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**Exotic Goods, Popular Consumption, and the Standard of Living:
Thinking About Globalization in the Early Modern World**

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Exotic Goods, Popular Consumption, and the Standard of Living:

Thinking About Globalization in the Early Modern World

In recent years a consensus has emerged in the relatively young sub-discipline of ‘world history’ that the long-distance exchange of commodities, money, ideas, and tastes that we all recognize as an essential feature of the contemporary world is in fact an old phenomenon. Indeed, making this case may well be the *raison d’être* for the emergence of the field in the first place. Its leading practitioners have overwhelmingly emerged out of historical fields representing the various geographical regions located outside of Europe and North America and/or from the time period now widely (if problematically) known as Early Modern [Goldstone 1998; and Starn 2002]. The themes and chronologies of their fields have thus not been dominated by the fact of a nineteenth century industrial revolution. They have identified the pivotal moments of their historiographies very differently than have most modern western historians whose key questions have been framed around the problems (when, why, where, how, and to what effect?) of industrialization more than any others. World historians are not willing merely to settle for the replacement of the epicenter of globalization outside of Europe or in an earlier time period; they want in fact to “re-orient” (to borrow from the title of an important work in this field) the very questions that are asked, and the kinds of data thought suitable for or worthy of comparative historical analysis [Frank 1998].

At least since the publication of Jean Baptiste Say’s Treatise on Political Economy in 1803 western economists, with only a few exceptions (most notably John Maynard Keynes) have privileged the study of the productive process over that of consumption. That is to say, even before the Industrial Revolution had played itself out fully in historical time, the scholarly stage was set to understand it primarily as an expansion of output resulting from the intensification of inputs, from a more efficient organization of those inputs, and most especially, from new technologies associated with machines of all types powered by fossil fuel burning engines. Thus was born the ‘wave of gadgets’ characterization of the Industrial Revolution by T.S. Ashton’s now famous English schoolboy [Ashton 1948:48]. His gadgets were not

technologies for better living per se, but rather novelties which allowed Britain to produce more goods, more quickly and more cheaply, than anywhere else. This would translate, eventually anyway, into higher living standards for the masses, but the latter was hardly considered to be the primary metric for assessing the relative strength of economic development across countries. Yet, as many world historians have noted, other metrics might have yielded rather different comparative histories. For example, Susan Hanley's work on Tokugawa Japan and Ken Pomeranz's work on Qing China both argue forcefully for comparatively high living standards in their respective studies of these two early modern states, neither of which underwent an Industrial Revolution at all [Hanley 1997; and Pomeranz 2000]. Similar claims have been made for a cultural metric which would likewise favor the great flourishing and expansion of Islamic culture in the 12th and 13th centuries. In each of these cases, the comparative histories suggest that framing the problem at hand in new ways is likely to prove very fruitful. Specifically, historians need to 1) develop new chronologies of globalization; 2) recognize that there were multiple geographic centers of economic achievement at different times, a phenomenon that Jack Goldstone has called 'efflorescences' [Goldstone 2002]; and 3) develop and use alternative yardsticks of economic success in place of, or at least in addition to, the theoretically unsatisfactory, albeit ubiquitous, measure of Gross Domestic Product (GDP).

Evidence which privileges processes of consumption over those of production is critical to any such re-evaluation of the traditional historiography of global integration and European economic growth. The growing body of documentation provided by early modern household inventory studies, along with much recent work on the contours of European demand for both imported manufactures and locally produced imitations, suggests that the time is now ripe for just such a re-evaluation. Indeed, new evidence, involving strata of the population usually too humble to leave documentary traces, suggests that, contrary to the position previously staked out by the field of economic history broadly conceived, the intercontinental luxury trades of the early modern period were in fact transformative of the European economy.¹ A review of the literature on this question will expose the underlying assumptions which have yielded the errant, but internally predictable, position widely accepted to date. New evidence will show that global groceries, long thought to be merely exotic, were actually in wide use by the early decades of the

eighteenth century. Likewise, manufactured goods imported from Asia, particularly porcelain, silk and cotton textiles, reached a wider range of consumers, and did so much earlier, than previously believed possible. Finally, the substitution of Asian manufactures for lower quality, and sometimes altogether different, European products calls into question the validity of the standard assertion that the early modern luxury trades were non-competing. Rather, it seems likely that traditional European productive processes did face direct competition from the newly available goods, and not surprisingly then, were forced to adapt. The emergence of the Delftware (and subsequent English) potteries is perhaps the best example of this process at work, but hardly the only one. Even more compelling evidence of the powerful connections between production in the East and the West, lies in the fact that Asian productive processes were in their turn transformed by European demand. The Chinoiserie designs which appeared on everything from Asian textiles, to lacquerware, to ceramics from the middle decades of the seventeenth century catered specifically to the dictates of European fashion [Styles 2000:133-136]. Taken all together, these findings about the extent of consumer access and the concomitant response of both European and Asian productive processes have important ramifications for the larger debate about the origins and significance of economic globalization.

The Need for Revision:

Revising the chronology of globalization is perhaps the most straightforward of the goals outlined above. Economists have long taken it as a matter of faith that given the technical achievements of the Industrial Revolution, the nineteenth century is also the obvious place to look for the origins of the modern globally-connected market system. This view is not shared, however, by the world historians for whom the Industrial Revolution is not the *sine qua non* of intercontinental commodity exchange. While a few of the latter are willing to make a case for the globalization of antiquity, and only slightly more so for the Middle Ages (especially as regards Islamic expansion before 1300), the most common view is that significant global connectedness began with the voyages of Vasco de Gama, Christopher Columbus and their followers. Most recently Denis Flynn and Arturo Giraldez have dated the moment of the birth of

globalization precisely, “in 1571 with the establishment of direct and permanent linkages between the Americas and East Asia” via the intermediary port of Manila [Flynn and Giraldez 2004: 99].

Furthermore, despite the fact that the choice of this date ultimately emerges from historical events that first took shape in the European Atlantic, the Pacific and Indian Oceans loom relatively larger in the world historians’ story than does the ‘pond’ of Anglo-American discourse. As they have argued repeatedly, western Europe was not the only location from which the forces of globalization were to emerge; and the Atlantic was not the only, or even always the most significant, ocean across which advantageous exchange could take place. For example, the Medieval Islamic sphere of cultural influence, centered on the Mediterranean littoral and extending across the Indian Ocean and subcontinent and into south-east Asia, figures prominently in the world-systems analysis of Janet Abu-Lughod [1989]. Indeed, she is willing to push the argument for a re-centering of globalization to its logical limit. She argues that “the ‘fall of the East’ preceded the ‘rise of the West’ and opened up a window of opportunity that would not have existed had matters gone differently” [Abu-Lughod 1993: 90]. Similar kinds of arguments have been made for China as well, especially for: 1) the period of Mongol ascendancy when central Asia functioned as a land bridge between East and West (approximately 1240-1340); and 2) subsequently for the great age of overseas exploration during the early Ming Dynasty (1405-1433). Both of these moments witnessed examples of the intensification of intercontinental exchange, but directed from a site other than western Europe.

This multi-faceted view (both in time and space) of the globalization process fits well (even if not always explicitly so) with the kinds of work that have long been of interest to many historians of European society and culture. The cultural attributes of the ‘East’, whether they be Turkish, Persian, Indian or Chinese to name only the most prominent, had a marked influence on the development of European letters and material culture. Indeed, public debates about the morality of consumption dating at least back to the Roman period have been repeatedly undergirded by the powerful associations between luxury consumption, refinement, and wealth, on the one hand and eastern-ness on the other, despite being simultaneously conjoined with discourses about the ‘barbarian’ inhabitants of those same places. By the

time we get to the early modern period, this discourse is especially rich. For example, the historical literature on the ‘rise of consumer culture’ in the eighteenth century, or even earlier for that matter, is not easily distinguishable from that documenting the growing use of, and desire for, eastern trade goods.² Both commodities, such as spices, tea, coffee, and sugar, and manufactures, such as silks, printed cottons, porcelain, and laquer wares, figure prominently here. We might even be tempted to believe that the consumer revolution itself would have been inconceivable without the stimulus provided by ‘luxuries’ first trickling and then streaming into Europe from Asia broadly defined. Furthermore, the Americas cannot be left out of the picture, not only because chocolate and tobacco were found there, but more importantly still, the metallic commodity, silver, which greased the wheels of the entire global trade edifice, was located there in prodigious quantities.

