also no escaping the evidence of tax, probate and business records over the later seventeenth and eighteenth centuries showing a greater abundance of household goods across all classes, but especially among the urban middling classes. More shops, at the rate of a retail outlet available for each group of just over 40 people, served these groups, not just with the basic fare of food and drink, but with the objects with which they conveyed their gentility, politeness, and respectability. Jan de Vries, convinced by this evidence – 'it cannot be explained away as a phenomenon restricted to a small social group, a few goods or a brief period of propitious price and wage movements.' - also linked it to the change in household behaviour he termed 'the industrious revolution.' That industrious revolution, de Vries continues, was inspired by attractive goods produced outside the household, especially non-local goods and even exotic luxuries. Those consumer desirables were fashion clothing items, notably printed calicoes traded from India, and new hot beverages, tea, coffee and chocolate together with the ceramic accoutrements of sociability to serve them with. Ornaments of the body, and of sociability, civility and politeness, many of these consumer goods were created in Asia.

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<sup>9</sup> John Brewer, 'The error of our ways: historians and the origins of consumer society', ESRC Cultures of consumption working paper.

### 3. Global divergence

Asia's place in the transitions of the eighteenth century has been discussed recently in the context of the global history inspired by Pomeranz's 'The Great Divergence'. Focussed on comparisons between Europe and China, this global history addresses energy and resources, labour and capital markets and institutions. It has not addressed consumption practices. How was it that Europe linked into a huge export-ware sector in both India and China? How did these items of global trade, produced in an exotic East, become consumer desirables in the West? The appeal of these objects to Western aesthetic sensibilities coincided with new ways of transporting huge amounts of this produce from East and South Asia to the Atlantic world. The divergence debate has confined itself to comparison not connection, yet even so, research on Asian consumer practices remains sporadic. In a long chapter on Chinese consumption, Pomeranz, though claiming no great differences in standards of living between Europe and China, when turning to durable luxuries only tells us that fashion demand is what Europe had and Asia did not. And yet, Ming and early Qing luxury debates expressed similar sartorial and sumptuary anxieties as those of early modern Europe. The inhabitants of Suzhou not only produced the refined clothing, but consumed in an extravagant and unusual way; and they supplied goods of an ever-escalating style.<sup>10</sup> Likewise, taste and status distinguished connoisseurship from mere wealth among elites buying paintings, calligraphy, books, bronzes and antiquities.<sup>11</sup> For India too our knowledge of consumer practices remains impressionistic. Christopher Bayly echoes Pomeranz's position on China in arguing that

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<sup>10</sup> Timothy Brook, *The confusions of pleasure. commerce and culture in Ming China* (Berkeley, 1998), pp. 220-222.

<sup>11</sup> *ibid.*, pp. 223-228; Craig Clunas, *Superfluous things, Material culture and social status in early modern China* (Cambridge, 1991). Also see his Also Slade Lectures Oxford 2005.



Indian patterns of consumption remained archaic; the wealthy collected rather than consumed, and there was little evidence of a middle-level consumption of fine goods.<sup>12</sup>

While global historians do need to discover a great deal more about the quality consumer goods of China and India, what we do know something of is the large-scale production and trade in export wares from Asia. If we turn to one product, porcelain, this never made up more than 2 per cent of Asian trade in all products, yet the number of pieces of this that reached Europe was staggering, and it had a tremendous impact. This was Europe's 'Chinese period' when 'chinoiserie dominated design. The Dutch brought in 355,800 pieces of porcelain in 1644, after which trade was disrupted in the Ming/Qing wars. But trade not only recovered, but so escalated that by the 1690s porcelain dealers in Batavia estimated they received shipments of 2 million pieces a year. Six Dutch ships stopped in Canton every year in the mid eighteenth century; a single ship in 1756 brought back 150,000 pieces; (the famous Geldermalsen wreck in 1752 contained 140,000 items of porcelain); the English surpassed this by 1730.<sup>13</sup> The VOC imported 43 million pieces from the beginning of the seventeenth century to the end of the eighteenth century. The English, French, Swedish and Danish Companies shipped another thirty million pieces.<sup>14</sup> For most of the eighteenth century, chinaware imports made up only 1 to 2 per cent of English East India Company imports, but these were frequently valued at between £7,000 and £12,000, with peak years showing much higher

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<sup>12</sup> Bayly, *The birth of the modern world*, p.

