Slavery and Anglo-American Capitalism Revisited*

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May 2019

*Adapted from the Tawney Lecture, presented at the Economic History Society meetings in Belfast, 7 April 2019. The author thanks Steve Broadberry for the invitation to deliver the lecture, and John Clegg, Suresh Naidu, Warren Whatley, and Nuala Zahediah for comments on earlier drafts. Even more than usual, it should be stressed that none of these individuals are responsible for any of the views presented here. Dante Mangiaracina contributed outstanding research assistance.

The relationship between slavery and the Industrial Revolution is one of the oldest debates in British economic history, second only perhaps to the Standard of Living Controversy. On the American side, a parallel debate about slavery and economic development has been largely separate. Originally concerned with the profitability of slavery, attention then moved to issues of efficiency and productivity, and most recently – prompted by claims from practitioners of the New History of Capitalism – to the role of slavery in U.S. economic development. Remarkably, these two conversations have had almost no connection to each other, with the notable exception of Sven Beckert's *Empire of Cotton*, which links the technological revolution in cotton textiles to the exploitation of slaves in the cotton fields of the American South.

In this lecture, I propose to conduct intellectual arbitrage by joining these two literatures. The linkage, however, is not exactly seamless. It turns on the neglected part two of the "Williams thesis": that British industrial development, "stimulated by mercantilism, later outgrew mercantilism and destroyed it" (1944, p. 106). In the dissertation that formed the prelude to his famous book, Eric Williams was even more explicit: "The tremendous expansion of British industry and commerce was accompanied by the declining importance of the colonies which had once been the gems of the Empire" (2014, p. 199). The argument, in other words, was that abolition became viable in the nineteenth century because slavery and the slave trade were no longer the "vital props that spurred the rise of British industry" (2014, p. xv). In contrast with recent assertions of the centrality of slavery for American economic development, the argument here will be that part two of the Williams thesis applies with equal force to the upstart economy across the Atlantic. Yes, there was a resurgent "second slavery" in the hemisphere, led by the U.S. South and also robust in Cuba and Brazil. But Anglo-American industrial capitalism no longer needed this coercive partner and was not sorry to see it go.

A few guideposts at the outset may be advisable. It has never been my practice to reify concepts like "capitalism" and treat them as historical actors, and this paper's title does not mark a change in this policy. But "capitalism" can be a useful shorthand for a combination of market forces and political pressures from powerful economic interests. Because the term has come in for widespread use in this historical territory, I use it that way for convenience.

Secondly, although the present effort draws inspiration from Eric Williams, it does not concern itself with the precise definition of the "Williams thesis," still less with its truth or falsity. *Capitalism and Slavery* should not be regarded as a sacred text to be worshiped or renounced. It was a product of its times and a suggestive motivator for ours, but ultimately it falls to us to understand the historical record with our own tools, as best we can.

Thirdly, the formulation offered here is not an attempt to substitute a materialist interpretation for an alternative emphasizing the role of ideas and humanitarian sentiments in the demise of slavery and the slave trade. Ideas and sentiments mattered, but their trajectories were not free-floating and exogenous to economic developments. The most virtuous of abolitionists still had to refute claims that ending the slave trade would be economically disastrous. Even Eric Williams' thesis supervisor Vincent Harlow, while urging his student to emphasize the humanitarian side of abolition, acknowledged: "Whether the Humanitarians could have got their way if the Nation as a whole had been convinced that the national economy would have been thereby seriously crippled is, of course, another matter" (quoted in 2014, p. xiii). Williams himself did not deny that abolitionists were moved by compassion, concluding only this: "Even the great mass movements, and the anti-slavery mass movement was one of the greatest of these, show a curious affinity with the rise and development of new interests and the necessity of destroying the old" (1944, p. 211). "Curious affinity" leaves us much room to maneuver on the interactive frontier between material interests and social change.