Yet despite the happy conjuncture between the agenda of those historians documenting the pre-industrial consumer revolution in Europe and that of the world historians documenting the trade connectivity of the world before steamships and railroads, not everyone has been convinced by the strength of these connections. Both neo-Marxists along the lines of “world systems” theorists, and neo-classical economic historians have been similarly dismissive of the economic significance of early modern trade. Just over three decades ago now, in his path-breaking Marxist interpretation of the rise of a European, capitalist world economy, Immanuel Wallerstein strongly downplayed the importance of sixteenth century Eurasian trade in determining the structures of production for any of the various Asian or European economies.

What Asia provided for Europe at this time was luxuries. Now luxuries are important and not to be sneered at, but they take second place to food (grain, cattle, fish, sugar) and the manpower needed to raise them. They took second place also to bullion, not hoarded bullion but bullion as money... Compared to food and even to bullion, a world-economy can adjust relatively easily to the shifts in luxury supply. [Wallerstein, 1974: 333]

This is not to argue, of course, that the Asian trade was not profitable to its various European practitioners. On the contrary, it was extremely lucrative: worthy of the expenditure of more than a million men lost at

sea or in the tropics between 1500 and 1795, and a bullion out-flow from Europe of unimaginable proportions, not to mention the repeated rounds of violence to which it gave rise [de Vries, 2003:72 and 82]. But for Wallerstein this gave rise only to the “profits of plunder” and “plunder is over time self-defeating” [Wallerstein, 1974: 335]. The “framework of a single world-economy” in which exploitation could become “self-reinforcing” would have to wait for a later period [Ibid].

A remarkably similar assessment of the early modern trade-boom, but from the very different perspective of quantitative neo-classical economics and based on very different evaluative criteria, has recently been proffered by O’Rourke and Williamson. In a series of related articles exploring the origins of economic globalization, they test and refute the claims of the world historians that globalization began in 1571, or at any other early modern date. They conclude that only the technological revolution of the early nineteenth century, which made “possible the movement of bulk commodities between continents so much more cheaply that domestic prices, and domestic resource allocation, were significantly affected by international trade,” can signal the true birth of a global economy [O’Rourke and Williamson, 2002b: 45]. In this view it was the nineteenth century transport revolution which precipitated the “decline in the international dispersion of commodity prices” which they argue is “*the only irrefutable evidence that globalisation is taking place*” [Italics in original, O’Rourke and Williamson, 2002b: 26]. Their critical benchmark may be commodity price convergence, in comparison with Wallerstein’s integration of “Asian primary production” into the “European division of labor,” but their final assessments about the chronology of globalization are not far apart [Wallerstein, 1974: 332]. Both arguments likewise rest on some shared critical assumptions about the limitations of early modern intercontinental trade, namely that it was dominated by a trade in luxury items, and therefore could not muster the power to transform the economic structures of production in either Asia or Europe. O’Rourke and Williamson have this to say about the spices, silk, sugar and gold, which they claim dominated European imports, and the silver, and lesser amounts of linens and woollens, which made their way into Asia in return:

By definition, these non-competing goods were very expensive luxuries in importing markets, and thus could bear the very high cost of transportation from their (cheap) sources. Also by definition,

their presence or absence in Europe had little impact on domestic production since they were largely non-competing. Again by definition, their presence or absence in Europe had an impact only on the living standards of the very rich who could afford these expensive luxuries. [O'Rourke and Williamson, 2002b: 27].

Not surprisingly, when they construct their quantitative model of import supply and demand to evaluate the relative strength of the various factors responsible for the trade boom of the pre-nineteenth century period, the growth of European import demand is measured exclusively by European "surplus income," estimated in this case by the growth in English land rents [O'Rourke and Williamson, 2002a: 434]. That is to say, they limit the potential stimulus from increased European import demand to be responsive only to increases in the incomes of the very rich, thereby ruling out *a priori* the possible importance of changes in taste broadly defined, or of increases in the incomes of other segments of the population. From this they draw the obvious implication that any changes in the standard of living of workers, and all others not counted among the land-owners or the urban merchants who supplied them, "would have had only a trivial impact on European import demand"[Ibid]. On these grounds general income growth and/or the income elasticity of demand for non-elites can be disregarded as potential variables in their framework.

Is this in fact a reasonable assumption? Ironically, in an important contribution to another old chestnut of the Industrial Revolution legacy, namely the so-called Standard-of-Living debate, Joel Mokyr makes an opposite claim about what he calls the "small luxury" trade in tea, sugar, coffee and tobacco. He argues for the usefulness of trade/consumption data for these commodities precisely because "these series reflect the living standard of the entire population of Britain" [Mokyr, 1988: 73]. Indeed, they are especially reflective of "the economic welfare of the masses because consumption was *only weakly affected by changes in the economic conditions of the upper income brackets*" [Emphasis added, Ibid]. Admittedly, Mokyr is working largely with early nineteenth century data in this analysis, but his discussion of the issues involved extends back into the eighteenth century as well. Who is right then? Was the Asiatic trade comprised of goods so exclusive as to rest on only the fickle whims and desires of the super rich? Or was it really a trade based on "small luxuries," available to many, even if in only modest

quantities? Furthermore, does our answer to this question matter to our understanding of the larger forces of globalization before the nineteenth century? In short, could a so-called luxury trade also be a transforming trade?

Others have already taken issue with O'Rourke and Williamson's restrictive definition of globalization as commodity price convergence and nothing else [Flynn and Giraldez, 2002 and 2004]. It is not my intention here to pursue that particular line of debate any further. Instead, I want to focus my comments on the strength of their assumptions about the demand characteristics of the Asiatic (and to a lesser extent the New World) 'luxury' trades. Of course, as O'Rourke and Williamson rightly point out, these demand characteristics are hard to quantify explicitly. Given the scarcity of data, it is easy to understand their reluctance to make judgements about the relative importance of the various commodities which figure among their price data. Nonetheless historians do possess more information than their simple model takes advantage of. To illustrate the point we need only consider the most obvious example, that of the early price data for pepper and ginger in the period 1450-1500. As their estimate now stands, both commodities have been given equal weight in determining the relative price trend for Asian commodities in the latter fifteenth century [O'Rourke and Williamson 2002a, footnote 37: 431]. Yet the social histories of diet and trade are both rich enough to allow us to say without any hesitation that pepper was a vastly more important trade commodity than ginger; and that the rising relative price of pepper across most of the late Medieval period (1350-1500) is almost certainly a reflection of the continued strong demand by a wide swath of the European populace in the face of constricted supply following the collapse of the Mediterranean-centered Islamic trade networks of the high Middle Ages. Thus, even though we cannot fully quantify the demand for either spice, we should nevertheless utilize the evidence we do have which indicates that pepper was a much more significant commodity in European consumption than was ginger. Likewise, pepper prices should be given greater weight than ginger prices in any numerical exercise. As Amartya Sen has argued so cogently in another context, when confronted by equally difficult measurement problems: surely it is preferable to be "vaguely right" than to be "precisely wrong" [Sen 1987: 34].

Understanding, even in a general sort of a way, the strength and composition of European demand

for various Asian and New World commodities is essential if we are to evaluate the impact of the early modern trade boom on the standard of living of Europeans who were not located at the top of the income distribution. What we know already from literary and visual sources, as well as from the growing field of the history of material culture (often focused on elites, but increasingly on the daily life of non-elites as well) needs to be evaluated in the context of quantitative evidence about the breadth and depth of the consumption of tea, coffee, sugar, and tobacco on the commodities side, and silk, chintz and other printed cottons, and porcelain on the manufactures side. Is there specific distributional evidence to uphold the broad claims of the historians of the consumer revolution, who see the seventeenth and eighteenth centuries as pivotal well in advance of the transport revolutions of the nineteenth century? What can we say about consumer demand responses to changes in either income or the prices of these commodities? And how did those responses vary across the wealth spectrum? Finally, what do we know about the response of European production to these trades? Were the Asiatic goods all non-competing as O'Rourke and Williamson assert, or did Europeans in fact make substitutions between them and goods produced at home?