<sup>13</sup> Lothar Ledderose, *Ten thousand things. modular and mass production in Chinese art* (Princeton, 2000), pp.88-9.

<sup>14</sup> Robert Finlay, 'The pilgrim art: the culture of porcelain in world history', *Journal of World History*, 9 (1998), pp. 141-89, p. 168.

values.<sup>15</sup> By the early eighteenth century the British imported one to two million pieces a year with 100,000 pieces a year re-exported to the British colonies.<sup>16</sup> In one year, 1777-8 European ships brought in 800 tons.<sup>17</sup> [A detailed list provided for one ship, *The Loyal Bliss* in 1712 included orders for 40,000 chocolate cups with handles, 110,000 tea cups with matching saucers and 6,000 tea pots, as well as 10,000 milk jugs and 2,000 sets of sugar bowls.<sup>18</sup>] Chinaware had long been carried to Europe, not just as part of the official imports of the East India Companies, but as part of the private trade. Officers and seamen on East India Company vessels could carry 80 tons of privilege or private trade, made up of porcelain, especially ornamental and decorative ware, armorial ware and dinner and tea sets, but also lacquerware, fans, painted glass, paper, mats, clay images, furniture, pictures, Persian carpets and diamonds. The China Committee of the VOC declared in 1756 that its official imports were not to include curiosities, services or cupboard garnitures, only 'current ware', that is dinner plates, tea and coffee cups and saucers and other ware that brought in a fixed profit. The English East India Company in the 1770s restricted its own official imports to tea, silk and china-ware of fairly standard lines.<sup>19</sup> Through a combination of 'official' and private trade the full range of a relatively standard quality fine-ware product and a highly-diverse range of specialty goods were imported.

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<sup>15</sup> K.N. Chaudhuri, *The trading world of Asia and the East India Company 1660-17160* (Cambridge, 1978), pp. 406-9; 519-520.

<sup>16</sup> Lorna Scammell, 'Ceramics', *Oxford Encyclopedia of Economic History*, Vol, (Oxford, 2003), pp. 379-383.

<sup>17</sup> H.B. Morse, *The chronicles of the East India Company trading to China 1635-1834*, 5 vols. (Oxford, 1929), vol. 5, p. 19; K.N. Chaudhuri, *The trading world of Asia*, Appendix 5, Table C8; G. Godden, *Oriental export market porcelain*, p. 47

<sup>18</sup> Chaudhuri, *The trading world of Asia*, p. 408.

<sup>19</sup> K.N. Chaudhuri, *Trading world*, p. 287; Jorg, *Porcelain and the Dutch China trade*, pp. 102-8; Godden, *Oriental export market porcelain*, pp. 59, 878, 95-104.

We know that the focus of English East India Company trade shifted to China, especially from the 1780s, with imports focussed primarily on tea. By the first decade of the nineteenth century goods from Canton accounted for 67 per cent of all Company sale income earned in London. With Pitt's Commutation Acts of 1784, tea became the great commercial success story; a former company director wrote in 1788 that tea was already the 'food of the whole people of Great Britain.'<sup>20</sup> But even earlier than this tea drinking, and the chinaware implements with which to prepare, serve it and drink it, extended much further down the social scale than we once thought. Lorna Scammell found 19% of those in her intermediate trades with chinaware in 1675-1725, but a third of London's middle ranks by 1720 owned such chinaware. Estabrook's sample for 1720-80 for Bristol and its surrounding areas found 31.5% of his urban sample with chinaware, and Overton in his Kent inventories for 1720-49 found 49 per cent with new pottery. A good proportion of this was, by this stage, no doubt, indigenous earthenware imitations, but those who could bought one or more of the preponderance of very small items of porcelain, cups, saucers, small bowls or small boxes imported every year. Porcelain was smuggled into Ireland; the arrival of East Indiamen, and auctions of their contents in Cork, Dublin and inland towns attracted all comers.<sup>21</sup> The Dutch inventories indicated even more rapid and extensive saturation. Anne McCants's analysis of nearly 1000 inventories of the Amsterdam Municipal Orphanage, between 1740 and 1782 representing a broad spectrum of the working poor, the craftsmen and small shopkeepers of the city (30 % of her inventories had no furnishings at all), showed over half with tea and coffee wares. 39 per cent of her

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<sup>20</sup> Huw Bowen, *The business of empire. The East India Company and imperial Britain, 1765-1833* (Cambridge, 2006), pp. 241-3.