Long-Distance Trade and the Industrial Revolution

This section does not present new scholarship on the relationship between long-distance trade and the Industrial Revolution, but it summarizes an emerging body of thought and evidence on this age-old question. As a gesture towards prudence, the term "consensus" will not be invoked. Joseph Inikori describes how views on trade and the Industrial Revolution have oscillated for more than two centuries (2002, pp. 89-155), so the principle of induction alerts us to the possibility that the pendulum might swing back again. Nonetheless, the direction of historical interpretation over the past thirty years seems reasonably clear.

Perhaps this redirection was launched with a 1991 essay by Patrick O'Brien and Stanley Engerman, which complained that "expressing the value of the output produced within any sector of economic activity as a percentage of economic activity *seems almost calculated to create an impression of insignificance"* (1991, p. 178, emphasis added). If we look instead at shares of the *increment* to British exports, the authors note, we find that "something like 95% of the addition to the volume of commodity exports [from, 1700-1 to 1772-3] were sold on imperial markets (the bulk to North America and the West Indies), which underlies the significance of sea power, imperial connections, slavery and mercantilist regulation for the sale of British manufactures overseas" (p. 186). Eltis and Engerman (2000) questioned this reading, noting that the slave trade itself was relatively small (less than 3 percent of British shipping tonnage), and that sugar had limited linkages to the industrial sector. But long-distance trade was both large and dynamic, growing twice as fast as national income (Cuenta Esteban 1997), prompting Ronald Findlay and Kevin O'Rourke to assert that "the 'colonial' trade was undoubtedly a major driving force of Britain's overall economic growth" (Palmer 2015, p. 172).

The role of international markets was particularly telling in cotton textiles, whose "precocious mechanization" was one of the primary technological developments of the 18th century. Joseph Inikori (2002) describes a familiar process of import- and re-export substitution, culminating in this case in new technologies. Overseas markets were critical in this view, because the domestic market was not well integrated prior to the railroads. Invoking "new growth theory," Inikori stresses the link between export expansion and technological

progress. One of the earliest breakthroughs in cotton textiles was Paul's spinning machine, patented in 1738 and prompted by competition with Asian goods for the West African market (p. 442). Rivalry between English and Indian cotton goods continued throughout the century, the African market as a primary frontier. Broadberry and Gupta (2009) emphasize a search for labor-saving technologies, while O'Brien argues that the main production problems were skill shortages and product quality (Riello and Parthasarathi, p. 359). Either way or perhaps both ways, international competition generated pressures towards mechanization. As Giorgio Riello concluded in 2009: "Cotton did not become a global commodity because its production was mechanized and industrialized; on the contrary, it became mechanized and industrialized thanks to the fact that it was a global commodity" (Riello and Parthasarathi, p. 282).

While avoiding explicit endorsement of Inikori's formulation, mainstream economists were soon echoing similar themes, linking the growth of market scale through trade with an environment conducive to innovation (Acemoglu, Johnson and Robinson 2005). Among economic historians, detailed accounts portray a transition from midcentury Smithian innovations in products and marketing to the more famous Schumpeterian inventions of the 1780s and 1790s, featuring many of the same industries and entrepreneurs (Griffiths et al 1992, pp. 286-88; Macleod 1992; Smail 1999; Broadberry and Gupta 2009, 285-88.)

The effects of rising trade were pervasive on what one might call economic infrastructure. In port cities, trade provided a powerful stimulus for a diverse range of occupations and ancillary activities, especially in London (Zahediah 1994). Jacob M. Price and Paul G. E. Clemens (1987) stress gains in the efficiency of ocean shipping across the 18th century, not primarily through technology but as the result of improved economic organization and reductions in risk, a "revolution of scale" in the authors' words. According to Price, the most striking and distinctive peculiarity of British commercial organization during this period was the extension of long credits by warehousemen and wholesalers to exporters, contracts that depended on the scale of trade for their viability (1980, pp. 117-18). Before 1800, the cotton textile industry had reached a scale sufficient to support specialized machine makers, whose ongoing innovations and marketing efforts served to spread Industrial Revolution technologies around the globe in the nineteenth century (Saxonhouse and Wright 2010).