The Colonial Groceries: tea, coffee, sugar and tobacco

It is hardly news that groceries, almost all of which were imports to Europe, dramatically increased in importance across the early modern period for both household consumption patterns and for national trade statistics (not to mention the rationalization of public finance on a basis of excise taxation, much of which fell on these groceries). As early as 1731 Daniel Defoe numbered the English consumers of imported luxuries not in the “hundreds or thousands, or hundreds of thousands, but millions” [quoted in Berg and Clifford 1999: 6]. While middling tradesmen and laborers may not have enjoyed the highest quality versions of these goods, they nonetheless formed the critical target audience for the abundance of coarser varieties which indeed made up the bulk of the trade. Carole Shammas estimates that the percentage contribution of groceries to the total value of all imports into England and Wales increased

from 16.9% in 1700 to 34.9% in 1800, during a century which witnessed the concomitant dramatic increase in imports of all kinds and strong downward pressure on the import prices of most groceries [Shammas 1990: 77]. From the 1730's onward, tea was among the most important of the colonial groceries for England, having joined tobacco and sugar as an item of “mass consumption” by then [Ibid: 85]. Moreover, the cheapest black variety, *bohea*, constituted about two-thirds of total consumption around mid-century [Smith 1996: 192]. It was also the variety of tea most likely to have been smuggled into the country, thereby evading the exorbitant excise tax as well as enumeration in the official trade statistics cited above [Mui and Mui 1968: 52]. Tea smuggling was a veritable growth industry in eighteenth century England, enjoying high profits, promoting the development of new organizational structures and technological advances, and accounting for up to three times the volume of the legal tea trade at moments of particularly high taxation [Ashworth 2003: 176-8]. Smuggling, by its very nature as a relatively small scale activity dependent on remote stretches of unwatched coastline, also served to introduce the tea-drinking habit to consumers who would otherwise have been too distant (either socially or geographically) from the main entrepot port of London for easy access to what was, after all, a totally new commodity.

A similar story, albeit with less emphasis on the contribution of smugglers, can be told for the Dutch Republic, the other leading European participant in the eighteenth century colonial groceries trade. Introduced first into western Europe in the second decade of the seventeenth century by Dutch sailors, neither tea nor coffee nevertheless caught on quickly as beverages. Rather they were seen as drugs to be sold off the apothecary's shelf. Thus, the first public auction of coffee by the *Vereenige Oostindische Compagnie* (VOC) in Amsterdam did not take place until 1661/62, and then in very limited quantities. Only in the 1690s did sales of coffee become truly regular. Public sales of tea became established more quickly, but even combined, the two commodities accounted for a scant 0.03% of total VOC sales at Amsterdam in the late 1660's and still only 4.1% of sales at the end of the seventeenth century [Glamann 1958: 13]. Yet by the end of the 1730s, tea and coffee accounted for nearly a quarter of all VOC sales in Amsterdam (24.92 %), second only to silk and cotton textiles (28.27 %) [Ibid: 14]. This increase in share is all the more impressive when we consider that total VOC sales in Amsterdam had increased during this

same period by 158 percent. Thus, the actual revenues of colonial beverage sales at Amsterdam were over 1,300 times greater in 1740 than they had been in 1669. Given the contemporaneous (more-or-less consistently) downward trend in the unit price of both tea leaves and coffee beans between the close of the seventeenth century and the middle of the eighteenth, the quantity of raw materials for making hot caffeinated drinks actually imported into the Dutch Republic must have increased in staggering proportions.

Furthermore, England and the Dutch Republic were by no means the only European powers engaged in this kind of trade, although they were clearly the most important. Portugal, which had been the earliest European entrant into Asian waters and had enjoyed a dominant position in the sixteenth century pepper and spice trades from the southeast Asian archipelago before being eclipsed by the Dutch around 1600, continued to import Asian colonial products although with a decreasing number of voyages over time. France also joined the fray in earnest by the middle of the seventeenth century and grew in relative strength until the revolutionary period. Denmark, Sweden and the Oostende Company engaged in limited activity in Asian waters as well, especially during the middle decades of the eighteenth century. Indeed, these smaller European companies were critical as suppliers for the illegal coastal tea trade to England, while their home communities were instead developing relatively strong preferences for coffee. Consider first the case of tea, all of which had to be purchased from a single source at Canton, making it easier to aggregate trade volumes reliably than for coffee. The established European companies together increased their imports of tea by 6.65 percent per annum between 1719-25 and 1749-55, followed by annual growth rates of 1.92 percent until the 1780s, by which time tea imports into Europe had reached the staggering amount of 9.4 million kg. [de Vries, 2003: 66]. Coffee did not likewise suffer (if that is the right word for such a successful increase in trade?) from the single-source problem. Rather, its production spread rapidly from its original source in Arabia following the successful Dutch transplantation of a coffee tree to Java in the first decade of the eighteenth century. Within another twenty years coffee was being widely grown across the tropics, with large quantities newly available (and moreover, totally under European control) in the West Indies and ultimately Central America as well. While the total volume of coffee available for

European import is harder to estimate than for tea, it too grew to staggering proportions over the course of the eighteenth century.

Who was drinking all of this tea and coffee? Surely not just wealthy elites, as the volumes are too high to even entertain the possibility of limited social access to hot caffeinated beverages. Some of the import volume was 'lost' to re-exports, but the ultimate consumers of these re-exports were, of course, just other Europeans (or their colonial counterparts). Eighteenth century commentators of all national stripes did not hesitate to ascribe consumption of these caffeinated luxuries, usually as a complaint, to the teeming masses of their social inferiors. Probate inventory evidence on the social diffusion of the artifacts associated with this consumption has been accumulating over the past several decades, and it suggests that it was indeed widespread across the social landscape.

Shammas has identified the decades of the 1730s and 40s as the critical ones for the mass consumption of tea in England, and Dutch inventory studies suggest a similar timing of diffusion. Hans van Koolbergen's study of the small industrial city of Weesp (15 km. northwest of Amsterdam with approximately 2,500 inhabitants working primarily as beer brewers, gin distillers and linen weavers, and as farmers in the immediate hinterland) finds no tea or coffee wares to speak of before 1700. But by the close of the 1730s, nearly 100% of the inventories include at least one item relating to the preparation or consumption of these goods [van Koolbergen 1997: 145]. A similar picture emerges from Hester Dibbits' comparative study of material culture in the South Holland coastal fishing village of Maassluis, and in the inland Hanseatic fortress town of Doesburg, situated at the juncture of the Oude IJssel and the IJssel rivers in a part of Gelderland known as the Achterhoek. While a place like Maassluis fits clearly into the larger picture historians have developed about the maritime economic vibrancy of the Dutch Golden Age, Doesburg, on the other hand, had reached its commercial zenith in the Middle Ages. By the early modern period Doesburg served primarily as a border garrison town and a regional distribution center for specialized craftsmen and retailers. It looked eastward towards the continent at least as much as it did westward towards the feverish activity of the Holland ports. Yet, Dibbits finds no particular difference in the speed of assimilation of the material artifacts of coffee and tea consumption between the two locations.