<sup>21</sup> Toby Barnard, *Making the grand figure. Lives and possessions in Ireland, 1640-1770* (New Haven and London, 2004), pp. 125-133.

inventories contained Chinese and Japanese porcelain.<sup>22</sup> Asian goods – not just tea, but textiles, porcelain, lacquerware and furnishings, drugs and dyestuffs were, by the eighteenth century, central to European material culture, and part of a systematic global trade. Jan de Vries calculates a trade of 50,000 tons a year by the late eighteenth century, or just over 1 lb of Asian goods per person for a European population of roughly a 100 million. One million men sailed for the Indies in the history of the VOC; though only one third of these ever returned to Holland, those that did, even common sailors and soldiers, carried with them their private trade in their seamen's boxes. Northern Europe thus experienced a wide social and geographic dispersion of Asian goods.<sup>23</sup>

### **3. Asian Export Ware and European Manufacture**

Imports of Asian luxury and consumer goods provided the incentive and the models to create a large-scale consumer goods sector at home. I have argued recently that we need to investigate the very wide ramifications of these imports. Writing on the negative effects of import-substitution policies, long part of the canon of scholarship on the Industrial Revolution, has cut us off from the impact Asian imports had on European consumption and production practices. Instead of static conceptions of a domestic market to be supplied from within rather than from the international marketplace, we need to turn to the part which imports played in stimulating domestic consumption. Learning desires for new goods through importing also

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<sup>22</sup> Anne McCants, 'Poor consumers as global consumers: the diffusion of tea and coffee drinking in the eighteenth century', Paper submitted to the *Economic History Review*, June 2005, p. 21, tables 3 and 4.

<sup>23</sup> Jan de Vries and Ad van der Woude, *The first modern economy. success, failure and perseverance of the Dutch economy, 1500-1815* (Cambridge, 1997), pp. 450-55, 462, 642-647

connected to knowledge of products, of materials and of the skills in making the goods. Asian commodities entered Europe in quantity just at the time of intense public interest in technology, what Joel Mokyr has called 'useful knowledge'. Dense information networks fostered consumerism and spread fashions; but likewise producers and projectors responded to consumer markets for these outside luxuries, examined the qualities of the products, adapted and invented. They handled the goods, they speculated on how they were made, they experimented with alternative materials. They delved into texts and sought oral accounts of foreign manufacturing techniques; they dissected, experimented and adapted skills honed to quite different purposes. Imports thus provided the challenge to stimulate indigenous learning.

The challenge of Asian commodities was clear in British patents and in the projects of the Society of Arts. I have demonstrated elsewhere the high level of patenting for consumer goods and product innovation. Imitation was the keyword in these patents, especially of French and Chinese luxury products. The Society of Arts, which opposed patents, instead offered premiums to inventors, projectors and experimenters of all sorts. Its mission statement was to create in Britain an 'economy of quality' in response to Asian and French luxury. It wanted to promote connections between the fine arts and design and modern manufacturing technique. Its own programme of initiatives offering premiums, as well as the statements of projectors applying for these were full of references to producing goods equal to the quality of those from China, Japan or Venice, of producing goods in imitation of those from the East.<sup>24</sup>

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<sup>24</sup> Maxine Berg, 'From imitation to invention: creating commodities in eighteenth-century Britain', *Economic History Review*, 55 (2002), pp. 1-30; pp. 18-22.

British porcelain and earthenware manufacturers took out many patents stating the goal of imitating Chinese porcelain or Dutch delft ware. Thomas Frye, William Cookworthy, Richard Champion and Josiah Wedgwood all held patents for porcelain, earthenware or painting in imitation of oriental, Dresden or antique Etruscan ware. Indeed English imitations of Chinese and European porcelains generated two new products attuned to much wider markets: the bone china recipe and the creamware body. Cream ware, a regional technological achievement, built on cumulative and interactive innovation among large numbers of small firms concentrated in a small area of Staffordshire. It became a British version of oriental export-ware. It was not any import-substituting domestic porcelain, but a high-quality earthenware, sold from the 1740s on national and international markets through the sophisticated mercantile networks established in the first instance to sell imported porcelain and glassware.<sup>25</sup>

If it was imports from Asia that framed the production process and marketing strategies of the key consumer goods that led the British industrial revolution, just how was this done? How did Asia, and in particular China produce such quantities of quality porcelain, most of it to standard specifications? To what extent did Asia provide the model for consumer goods development in Europe?