By 2014, the transformation of expert opinion seemed all but complete. In a conference volume concerned with the legacy of emancipation, the editors suggest that the essays by Robin Blackburn and Pat Hudson "consolidate the acceptance of Williams' argument that slavery was essential to the take-off of Britain's industrialization … [Hudson's essay] marks the incorporation of the Williams/Inikori thesis into the mainstream of histories of the Industrial Revolution" (Hall, Draper, McClelland 2014, p. 8). Hudson highlights the "unique importance of the slave trade and associated bills of exchange in bringing about the integration of London and provincial money markets, without which the major manufacturing regions of the industrial revolution might well have floundered." According to Hudson, the Atlantic trade and the slave trade in particular were "peculiarly bill dominated," and this familiarity through external usage then spilled over into internal trade as well, "creating credit for a dense regional network of traders…The Industrial Revolution was entirely dependent upon it" (p. 45).

It should be stressed that none of these interpretations claim that the slave trade and slave-based commerce "caused" the Industrial Revolution. As countless critics of Eric Williams have observed, if merely engaging in violent enslavement were enough to generate an Industrial Revolution, then Spain and Portugal would have become world industrial leaders centuries before. Clearly, the British presence in Africa was an endogenous consequence of British naval and shipping supremacy, themselves important background factors in national economic growth. Expanding markets provide incentives for innovation, but by no means do they assure that these innovations will actually appear. Thus, the accounts reviewed here are fully compatible with those emphasizing supply-side factors such as skills, creativity, and culture. Following Findlay and O'Rourke, the argument is simply that the slave trade was part of an interdependent imperial system, whose expansion underlay the sustainability of the Industrial Revolution (2007, pp. 339-345). As Findlay summarized his perspective in an earlier work, "slavery was an integral part of a complex intercontinental system of trade in goods and factors within which the Industrial Revolution, as we know it, emerged. Within this system of interdependence it would make as much or as little sense to draw a causal arrow from slavery to British Industrialization as the other way around" (1990, p. 28).

The Link to Slavery

Dynamic gains from expanding trade seem familiarly plausible to economists, but why single out link to slavery? What happened to the enlightenment ideal of *doux-commerce*, expressed in Montesquieu's "commerce is a cure for the most destructive prejudices"? The problem with this proposition for the 18th century is that long-distance Atlantic trade in the 18th century was dominated by the products of slave labor, and rising trade volume did nothing to ameliorate the conditions of slavery. Figure 1 divides British American exports to England into those from "free" and "slave" colonies, according to their post-Revolutionary War choices. It is obvious that slave-produced commodities were dominant, and their relative prominence actually widened across the century. Inikori estimates that Africans produced more than 80 percent of commodity export value from the Americas between 1711 and 1800 (p. 197). By far the largest of these was sugar, which in the 1770s accounted for nearly two-thirds of American colonial exports to Britain, and nearly 20 percent of the entire English import bill (Solow 2014, p. 31, Zahedieh 2002, p. 58). And sugar was inextricably linked to slavery.

Sugar plantations required slave labor not because of any efficiency advantage associated with that organizational system, but because it was all but impossible to attract free labor to those locations and working conditions. According to Karen Kupperman, a "general impression of unhealthiness" hung over the West Indies and the southern mainland (1984, p. 236). Worse than location, sugar entailed "literally a killing work regime," for reasons of both the hostile disease environment and episodic stress (Morgan 2004, p. p. 302). Richard Dunn concluded his exhaustive study of a Jamaican plantation with the observation that "the evidence…plainly demonstrates that the labor system practiced at Mesopotamia sentenced the slave workers to broken health and early death" (1987, p. 82). For any laborer with a choice – and despite elements of coercion, indentured servitude was in principle a voluntary contractual system – these were not places to go. As mercantilist, James Steuart asked in 1767: "Could the sugar islands be cultivated to any advantage by hired labor" (quoted in Drescher 2002, p. 17).