She concludes of both places that by “1750 coffee and tea wares were altogether commonplace” [Dibbits 2001: 160 and 321-26]. Likewise for Thera Wijsenbeek-Olthuis’ now classic study of eighteenth century Delft: despite the powerful negative trends of de-population and de-industrialization there, the evidence for tea and coffee consumption rises markedly between the first and second quarters of the eighteenth century [Wijsenbeek-Olthuis 1987a: 453-454]. Finally, Blonde and van Damme’s study of Antwerp, another city in considerable decline in the eighteenth century, finds the same pattern repeated. After finding no mentions of equipment for making tea or coffee in inventories dating from the seventeenth century, regardless of social class, they document that by 1730 this picture had changed radically. Almost 60% of even modest one-room households could drink tea at home, rising to 100% of the most spaciouly accommodated (those with ten or more rooms). Coffee equipment did not advance quite as spectacularly by 1730, but by 1780 both tea and coffee equipment were ubiquitous [Blonde and van Damme 2005: 12]. Not surprisingly, their study also documents an accelerating increase in the number of new purveyors of tea, coffee, and chocolate up through the decade of the 1740s, followed thereafter by more gradual increases in the number of new establishments. Over the course of the eighteenth century, tea and coffee retailers accounted for between five and ten percent of all new entrants into the Antwerp mercers guild [Ibid: 5 and 12].

My own study of over 900 eighteenth century *post mortem* inventories collected by the Amsterdam Municipal Orphanage confirms the full extent of the social diffusion suggested by the studies mentioned above. For the households affiliated with the Orphanage were truly poor to a much greater extent than is the case for the poorest subjects of inventory studies which rely on notarial records. The Orphanage affiliates were drawn primarily from the bottom three deciles of the wealth distribution of the Amsterdam citizenry, with the overwhelming majority of them living in just one room or a cellar [McCants 2006a; McCants 2006b]. Yet as the data reported in Table 1 show, by the middle decades of the eighteenth century, sixty percent of the inventories contain evidence which suggests that coffee and/or tea was being consumed at home. This percentage drops slightly in the (roughly) third quarter of the century, a finding concomitant with other evidence that the population affiliated with the Orphanage grew increasingly

impoverished as the century wore on.

What we cannot know of course, is whether those households which could not afford the equipment required to prepare and serve their caffeine drinks at home nevertheless found petty retailers who could supply them with these beverages ready-made. We do know that there was an active trade in used tea leaves and coffee grounds, suggesting that even the lowest end of the market might be supplied. Moreover, the VOC was notorious for being the company which returned to Europe with tea of the lowest quality (*bohea*), suitable for “being hawked around the streets of Amsterdam in barrows” [Jorg 1982: 20]. The quality of the product which reached home was further compromised by the fact that for most of the first half of the eighteenth century (with the exception of the years between 1729-34) the Dutch China trade was not carried out directly, but rather via Batavia. Chinese junks brought tea and other commodities to Java, from whence it had to be transshipped for the voyage back to Europe. The extra handling time was widely reputed to work to the disadvantage of the tea itself. The quality differential can be seen directly in the price data from the first four years of the 1730s, when *bohea* tea was shipped along both routes simultaneously. That which arrived directly from Canton fetched between 15 and 25 percent more per *pond* than that which had been transshipped via Batavia [Glamann 1958: 228-29]. In any event, it is almost certainly the case that the diffusion of tea drinking within the lower reaches of the social order in Amsterdam was greatly facilitated by the fact that a low grade product was widely available.

Sugar, which by all accounts was the dominant accompaniment of these hot beverages, is less visible in the inventory data. Only eight percent of the households indicate the presence of a bowl or tin specifically for storing or serving sugar. [See Table 2, which includes information on a variety of goods in addition to tablewares for purposes of comparison.] But we should be careful not to conclude from this evidence alone that so few actually used sugar, at least from time to time. The data on items associated with the storage of salt and pepper can offer some guidance here. It seems certain that the usage of salt was universal, and pepper must have been not far behind, having long since ceased to be the exotic import it had been in the Middle Ages. Yet only one-fifth to one-fourth of the inventories indicate a special item for the storage or use of these condiments. Presumably a wide variety of more generic dishes, boxes, or

tins could have been used to store salt and pepper, and must have been in fact. The possibility that the same was true for sugar seems not far fetched, especially for those households where only very small quantities were used at a time. It is also worth noting, that the not-so-humble fork is even less in evidence. Only 5.3 percent of all households owned this utensil which had its origins in Europe during the Renaissance. Despite our presentist inclination to view colonial groceries (and their service items) as luxuries in the eighteenth century, and not so the fork, the rank ordering depicted in Table 3 of median household assets, with households grouped by the presence of specific items, suggests that the fork was actually one of the most “luxurious” items to be found among the population of Orphanage affiliates.

Given the less specific nature of the tablewares associated with the use of sugar than with the making and serving of hot caffeinated beverages, we really need some other indication of how much sugar was available for consumption, and what fraction of household budgets (food budgets in particular) was devoted to its purchase. Even better would be evidence allowing one to estimate the price and income elasticities associated with sugar demand. Fortunately, we do have such information, although it remains less comprehensive than we might desire.

The colorful social history of the spectacular rise of European sugar consumption between the late Middle Ages and the present has already been ably told by Sidney Mintz. Yet his presentation is of only limited quantitative usefulness [Mintz 1985]. Shammass, on the other hand, has devised a schema for assessing the moment at which sugar can be said to have become a product of mass consumption from a quantitative point of view. Her criterion is satisfied when enough sugar is imported (into England in this case) to allow approximately one-quarter of the population regularly to sweeten their food or drink, an amount she estimates to be on the order of 24 lbs. per year for each consumer [Shammass 1990: 81]. At the end of the seventeenth century, when England was importing approximately 4 lbs per capita annually, the initially unequal distribution of sugar across the population would have permitted approximately one-quarter of English consumers to have reached her threshold amount. By the close of the eighteenth century, England imported enough sugar for every inhabitant to regularly sweeten their daily diet [Shammass 1990: 82]. That these high quantities of sugar indeed came to be widely distributed is

confirmed by the evidence we have from workhouse and hospital diets over the course of the eighteenth century. All of the institutional budget data so far collected for English poor relief facilities after 1700 allude to sugar purchases, even when the amounts were too small to merit a specific financial record. In similar seventeenth century workhouse budget data, sugar is not to be found at all. For the majority of the eighteenth century cases which did record exact expenditures, the typical English workhouse devoted between two and three percent of their total dietary expenditure to sugar [Shammas 1990: 142-3].

My own study of the diet provided for the orphan inmates of the Amsterdam Municipal Orphanage confirms this pattern with even more robust evidence. The financial records of the institution have been preserved in almost complete detail over the period from 1639 to 1812, including an itemized expenditure for every category of foodstuffs. These financial accounts almost always record the quantity of particular food items purchased in local units and the purchase price as well. While it seems that the children enjoyed refined sugar only very occasionally, treacle (a syrupy brown sugar) was an increasingly regular part of their diet, as exhibited both by changes in the standard menus over time and in the actual purchase of commodities. The middle decades of the seventeenth century (1639-1679) were characterized by both meager caloric provision (with per capita daily kcals averaging between 2,100 -2,300) and a very low contribution to that total from sugar (averaging between 0.5 and 0.6 percent of all calories). After the turn of the eighteenth century, the average caloric provision increased substantially to average between 2,600 and 3,000 kcals daily. This figure only fell again after 1790 when the Orphanage was confronted by soaring food prices and plummeting revenues, and even then to a level still slightly higher than had been normal in the seventeenth century. More importantly for the present argument, sugar's contribution to the increased number of calories rose consistently and dramatically, first to 0.9 percent of calories at the close of the seventeenth century, then to 2.1, 3.4, 3.9 and 4.3 percent of calories for 1720-39, 1740-59, 1760-79 and 1780-89 respectively. As with total calories, the contribution of sugar fell back after 1790 to 2.7 percent, a level still substantially higher than was achieved in the seventeenth century.³ It seems that even in the face of the severe financial hardships which characterized the late eighteenth century experience of the Dutch Republic, sugar had become so much a necessary part of the ordinary diet that even destitute

orphans could continue to make claims on the public purse for its purchase.