First, Europe's East India Companies actively participated in creating a product, dictating design sources, colour combinations; in the case of textiles, the length and breadth, quality, and pattern; in the case of porcelain, the shape and decoration as well as series and assemblage of objects for specific occasions of social engagement especially teawares and dinner

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<sup>25</sup> *ibid.*, pp. 24-25; Hilary Young, *English porcelain 1745-95: its makers, design, marketing and consumption* (London, 1999); Hilary Young, ed., *The genius of Wedgwood* (London, 1995),

ware services. They carefully cultivated markets in Europe, selling initially within metropolitan luxury markets, adapting the porcelain they brought to gentry and middle class desirables in tea ware and dinner services. Transforming an art object and exotic collectable into a commodity of taste and fashion, they then diversified to a broader range of qualities. Beverly Lemire and John Styles have shown how this market for Asian export-ware cottons was made and the calico craze constructed. In the case of porcelain, we see the similar construction of an export-ware product. Its distribution was highly centralised. In Britain the goods auctioned in quarterly East India Company sales in London, and information gathered at these sales, regulated the volume of trade at the Asian end. The auctions joined other auctions of painting, sculpture, books and prints, antiquities and curiosities; large lots were bought by middlemen who then sold them to dealers advertising large consignments in the provincial press. London's china and earthenware dealers – there were 190 of them before 1780, frequently had stocks valued at £2-3,000; and even smaller provincial dealers kept stocks at the considerable values of £300-700. There were also small numbers of large-scale buyers at the Dutch Zeeland auctions – one in the period 1724-48 frequently bought 50,000-100,000 pieces; there were other dealers who took 20-40,000 pieces.<sup>26</sup> This highly centralised marketing and distribution also set the terms for how domestic quality chinaware came to be sold in the latter half of the eighteenth century.

Creating an export-ware sector also depended on careful attention to design and to quality. This was product development on a sophisticated scale; it involved transforming a curio into both the extensive paraphernalia of the bourgeois tea table, and the necessary utensils of the daily routines of

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<sup>26</sup> Christian J.A. Jörg, *Porcelain and the Dutch China trade* (The Hague, 1982), p. 131.

life of rich and poor alike. Consumer markets in Europe were made for quality goods that were not high luxuries for elites only; yet the quality of goods is a subject too little discussed by economic historians. It was vital to any merchants' understanding of the international market; it was also a priority of British patentees and projectors throughout the industrial revolution. Consumers, responding to high-quality products, were willing to pay for the higher production and transport costs involved. Their market stimulated quality innovation; as 'active consumers' they took part in taste formation, responded to new goods, and combined and recombined these goods to create social identity. Making better products also frequently required supporting changes in processes. Creating quality export ware was also about commodity reputations. The time and space separating importers from areas of production made mercantile control over quality all the more vital. For textiles, this was about thread counts, cloth weights and qualities, for indigo it was about light weight, sweet odour, smooth texture and luminous colour; for paper it was about regular weights and grades of diverse products for segmented markets. What was it for porcelain? Here was a product esteemed for its beauty – its white base, its translucence, its distinctive blue and white, then polychrome decoration. But it was also valued for its utility - it was tough and light-weight and impermeable to hot liquids. It was the ideal vessel for tea, coffee and chocolate wares. Over the course of the seventeenth and early eighteenth centuries representations of its magical qualities which had once made it into such an exotic were demystified. The tons of porcelain imported into Europe proved that something once thought impossible could be done. Malachy Postlethwayt advised in his great *Dictionary of Commerce* in 1757 careful observation of



Asian imports: 'those which are imported, and which [our artisans] can see, handle, and minutely examine, they are most likely to imitate or excel.'<sup>27</sup>

Chemists, potters and projectors engaged in chemical analysis and experiment. Europeans knew more about where and how Chinese porcelain was produced as print culture from the seventeenth century conveyed the accounts and maps sent by Jesuit priests who sent recorded their travels to Chiangsi province.<sup>28</sup>

## **5. Making Export Ware: Design and Production**

In the case of export-ware porcelain, the bulk of the products came from one centre – Jingdezhen where the imperial factory and kilns were closely connected to the private factories. During the period of transition between the Ming and Qing dynasties, the imperial factory was rebuilt and reorganized, and it thrived for over the hundred years of the most extensive European trade under the control of officials from Peking. The result was top quality production for both imperial demands and for the export trade and high revenues from taxes on the output.<sup>29</sup> Key events fostered reorganization and innovation in this long-standing centre for the production of imperial, domestic and export-ware porcelain. Jingdezhen underwent a transformation of its products and its production processes at a time coinciding with the rising popularity of Chinese porcelain in Europe, and coinciding in addition with the means of transporting vastly increased shipments of the goods.

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<sup>27</sup> Malachy Postlethwayt, *Universal Dictionary of Trade and Commerce*, 2<sup>nd</sup> edition, 2 vols., 1757, vol. I, s.v., 'Artificer, or Artisan or Mechanic'.

<sup>28</sup> Kerr and Wood, *Ceramic technology*, pp. 742-5.

<sup>29</sup> Rose Kerr and Nigel Wood, *Science and civilization in China. Vol. 5. Chemistry and technology. Part XII. Ceramic technology* (Cambridge, 2004), pp. 188-90.

Creating an export-ware product was certainly about quality. It was about the design of products to be sold in distant places and in very different cultures. Chinese producers had long experience in making such global export products. Their biggest markets continued to be the huge Islamic market from South-east Asia right through to Egypt, Africa and the Ottoman Empire. But the most immediate antecedent to European markets was the trade to Japan. Over the course of the seventeenth century China exported 63 per cent of her ceramic exports to the South Seas, only 12 per cent to Europe and 23 per cent to Japan. Events and markets during the seventeenth century provided the catalyst for developments that would make the large scale of Europe's imports during the eighteenth century possible. The major import of china wares into Europe was not just a story of European demand and European East India companies. It was also about events and changing production and market conditions in China and it was about consumer markets in Japan.

Imperial demand and investment in the imperial factory at Jingdezhen declined in the early seventeenth century, coinciding with the decline of the Ming dynasty, but middle range private kilns adapted their production to both a large internal market, and to new demand in overseas trade, notably from the Japanese and the Dutch. Private kilns responded to new non-imperial demands affecting design, quality and quantity. Chinese porcelain producers underpinned the elaboration of the Japanese tea taste. Over a crucial period of four decades, they provided export-quality wares, many in small quantities, and even specifically designed from patterns and correspondence provided by merchants servicing the different schools of tea ceremony. What this required was response to an aesthetics of diversity with some schools preferring more showy wares, others appreciating an understated taste. A diversity of shapes and utensils was required to meet

the different protocols of the socially-diverse but large sectors of new wealth in Edo and other Japanese cities. Together with this distinctive export ware, Chinese kilns also produced large amounts of good quality, standard design blue and white porcelain and stonewares for ordinary consumption.<sup>30</sup> Japan was soon to produce its own porcelain, and moved into European and South Seas markets during the Ming-Qing wars.

At the same time as producing for this dual market in Japan, private kilns in China also provided a new type of product for domestic markets, and a product which was adapted to Dutch markets. The later Ming period saw a substantial group of new rich seeking the material attributes of the traditional gentleman literatus; this was a new market for high quality goods, especially those decorated to follow the new prints and book illustrations associated with the literati. Merchant guilds closely associated with literati circles adapted their prints and illustrations conveying commentary on contemporary fashions and politics.

Merchants also effectively turned this quality production for an internal market to new export opportunities. They also sold quality wares to the Dutch, made after models for shapes like beer mugs, candlesticks, mustard pots or beakers, but decorated in Chinese style with a clear aesthetic appeal to European buyers. Adapting book illustration to ceramic decoration carried clear meanings for domestic consumers; they also proved attractive to European buyers who saw such decoration only as 'Chinese figures with landscapes.' Chinese merchant acuity and inland trading organization thus

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<sup>30</sup> S.J. Vainker, *Chinese pottery and porcelain. From prehistory to the present* (London, 1991), pp. 150-1; Colin D. Sheaf, 'Chinese ceramics and Japanese tea taste in the late Ming period', in Scott, ed., *Porcelains of Jingdezhen*, pp. 165-182, pp. 166-9.

adapted these literati-inspired high quality wares to two markets – an internal, and a greatly expanded export market.<sup>31</sup>