The dramatic rise and then lingering persistence of sugar purchases is made even more significant by the fact that it was not simply a response to falling relative prices for sugar. Indeed, if anything sugar prices (measured relative to grain prices) were on average rising slightly in the second half of the eighteenth century, although the evidence is arguably mixed [Williamson and O'Rourke 2002a: 449-50]. However, in the case of the orphanage expenditures we need not rely on the general price trend alone. Because we have complete information on the total expenditures for the diet, as well as unit prices for the foodstuffs in that diet, we should be able to estimate income and price elasticities of the major commodity groups directly. (This calculation has been made using a simultaneous demand equation system operating under the specifications of the Rotterdam Model. The data is described and the demand system explained in detail elsewhere [McCants 1993 and 1995].) However, the dramatic increase in the demand for sugar resulting from an exogenous shift in tastes so destabilizes the demand system that it is, in fact, impossible to determine the underlying sensitivity of demand for sugar to changes in either price or income. Purchases of sugar in the seventeenth century increased significantly at a time when the unit price of sugar was also increasing relative to the other goods in the diet, resulting in an apparent total price elasticity which is strongly, and counter-intuitively, positive. It is noteworthy that this is the only positive estimated price elasticity among all of the foodstuffs purchased for the Orphanage diet. After 1700, the coefficient on sugar reverted to a more normal negative number, but the relative price of sugar was falling anyway by this point. What is particularly interesting about the eighteenth century data is the coefficient for the income effect, which is negative for both the periods 1704-58 and 1761-1812. Even as the resources available to spend on foodstuffs were being constrained (especially after mid-century), sugar continued to be bought in mostly increasing amounts. The secular trend toward the greater use of sweeteners completely swamped the sensitivity of sugar purchases to first increases in price, and then later to declines in income. This can only be indicative of the increasing cultural importance attached to the consumption of sugar by the Dutch middling and working classes over the early modern period. Furthermore, this cultural imperative yielded quantifiable change in people's behavior.

If sugar had become an item of mass consumption by the turn of the eighteenth century, tobacco had done so even earlier. Shammass estimates that the English mass consumption threshold had been reached for tobacco by the mid-seventeenth century, based on legal import statistics combined with estimates of smuggled tobacco. The quantity of tobacco imported from the Chesapeake (not to mention that which was grown, illegally, in England itself until the close of the seventeenth century) by 1670 would have allowed fifty percent of the total population a ration of one pipeful per day. While she estimates that there were fewer regular smokers than half of the nation, nonetheless “there was too much tobacco around in 1670 for it to have been all consumed by an elite group” [Shammass 1990: 79]. The Dutch were also a nation of regular pipe smokers, as can be visually grasped by even a cursory examination of seventeenth century genre paintings. Roughly one-third of the eighteenth century Orphanage affiliate inventories record evidence of tobacco use, a percentage which rises substantially to almost a half if we consider only those households headed by a married male. (This is hardly to imply that Dutch women were not smokers, as they notoriously were. But female consumption was still presumably much lower than that of their male counterparts.)

Imported manufactures: tablewares and textiles

The evidence for European mass consumption of imported manufactured goods is certainly less straightforward than for the colonial groceries, but it is not for that reason of any less significance for the development of the early modern European economy. Indeed, the incongruities between the received wisdom about the extreme social stratification associated with porcelain and silk consumption and the findings of the historians of eighteenth century consumer culture are perhaps even more dramatic than in the case of the comestibles. Small and/or occasional purchases of grocery items by the working classes have been easier for historians to believe possible than discrete purchases of bigger and more durable household items such as tablewares and textiles. Thus, the evidence which suggests that exotic durable goods also found their way into the homes of the working poor surprises us more than that they consumed some tobacco, sugar, and caffeinated drinks. Nevertheless, the evidence for a wider social dispersion of

Asian durable goods consumption is growing apace with the kind of research made possible by a growing number of inventory studies.

The after-death inventories collected by the Amsterdam Municipal Orphanage are once again most instructive on this point. Roughly one-third of the recorded households owned at least once piece of Chinese porcelain, and the median household among those owned eleven separate pieces of china. More than half of the households owned the closest available imitation, delftware.⁴ Moreover, if we consult Table 3 for the rank ordering of those households which owned delftware and china, we find that they are surprisingly low on the list. That is, the median asset values associated with those two groups of households are low compared to those generated by a great many other goods which seem less exotic in retrospect. Households which owned china, for example, look remarkably similar to those which owned (unsigned and unnamed) paintings, that quintessential Dutch decorative item. Likewise, households with delftware⁵ are ranked just below those with mirrors, another item with a wide dispersion across the Dutch material environment.

The relatively high incidence of these goods among a population as modest as this one is all the more surprising given that ceramic dishes are so susceptible to breakage. Unlike the pewter or silver service items which preceded ceramics as high status tablewares, porcelain and delftware items were much less likely to pass intact from one generation to the next. Indeed, the inventories reveal that some dishes were retained for use despite being described as either broken or chipped. Nearly eighteen percent of the households which owned porcelain had at least one such piece, and among those over seventy percent of their total number of pieces were so described. Among the poorest households, those with total assets of less than fifteen guilders, nearly half of the twelve china owning families had broken dishes, and indeed, every one of their individual dishes was damaged in some way. Despite the fact that the relatively wealthier households in this sample possessed a much higher number of ceramic dishes at risk of being broken, they nonetheless reveal a much lower incidence of having even one such dish in their inventory. Presumably their dishes broke and chipped just as often as those located in poorer households, but they were presumably discarded. For the very poor, holding onto damaged goods, or perhaps even buying them

that way from the many which did not survive the long ocean voyage fully intact, or as cast-offs from better households, offered a viable way to access an increasingly important object of eighteenth century consumer culture. Clearly, porcelain and/or delftware did not need to be owned in either large quantities or in pristine condition in order to contribute to a household's sense of its own well-being. Moreover, for those households for which even damaged goods were out of reach, delftware offered a reasonable, and widely available substitute.

Asiatic textiles likewise offered the capacity for a broader participation in their consumption than is readily apparent if we focus only on silk and chintz. Indeed, these two fabrics were highly luxurious, as a quick review of their placement in the household ranking in Table 3 shows. Table 5 depicts a similarly constructed ranking of median household assets by possession of a variety of different fabrics. It also indicates which of these fabrics were manufactured in Europe and which were imported. While it is possible that some of the so-called Asiatic fabrics were actually imitations made in Europe and named to be misleading, the significance of those names for people's understanding of their standard of living remains the same. What is most striking about the rank ordering is the mix of European and Asiatic textiles across the list. Both regions manufactured the full range of cloths, from cheap to prohibitively expensive, leaving poor Europeans excluded from some kinds of consumption but not exclusively along lines of geographic origin. While the traditional Dutch woolen, *lakens*, is the fabric most in abundance in these inventories, it did not require much of a jump in median assets for a household to be positioned for the ownership of at least a cheaper variety of cotton. Likewise, the top of the scale was occupied by an even mix of traditional European luxury fabrics such as velvet and damask and newer imports, most importantly chintz. Silk had in fact been imported into Europe since Roman times, and the capability to produce their own had been espied by the Italians and perfected by the High Middle Ages. Nonetheless, silk only became more widely available with the expansion of direct trade with China in the early modern era.

We should not be terribly surprised by this evidence of a wide price/quality range for both European domestic textiles and their Asiatic competitors. Research carried out on the intra-Asian trade of

the VOC has long shown that a wide range of textile qualities were moved over the whole trade network. The extreme example of this is the *guineas*, a very light cotton used mainly for clothing slaves, but more ordinary cheap goods were produced and distributed widely as well. For example, Wil Dijk's research in the VOC archives from Burma finds evidence of textile customers there who hailed "from all walks of life, from kings to slaves" [Dijk 2002: 495]. Indeed, her work shows that the major bulk of the trade to Burma consisted of simple cloth intended for everyday use by common people [Dijk 2002: 502]. Given the much greater extent of the ordinary market than the luxury market, it should not be too hard to believe that savvy traders such as the Dutch would have found a way to tap into the former. Nor should we find it so hard to believe that the VOC likewise brought home to Europe goods destined for a similarly large market for ordinary goods. Profits may have been less per unit on the cheaper goods, but this could be made up for by volume. The preponderance of relatively inexpensive cotton textiles among the clothing of the orphanage affiliates is certainly evidence of such a strategy at work.