The rapid design and marketing response to these export opportunities was carried out in private kilns in the late Ming and the period of transition to the Qing dynasty. The imperial factory was reorganized and renamed in 1645; then there was a great rebuilding after the destruction of large parts of Jingdezhen in 1675; there was an enquiry into the pottery industries in 1680, and for the next hundred years the imperial factory was under the control of officials from Peking. Close interaction between the imperial factory and the private kilns brought quality controls, top quality wares, not just for ritual vessels for state and religious ceremonies and the needs of the royal household, but for wider markets, and with this high tax revenues.<sup>32</sup> This was a unique period of two to three decades, to be followed by diversification and specialisation by the early eighteenth century into much more middling and lower quality export ware.<sup>33</sup>

New markets and reorganization in Jingdezhen also stimulated new technologies. More kaolin added to porcelain clays and new glazes produced different and finer products. But it was new kilns and how they were used that created this export ware in such astonishing volumes. Dragon kilns, used in the South as early as the 3<sup>rd</sup> Century AD, stretched up hillsides as much as 60 metres, and might fire 20,00 to 25,000 pieces with temperature differences of 600 degrees C. between the lower chambers and the higher, firing the full range from earthenware, through stonewares to

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<sup>31</sup> Shelagh Vainker, 'Luxuries or not? Consumption of silk and porcelain in eighteenth-century China' in Maxine Berg and Elizabeth Eger, eds. *Luxury in the eighteenth century: Debates, desires and delectable goods* (London, 2003), pp. 207-218,; Jorg, 'Chinese porcelain for the Dutch', p. 189; Margaret Medley, *The Chinese potter*, third edition (London, 1989), pp. 229-232.

<sup>32</sup> Kerr and Wood, *Ceramic technology*, p. 188-190.

<sup>33</sup> Vainker, 'Luxuries or not?', pp. 208-9.

porcelain. A kiln of 42 metres required 6 tons of wood and the firing lasted 36 hours with a further cooling period of 72 hours. Such a kiln could fire 3,500 pots, or 7 tons of ware for 6 tons of fuel. (open-fired pots without saggars)<sup>34</sup> Egg-shaped kilns, widely introduced from the late Ming dynasty were 7-18 metres in length, consumed a modest 25 to 35 tons of wood for a 250 cubic metre capacity or 10 to 15 tons of porcelain (including the saggars could bring this up to as much as 30-45 or 40-60 tons) in a main firing period of 24 hours. Egg-shaped kilns constructed by specialist firms allowed different temperatures and different kiln atmospheres within a single firing; they conserved energy in comparison with other kiln types, and they could be densely packed. They were also very versatile, firing a range of wares over a temperature difference of 300 degrees C. Where imperial kilns might fire 300 blue and white pieces at a time, operators at a comparable private kiln stacked 1000 pieces together for a single firing; private kilns regularly produced double the output of the official kilns and produced mixed loads in each firing.<sup>35</sup> By 1743 there were 200 to 300 areas of private kilns employing 100,000 craftsmen, from this period they expanded and skills increased.<sup>36</sup>

Extremely precise division of labour was in place by the eighteenth century, governed by guild regulations. Pere d'Entrecolle's celebrated letters of 1712 and 1722 claimed 3000 furnaces. Factories in 'less frequented places of Ching-te-chen, to be found 'in a surrounding of walls, one finds vast sheds where one sees in row after row, a great number of jars of earth. In these enclosures there live and work a large number of workers

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<sup>34</sup> Nigel Wood, Personal communication, 28 April, 2006. Also see S. Vainker, 'Production and trade of porcelain in China, 1000-1500' Paper to Global Economic History Conference, April, 2006.

<sup>35</sup> Kerr and Wood, *Ceramic technology*, pp. 370-372; Ledderose, *Ten thousand things*, pp. 87-9; Vainker,

<sup>36</sup> Kerr and Wood, *Ceramic technology*, p. 201.

who each have their appointed task. On piece of porcelain, before it enters the door of the furnace passes through the hands of more than twenty people without any confusion. No doubt the Chinese have learned that the work is done faster this way.' At a later point he added. 'It is surprising to see with what speed these vessels pass through so many hands. It is said that one piece of fired porcelain passes through the hands of seventy workers.' Stamps, moulds and decorating were all based on modular systems. In d'Entrecolle's words 'These molded works are made in three or four pieces which are fitted one to the other...As for flowers and other ornaments that are not in relief, but which are like engraving, one applies them to the porcelain with stamps and molds. One also applies ready-made reliefs, in the same manner that one applies gold lace to a coat.' 'Chinese landscape with figures' decoration was a modular decoration created out of a small standardized range of decorative elements. Even with these 'the work of painting in any given laboratory is divided among a large number of workers. One makes only the first coloured circle that one sees next to the ends of the porcelain; another traces flowers that a third one paints; this one does water and mountains; that one birds and other animals....'<sup>37</sup>