New research on seventeenth and eighteenth century industrial processes and patterns of innovation further corroborate the story of a powerful trade-inspired Asian influence on European consumption patterns in the early modern era, now via the medium of the products of European manufacture itself. Delftware is, of course, the earliest widely recognized example of this phenomenon. Goods from the Delft pottery factories became associated with two new features in the early seventeenth century, both of which have proved so remarkably tenacious that they remain the distinctive markings for Delftware to this day. First, in direct imitation of the highly desired, but as yet technologically elusive high quality Chinese porcelain, Delft potters adopted the glazed blue and white color scheme associated with imported porcelain. Ironically, this color scheme was not itself indigenous to China, but was the result of an earlier long-distance trade expansion initiated by Muslim merchants between the Middle East and China in the High Middle Ages [Finlay 1998: 147-49]. The spare monochromatic style of Northern Song (960-1127) ceramics, while of the highest technical quality then available in the world, nonetheless failed to impress the sensibilities of Middle Eastern consumers who desired highly colorful items instead. It was only with cobalt oxide, imported into China from Persia from the twelfth century onwards, that the potters

of Jingdezhen, began to develop the distinctive blue and white pottery for which they became so famous, and which found later imitation among the Dutch. Second, because porcelain was so far superior to the glazed earthenwares manufactured in Europe, and its price was not all that much higher than for its European-made counterparts, Delftware was a hard sell when comparing piece for piece. So, the Dutch factories initially specialized in making tiles, something the Chinese did not do at all [Wijsenbeek - Olthuis 1987b: 109]. Only after the 1640's, when the supply of Chinese porcelain was greatly reduced by the dynastic struggle between the Ming and the Manchu, did Delft artisans turn increasingly towards direct imitation of the specific tablewares of Chinese manufacture [Finlay 1998: 148].

The global give and take of both style and technique that so clearly existed for ceramic manufacture, leading to its appellation as 'the pilgrim art', is equally important for textile manufacture. Lest we forget, that most quintessential of English economic phenomenon, the so-called First Industrial Revolution, was overwhelmingly powered by the cotton textile industry, hardly an indigenous enterprise. However, we need not wait for the nineteenth century to see the powerful forces of global imitation at work in the manufacture of textiles. Both Maxine Berg and John Styles, among others, have shown exhaustively that as early as the late seventeenth century this industry was especially sensitive to changes in taste driven by imported goods. As Berg notes, the "focus of invention during the eighteenth century was directed towards this process of imitation" [Berg 1999: 77]. Moreover, as with ceramics, the direction of influence in textile manufacture was not merely one-way. Both Chinese porcelain and Indian cottons came to be decorated with patterns that were themselves imitations of the imitative style known in Europe as *chinoiserie* [Styles 2000: 133-34]. Finally, it is worth noting that the stimulating effect of new tastes molded by imports was not always and in every quarter equally appreciated. Indian printed cottons were so wildly successful among consumers in England that the various native textile industries petitioned and secured from Parliament a ban on the wearing of imported printed fabrics in 1701. The failure of this law to stem the tide of illegal imports was punctuated in 1721 by a more general ban on the wearing of any printed fabrics. The flood of pent-up demand for printed fabrics unleashed in 1774 when the ban was lifted entirely is certainly consistent with the story being told here that imported textiles made a critical

contribution to improving people's sense of well-being, and not just among a small elite, but across a wide swath of the social order.

Conclusions

The consumption of tea, coffee, sugar, tobacco, porcelain, and silk and cotton textiles, increased dramatically in western Europe beginning as early as the closing decades of the seventeenth century, only to accelerate through much of the eighteenth century. The consumer setbacks associated with the period of the French Revolution and a continent at war, especially as triggered by the Napoleonic blockades, should properly be seen as a severe interruption to the trend which would otherwise have extended rather more seamlessly from the early modern trade system to the 'transport revolution' of the nineteenth century. Use of the new commodities brought by this trade spread rapidly, both in geographical and social space. Naturally, we find them first and most prominently in the urban maritime communities which facilitated their arrival, but their diffusion into rural and interior locales was often remarkably rapid. Even more surprisingly, the presence of many of these so-called luxury goods is well documented down into the ranks of the working poor by the middle of the eighteenth century. There can be little doubt then, that European demand was fueled not only by the rich with their growing 'surplus incomes' but by the much more numerous lower and middling classes of Europe's multitude of urban centers, followed by their rural counterparts. Furthermore, data on the price and income elasticities of demand strongly suggest that European import demand was not merely shifting within a fixed demand function in response to growing incomes and/or falling prices. There clearly was a remarkable re-orientation of people's tastes and purchases away from products of local agriculture and industry, towards products imported from overseas. What is more, the consumption of these imports proved habit-forming, making people less content with products of local origin even when relative price differentials turned back in their favor. Moreover, for products like tea and coffee, which carried only minimal caloric loads (from their accompaniment sugar) while acting as physiological stimulants, the potential scope for increasing demand was not so quickly limited by satiation as for most other foodstuffs. Finally, European productive processes did respond to

these demand shifts. European efforts to build up import substitution industries can be seen in the processing of beat sugar, cotton textile manufacture and decoration, and most prominently in the attempt to reproduce Asian ceramics, first in Delft, and subsequently in England and elsewhere on the continent.

What then about the larger arguments regarding the pace and timing of globalization? If O'Rourke and Williamson "begin with the premise that the vast majority of the "exotic" imports from Asia and the Americas were out of the reach of any but the rich," they are almost certainly wrong to do so [O'Rourke and Williamson 2002a: 434]. Many of the commodities of the colonial trades, particularly the primary goods which figure exclusively in their price calculations, were indeed consumed by a wide spectrum of individuals. This social breadth was without a doubt the case in England and the Dutch Republic, which not surprisingly, provide the two most important sources for their price data. Indeed, in these two places especially, demand for colonial commodities was strong enough to support commodity sale prices at a level that (mostly) continued to cover the high cost of transshipment despite the incredible increase over time in the total volume of imports arriving in the major port cities. If demand had been as limited as many economic historians have assumed, and given what we know about the failure of transport costs to fall much before the nineteenth century, the trade would have been unsustainable for long. Certainly it should not have persisted for three centuries and more, nor would it have been worth dying for, as so many men in fact did.

A much more likely scenario, given the evidence at hand, is that changing living standards of workers *did* have more than "a trivial impact on European import demand" [Ibid]. If so, O'Rourke and Williamson's decomposition of the sources of the post-Columbian intercontinental trade boom is poorly specified, particularly in regards to an underestimation of the role played by European demand. Although a paucity of source materials will continue to make it difficult for historians to quantify with precision the size and scope of the early modern demand for colonial groceries and Asian manufactures, we risk misunderstanding a critical moment in the globalizing process if we fail to recognize the power of that demand to radically transform European patterns of consumption as well as its processes of production.

Bibliography

- Abu-Lughod, Janet L. 1989. Before European Hegemony : the World System A.D. 1250-1350. New York: Oxford University Press.
- , 1993. "The World System in the Thirteenth Century: Dead-End or Precursors?" in Islamic and European Expansion: the Forging of a Global Order. Ed. Michael Adas. Philadelphia: Temple University Press: 75-102.
- Adas, Michael. 1993. Islamic and European Expansion: the Forging of a Global Order. Philadelphia: Temple University Press.
- Adshead, S.A.M. 1997. Material Culture in Europe and China, 1400-1800. New York: St. Martin's Press.
- Ashton, T.S. 1948. The Industrial Revolution, 1760-1830. Oxford: Oxford University Press.
- Ashworth, William J. 2003. Customs and Excise: Trade, Production, and Consumption in England, 1640-1845. Oxford: Oxford University Press.
- Berg, Maxine and Helen Clifford, eds. 1999. Consumers and Luxury: Consumer Culture in Europe 1650-1850. Manchester: Manchester University Press.
- Berg, Maxine and Elizabeth Eger, eds. 2003. Luxury in the Eighteenth Century: Debates, Desires and Delectable Goods. New York: Palgrave Macmillan.
- Blonde, Bruno and Ilja van Damme. 2005. "Consumer and Retail 'Revolutions': Perspectives from a Declining Urban Economy, Antwerp, 17th and 18th centuries." Unpublished manuscript.
- Brewer, John and Roy Porter, eds. 1993. Consumption and the World of Goods. New York: Routledge.
- Brotton, Jerry. 2003. The Renaissance Bazaar: From the Silk Road to Michelangelo. Oxford: Oxford University Press.
- Bulbeck, David, Anthony Reid, Lay Cheng Tan and Yiqi Wu. 1998. Southeast Asian Exports Since the 14th Century: Cloves, Pepper, Coffee, and Sugar. Leiden: KITLV Press.
- Dibbits, H. 2001. Vertrouwd Bezit: Materiele Cultuur in Doesburg en Maassluis, 1650-1800. Nijmegen: SUN.
- Dijk, Wil O. 2002. "The VOC's Trade in Indian Textiles with Burma, 1634-80." Journal of Southeast Asian Studies. Vol. 33: 495-515.
- Finlay, Robert. 1998. "The Pilgrim Art: The Culture of Porcelain in World History." Journal of World History. Vol. 9: 141-188.
- Flynn, Dennis O. and Arturo Giraldez. 2002. "Cycles of Silver: Global Economic Unity through the Mid-Eighteenth Century." Journal of World History. Vol. 13: 391-427.
- , 2004. "Path dependence, time lags and the birth of globalisation: A critique of O'Rourke and Williamson." European Review of Economic History. Vol. 8: 81-108.

- Frank, Andre Gunder. 1998. ReOrient: Global Economy in the Asian Age. Berkeley: University of California Press.
- Glamann, Kristof. 1958. Dutch-Asiatic Trade: 1620-1740. den Hage: Martinus Nijhoff.
- Goldstone, Jack. 1998. "The Problem of the 'Early Modern' World." Journal of the Economic and Social History of the Orient. Vol. 41:249-284.
- , 2002. "Efflorescences and Economic Growth in World History: Rethinking the 'Rise of the West' and the Industrial Revolution." Journal of World History. Vol. 13: 323-389.
- Hanley, Susan B. 1997. Everyday Things in Premodern Japan: The Hidden Legacy of Material Culture. Berkeley: University of California Press.
- Jardine, Lisa. 1996. Worldly Goods: a New History of the Renaissance. New York: Doubleday.
- Jardine, Lisa and Jerry Brotton. 2000. Global Interests: Renaissance Art between East and West. Ithaca: Cornell University Press.
- Van Koolbergen, H.. 1997. 'De Materiele Cultuur van Weesp en Weesperkarspel in de Zeventiende en Achttiende Eeuw', in A. Schuurman, J.de Vries and A. van der Woude, eds. Aards Geluk: de Nederlanders en hun Spullen van 1550 tot 1850. Amsterdam: Balans: 121-159.
- Mazumdar, Sucheta. 1998. Sugar and Society in China: Peasants, Technology, and the World Market. Cambridge: Harvard University Press.
- McCants, Anne. 1992. "Monotonous but not Meager: the Diet of Burgher Orphans in Early Modern Amsterdam." Research in Economic History. Vol. 14: 69-116.
- , 1993. "Consumer Behavior in an Early Modern Dutch Orphanage: A Wealth of Choice." The Journal of European Economic History. Vol. 22: 121-142.
- , 1995. "Meeting Needs and Suppressing Desires: Consumer Choice Models and Historical Data." Journal of Interdisciplinary History. Vol. 26: 191-207.
- , 2006a. "Inequality Among the Poor of Eighteenth Century Amsterdam." Forthcoming in Explorations in Economic History.
- , 2006b. "After-Death Inventories as a Source for the Study of Material Culture, Economic Well-Being, and Household Formation Among the Poor of 18th c. Amsterdam." Forthcoming in Historical Methods.
- Mintz, Sidney. 1985. Sweetness and Power: The Place of Sugar in Modern History. New York: Penguin Books.
- Mokyr, Joel. 1988. "Is There Still Life in the Pessimist Case? Consumption during the Industrial Revolution, 1790-1850." The Journal of Economic History. Vol 48:69-92.
- Mui, Hoh-Cheung and Lorna Mui. 1968. "Smuggling and the British Tea Trade before 1784." The American Historical Review. Vol. 74: 44-73.

- O'Rourke, Kevin and Jeffery Williamson. 2002a. "After Columbus: Explaining Europe's Overseas Trade Boom, 1500-1800." Journal of Economic History. Vol. 62: 417-456.
- , 2002b. "When did Globalisation Begin?" European Review of Economic History. Vol. 6: 23-50.
- Pomeranz, Kenneth. 2000. The Great Divergence: Europe, China, and the Making of the Modern World Economy. Princeton: Princeton University Press.
- Posthumus, N.W. 1943. Nederlandsche Prijsgeschiedenis. Vol. 1. Leiden: E.J. Brill.
- Sen, Amartya. 1987. The Standard of Living. Cambridge: Cambridge University Press.
- Shammas, Carole. 1990. The Pre-industrial Consumer in England and America. Oxford: Oxford University Press.
- Smith, S.D. 1996. "Accounting for Taste: British Coffee Consumption in Historical Perspective." Journal of Interdisciplinary History. Vol. 27: 183-214.
- Smith, Woodruff D. 2002. Consumption and the Making of Respectability: 1600-1800. New York: Routledge.
- Starn, Randolph. 2002. "The Early Modern Muddle." Journal of Early Modern History. Vol. 6: 296-307.
- Styles, John. 2000 "Product Innovation in Early Modern London." Past and Present. Vol. 168: 124-169.
- Vainker, Shelagh. 2003. "Luxuries or Not? Consumption of Silk and Porcelain in Eighteenth-Century China," in Luxury in the Eighteenth Century: Debates, Desires and Delectable Goods. Eds. Maxine Berg and Elizabeth Eger. New York: Palgrave Macmillan: 207-218.
- de Vries, Jan. 2003. "Connecting Europe and Asia: A Quantitative Analysis of the Cape-route Trade, 1497-1795," in Global Connections and Monetary History, 1470-1800. Eds. Dennis O Flynn, Arturo Giraldez and Richard von Glahn. Aldershot: Ashgate Publishing: 35-106.
- Wallerstein, Immanuel. 1974. The Modern World-System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century. New York: Academic Press.
- Wijsenbeek-Olthuis, T. 1987a. Achter de Gevels van Delft. Hilversum: Verloren.
- , 1987b. "Invloed van de VOC op het dagelijks leven in Delft," in H.L. Houtzager, ed. Delft en de Oostindische Compagnie. Amsterdam: Rodopi: 99-117.

TABLE 1

Frequency of Possession and Number of Colonial Beverage Goods
in two time periods

Amsterdam -- BWH Inventories 1740-1759						
	N of inventories	% of inventories	Mean	Med	Goods per inventory Max	% out of inventories w/ enumerated goods
Coffee wares	263	53.9	6.4	2	199	61.2
Tea wares	204	41.8	3.5	2	36	47.4
Teapots/infusers	245	50.2	3.2	2	23	57.0
Coffee and tea (comb.)	296	60.7	8.1	3	206	68.8
Sugar bowls etc.	35	7.2	2.5	1	10	8.1
Chocolate wares	12	2.5	6.3	4	33	2.8
Delftware 274	56.1	2.8	2	45	63.7	
Porcelain	190	38.9	32.2	12	350	44.2

1760-1782						
	N of inventories	% of inventories	Mean	Med	Goods per inventory Max	% out of inventories w/ enumerated goods
Coffee wares	219	51.6	8.6	3	87	62.7
Tea wares 156	36.8	5.8	2	94	44.7	
Teapots/infusers	176	41.5	2.7	2	22	50.4
Coffee and tea (comb.)	232	54.7	12.0	4	120	66.5
Sugarbowls etc.	38	9.0	2.7	2	10	10.9
Chocolate ware	13	3.1	5.2	5	12	3.7
Delftware 218	51.4	5.8	2	73	62.5	
Porcelain	149	35.1	25.4	11	412	42.7