Large-scale production deploying modular systems and division of labour combined with geographical concentration of private and official factories and kilns in one major centre, Jingdezhen. This create the global export ware that passed in Europe from exotic collectable to the expected props of the daily routines of polite civility and respectable sociability. Asian production processes and Asian quality products globalized the concept of a semi-luxury, quality good integrated into everyday life. Lancashire cotton

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<sup>37</sup> 'The Letters of Pere de'Entrecolles'. Letter 1, September 1, 1712 translated by Robert Tichane, in Robert Tichane, *Ching-te-chen. Views of a porcelain city* (Painted Post, NY), 1983, pp. 55-111, pp. 73-78.

manufacturers found in mechanisation the solution to the quality and diversity of Indian calicoes and muslins. British machine-made fabrics by 1790 provided the demands for quality and consistency throughout a high-income Atlantic free-trade zone. Porcelain, once exotic and magical was demystified by the early eighteenth century, as tons of it were brought in European ships, and as descriptions of the great porcelain city, its vast factories and intensive division of labour entered the canons of Europe's 'useful knowledge.'

Here was a great industrial city, its innovative private factories and merchants filling the gap left by the decline in imperial demand in the early to mid seventeenth century by responding to quality domestic markets and new export-ware markets in Japan and Europe. With the revival of the imperial kilns and new quality controls, and craftsmen and orders passing between the imperial and private kilns in the latter half of the seventeenth century, knowledge transfers and new markets stimulated technological innovation. On a grand scale, Jingdezhen reaped its gains from the 'locality' of knowledge, a creative city as Europe's Lyons or Birmingham were to become.

The lessons of concentrated industrial regions, large kiln complexes, specifically honed fuel-efficient kilns and extensive division of labour developed in Britain's pre-existing region of earthenware production in North Staffordshire, where the potters of a group of interlocking towns developed a 'useful knowledge' of craftsmen's skills, systematic experimentation and competitive imitation. They improved their own coal-fired bottle ovens, refined the clay composition of their earthenwares, and advanced the division of labour to produce their own high-quality export ware, creamware. These bottle ovens, though fired by coal were no more fuel-efficient than China's egg-shaped kilns. Similarly concentrated – Stoke on Trent had 2000

of these ovens in the 1930s, Staffordshire creamwares and other Staffordshire varieties of fine earthenware now fed the new markets for ceramics. Staffordshire ware became one of Britain's leading export-ware products, more of it supplied to the U.S. by 1790 than to anywhere else and providing the majority of table, tea and toiletwares.

An Asian century was how Britain and Europe experienced the introduction of semi-luxury and quality consumer goods, produced in a huge industrial city, shipped in enormous quantities to Europe's entrepôts, and distributed through the population by countless china dealers and retailers. Britain's own earthenware industry, followed similar models of product development and distribution, to lead the way in creating a new quality export ware, a branded British product that scooped European and Atlantic markets. Britain's fine earthenware sector by the 1780s had grown to account for four-fifths of the British industry. This new product was distributed through the older distribution network of the Asian porcelain trade, and focussed on London and the seaports it also became a leading British export ware product to the Atlantic world and the rest of Europe. Staffordshire ware, like Chinese blue and white quickly established itself as a global product, one of the new array of British products, modern, fashionable and high quality. Trade once again meant variety and choice. This was now a trope representing prosperity, civilization and British goods.

And this was the message that Macartney wanted to take to China. Where Europe's 100 million had once been China's new market, now it was time to seek out markets for British goods among China's 300 million. Despite his negative reception at the Chinese court, he wrote of the Chinese 'in general I have found no people more curious, more greedy after novelty, or more eager to increase their personal convenience than the subjects of this Country.' And the ever optimistic Matthew Boulton, compiling his own



inventory of new British consumer goods to take on the Embassy saw this as 'the most favourable [occasion] that every occurred for the introduction of our manufactures into the most extensive market in the world...to send a very extensive selection of specimens of all the articles we make both for ornament and use. I don't mean as presents to great men but such as are vendable through all the middle and lower class of people'.<sup>38</sup>

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<sup>38</sup> Birmingham Central Library, Matthew Boulton Papers, 'Macartney's Embassy, Matthew Boulton to James Cobb, East India House, no date, 1792, letter 19.

## Tables

### **Exports of Glass and Earthenware from England 1700-1800**

<u>Year</u>	<u>Total</u>
1700	758,975
1720	3,412,506
1740	4,174,264
1760	3,981,890
1780	8,588,265
1800	30,281,388

Quantity figures in Pieces, Figures for England and Wales 1700-1790. Figures for Great Britain 1795-1800. Table compiles from E. Schumpeter, *English Overseas Trade Statistics 1697-1808* (Oxford, 1960), Table XXIV, p. 64

### **English East India Company: Peak Years of Imports of Chinaware and Porcelain**

<u>Year</u>	<u>Value (£)</u>	<u>% of Asian Imports</u>
1693	6,275	10.4
1697	13,067	8.9
1699	15,282	3.9
1702	18,764	5.0
1704	20,815	13.3
1705	14,338	7.0

**Source:** K.N. Chaudhuri, *The Trading World of Asia and the English East India Company 1660-1760* (Cambridge, 1978), Appendix 5, Table C.8

### **Exports by Foreign Ships at Canton, 1764**

	<u>Tea (piculs)</u>	<u>Porcelain (piculs)</u>
14 English	53,000 -	(370 chests) *
4 Dutch	37,078	3,326
4 French	14,580	2,284
2 Danes	20,357	1,460
1 Swede	11,958	1,170
1 picul=133. 1/3 lb. average		

**Source:** H.B. Morse, *Chronicles of the East India Company Trading to China 1635-1834*, Vols. 1-V (Oxford, 1929), Vol. V, pp. 113-114, 121-2.

\*370 chests of private trade only.

### **Exports by Ships from Canton, 1773**

	<u>Tea (piculs)</u>	<u>Porcelain (piculs)</u>
13 English ships	69,000	1,211
4 Dutch ships	36,635	2,372
3 French ships	22,663	1,400
2 Danish ships	22,497	1,470
2 Swedish ships	20,602	1,887

**Source:** H.B. Morse, *The Chronicles of the East India Company Trading to China 1635-1834*, Vols. 1-V (Oxford, 1929), Vol. V, p. 170.

### **Chinaware Carried by European East India Company Vessels in 1777-1778**

<u>Number of vessels</u>	<u>Country</u>	<u>Tons Chinaware</u>
8	Britain	348
4	Holland	111
6	France	100
2	Sweden	99
2	Denmark	39

**Source:** G. Godden, *Oriental Export Market Porcelain and its Influence on European Wares* (London, 1979), p. 47.

### **Average Annual Ceramic Exports in the Seventeenth Century**

	<u>Total Pieces</u>	<u>Europe</u>	<u>South Seas</u>	<u>Japan</u>
<u>From China</u>				
1602-44	40,5535 (100%)	65,970 (16%)	245,067 (60%)	93,498 (23%)
1645-61	12,9366 (100%)	41,292 (31%)	69,254 (53%)	18,820 (14%)
1662-82	95,959 (100%)	5,834 (5%)	89,312 (93%)	1,162 (1%)
<u>From Japan</u>				
1659-61	101,960 (100%)	9,102 (8%)	92,858 (91%)	
1662-82	95,828 (100%)	8,988 (9%)	86,840 (90%)	

**Source:** C. Ho, 'The Ceramic Trade in Asia 1602-82', in A.J.H. Latham, H. Kawakatsu, *Japanese Industrialization and the Asian Economy* (London, 1994), pp. 37-8.

### **Retained Imports of China Ware 1704-1774 – England**

	<u>£</u>
1704	103,363
1714	23,452
1724	37,043
1734	70,297
1744	29,738
1754	29,474
1764	41,643
1774	23,320

### **Retained Imports of China Ware – Peak Years – England**

	<u>£</u>
1704	103,363
1718	144,523
1722	95,499
1732	118,652
1737	100,808
1740	107,482
1757	103,586
1758	150,621

**Source:** PRO Customs Accounts. Cust 3, 1698-1771; Cust 17, 1772-1808. Derived from tables compiled by Lorna Weatherill, 'The Growth of the Pottery Industry in England, 1660-1815. Some new evidence and estimates', *Post-Medieval Archaeology*, 17 (1983), pp. 15-46. Table A-3, pp. 33-35.