TABLE 2

Frequency of Possession and Number of Selected Goods

Burgerweeshuis and selected comparison data

	Amsterdam -- BWH Inventories 1740-1782					England	Amsterdam
	N of	% inventories	Goods per inventory Mean	Med	Max	(1725) %	(1701-10) %
Total inventory entries	805	88.2	61.2	52	293		
Total individual goods			218.5	134	8,129		
Beds (all kinds)	652	71.5	1.8	1	14		
Cupboards/Wardrobes	575	60.3	1.7	1	10		
Chests	273	29.9	1.4	1	5		
Chests of Drawers	97	10.6	1.1	1	2		
Cabinet	68	7.5	1.0	1	2		
Hanging cupboard	144	15.8	1.1	1	3		
Baskets/Hampers	191	20.9	3.2	1	206		
Walnut furniture (all)	79	8.6	1.3	1	12		
Chairs	622	68.2	7.6	6	94		
Tables	577	63.3	2.2	2	15	91	
Tea tables 66	7.2	1.2	1	2			
Spoons	452	49.6	6.8	6	40		
Forks	48	5.3	4.6	4	15	10	
Delftware 492	53.9	4.1	2	73	157		
Pewter wares -all	475	52.1	15.1	12	82	91	
Pewter plates	132	14.5	6.8	6	26	55	
Porcelain (china)	341	37.4	29.0	11	412	9	84.7
Japanese porcelain	15	1.6	10.5	5	56		
Coffee wares	482	52.8	7.4	2	199		
Tea wares	360	39.5	4.5	2	94		
Teapots/infusers	422	46.3	3.0	2	23		
Coffee and tea (comb.) ³	533	58.4	9.8	3	206	² 15	
Sugar bowls etc.	74	8.1	2.6	2	10		
Chocolate wares	25	2.7	5.7	5	33		
Pepper wares	189	20.8	1.1	1	7		
Salt boxes/cellars	215	23.6	1.9	2	11		
Mustard pots etc.	68	7.5	1.1	1	3		
Tobacco wares	317	34.8	2.0	1	17		

TABLE 2 (cont.)

	Amsterdam -- BWH Inventories 1740-1782			England (1701-10)		Amsterdam (1725)	
	N of inventories	% of inventories	Mean	Med	Max	%	%
Bibles	181	19.8	1.4	1	6		
Other books	197	21.6	4.1	2	60	22	85.7
Paintings 224	24.6	3.8	2	61	421	96.1	
Prints	261	28.6	4.1	3	29		
Mirrors	529	58.0	1.5	1	10	40	
Tea trays ⁵ 344	37.7	3.0	3	18			
Scientific Instruments	30	3.3	1.2	1	3		
Timepieces	171	18.8	1.1	1	3	34	
Gold (all items)	133	14.6	2.8	2	9	621	
Silver (all items)	258	28.3	8.7	3	118		777.3
Japons	120	13.1	1.9	1	8		
Chintz goods	133	14.6	2.5	2	9		
Silk goods ²⁰⁶	22.6	2.5	2	10			

Notes: Delftware cannot be accurately counted because so many of the inventories enumerated this item with the terms 'small amount' or 'some.' The number of books found in the inventories may also be suspect on account of this problem although it was not as prevalent as for delftware. Those entries which were given imprecisely were numbered at '2' for purposes of the calculation here.

¹ Includes all earthen wares, not just Delftware.

² Goods for making all hot beverages are combined.

³ Many serving items were used interchangeably, as is confirmed by the 55 cases of coffee wares and 3 cases of tea wares specifically described as for both coffee and tea. Trekpots are not included here.

⁴ Paintings and prints have been combined.

⁵ These appear to have been wall decorations as well as serving trays as we might expect.

⁶ Includes gold and silver items combined.

⁷ Only silverware included here. 84.2% of the inventories recorded jewelry of some sort.

Sources: English data based on 390 probate inventories drawn up in 1725 and analyzed by Lorna Weatherill in her Consumer Behaviour & Material Culture in Britain, 1660-1760, Routledge, 1996. p. 26. The Amsterdam data from (1701-1710) is based on 203 probate inventories of individuals in the lowest burial tax class sampled from the city Notarial Archives by J.A. Faber. See his, "Inhabitants of Amsterdam and their Possessions," in Probate Inventories: A new source for the historical study of wealth, material culture and agricultural development, eds. Ad van der Woude and Anton Schuurman. Hes Publishers: Utrecht. 1980. p. 153.

TABLE 3

Quartile Distribution of Household Assets in Guilders

(by possession of selected goods and rank ordered by ascending median household assets)

Households grouped by possession of specified items	Household Assets in Guilders							
	N		Q1	Med.		Q3		
Owns no bed	260		0.0	0.5		29.3		
Owns at least one of:								
bed	650		31.5	81.3		248.3		
cupboard/wardrobe	571		35.0	87.0		255.0		
delftware	492		42.8	98.9		257.7		
(some broken)	(13)		(10.0)	(31.3)		(82.6)		
mirror	527		44.0	103.6		276.6		
coffee/tea wares -all	533		50.9	114.0		319.6		
(some broken)	(15)		(30.5)	(87.0)		(329.5)		
pewter wares	476		55.0	119.8		307.0		
teapot/ <i>trekpot</i>	421		58.5	138.8		318.6		
porcelain	341		62.5	147.0		345.1		
(some broken)	(61)		(38.5)	(70.7)		(352.2)		
painting	225		53.3	150.0		335.2		
hanging cupboard	142		62.0	170.0		362.1		
book (all types)	196		79.1	174.1		364.1		
Bible	180		99.5	186.0		437.0		
chest of drawers	97		75.0	194.0		451.4		
tobacco wares	222		91.2	194.0		399.1		
cabinet	66		67.0	203.4		388.0		
desk	103		89.0	222.5		591.5		
silver item	226		110.5	223.5		528.8		
tea table	64	63.5	230.8	520.6				
timepiece	170		101.0	236.5		565.1		
silk goods	206		110.5	246.5		481.9		
floor mat/carpet	61		131.2	247.2		470.7		
sugar bowl	74		140.0	268.5		651.1		
fork	48		140.5	272.0		508.6		
chintz goods	134		130.1	272.4		601.3		
gold item	112		163.0	283.5		533.7		
chocolate wares	25		150.0	297.6		591.5		
Japanese porcelain	15		245.2	297.6		625.4		
scientific instrument	30		173.5	329.7		807.0		
ink-well	44	239.7	359.1	953.6				
Asset profile of all households	N	10%	Q1	Med.	Q3	90%	95%	Max.
	910	0.0	13.0	52.8	183.3	494.7	863.5	8,127.3

Endnotes

1There is growing evidence, and much logic, that they were on the Asian side of the exchange as well, but the full explication of that story will have to come from historians who specialize in the various locales of the Asian export trade, and their industrial and agricultural hinterlands. See for example, Vainker, 2003, Adshead, 1997, and especially Mazumdar, 1998.

2The literature on these connections is enormous and amazingly diverse in its range of time period and subject matter covered. An especially rich example of a Renaissance art historical manifestation can be found in Lisa Jardine, 1996, followed up soon thereafter by her collaboration with Jerry Brotton, 2000, itself followed by Brotton, 2004. There are also many excellent essays in Brewer and Porter, 1993; Berg and Clifford, 1999; and Berg and Eger, 2003. For a recent book-length treatment about the changing moral understanding of consumption in early modern Europe broadly, see Smith, 2002.

3The foregoing discussion is all based on research presented in McCants 1992. See Tables 3 and 5 in particular.

4 An additional two percent of the households owned Japanese porcelain, which would have been distinctive by its more variegated color schemes.

5The sorting criterion for Delftware requires the specific mention of “Delft” in the inventory record. Dish wares described only as ceramic (*aardewerk*) or earthenware are not included here.