The truth of this proposition is suggested by Figure 2 and confirmed by every study of the transition from free to slave labor on Barbados, the first British sugar colony. The island

was uninhabited in 1627 when first occupied by English settlers practicing small-scale farming. The rise of sugar plantations in the 1640s brought a much harsher labor regime, initially with indentured servants. Hilary Beckles (1989) and Simon Newman (2013) stress that labor discipline and regimentation predated the shift to African slaves, including complete planter control of hours, pass requirements, and involuntary transfers. The system originated under indentured labor, but the relationship between supply of and demand was not sustainable in that regime. Russell Menard describes "signs of strain" in the market for servants, including higher prices, shorter terms and increased use of convicts (2006, pp. 43-44). Not only did servants resist, but news of their plight quickly spread, as Barbados became known as "a place worse than hell for servants" (Beckles 1989, p. 125), a "land of Misery and Beggary" (Menard 2006, p. 45). Did the planters thereby suffer a loss of labor quality in their switch to full-blown slavery? To the contrary, they "rapidly developed a strong preference for Africans from the Gold Coast" (Newman 2013, p. 190). According to Justin Roberts, "the vast majority of planters never questioned whether an enslaved worker was better than free worker… a guaranteed, captive and permanent labor force reduced the risks inherent in improvement schemes, thus encouraging experimentation and innovation" (2013, p. 37). Climatic theories of race were popular, but during the relatively brief transition period on Barbados, the physical productivity of slave and indentured labor was reported to be equal (Beckles and Downes 1987, p. 238).

Sugar thus contrasts with tobacco, the second largest British American colonial export, a care-intensive crop with no significant scale economies (Main 1982, pp. 31-38). In many respects, tobacco areas epitomized the world of the Domar model, where investors adopt slavery as the only way to expand their scale of operations, because laborers prefer independent farming as long as they have that option. Until the 1690s, tobacco labor in the Chesapeake region was mainly indentured servants, many of whom served out their terms and became farmers themselves. A transition to slavery occurred at the turn of the century, because servant prices rose and slave prices fell, while improved mortality tipped the calculus in favor of lifetime labor (Menard 1977, Galenson 1981). Slavery undoubtedly accelerated the growth of tobacco production during the 18th century, not through any productivity advantage, but because slave assets attracted infusions of credit, while the mobility of slaves facilitated the

extension of the frontier (Kulikoff 1986, pp. 49-54, 64). Both slave and free populations experienced high rates of natural increase, pushing the slave trade into sharp decline even before the Revolution (Menard 1996, p. 273). Nonetheless, by the time of the American Revolution, slavery was entrenched throughout the Chesapeake and the Virginia piedmont, a legacy of great importance for the subsequent century.

The mainland colonies were relatively minor direct participants in the African slave trade, but they were nonetheless conected to the larger slave-based Atlantic economy. As imperial insiders, the northern colonies were beneficiaries of the Atlantic trading regime, protected against outsiders by British naval superiority. Table 1 shows that as late as 1768-1772, the British West Indies were the largest single market for commodity exports from New England and the Middle Atlantic, dominating sales of wood products, fish and meat, and accounting for significant shares of whale products, grains and grain products. Moreover, David Richardson estimates that two-thirds of New England's "invisible" earnings during the same period arose from Caribbean commerce, providing the region with its largest single source of revenue from overseas trade (1991, p. 257). Two years before the publication of *Capitalism and Slavery*, Lorenzo Greene wrote: "On the eve of the American Revolution [the slave trade] formed the very basis of the economic life of New England. The vast sugar, molasses and rum trade, shipbuilding, the distilleries, a great many of the fisheries, the employment of artisans and seamen, even agriculture – all were dependent upon the slave traffic" (1942, pp. 68-69; cf. (McCusker and Menard 1985, pp. 288-294).

The prominence of slave-based commerce for the Atlantic economy provides the background for the arresting connections reported by Craig Stevens Wilder in his book *Ebony and Ivy*, associating early American universities with slavery. The first five colleges in British America were major beneficiaries of the African slave trade and slavery (p. 17). From the outset, "Harvard became the first in a long line of North American schools to target wealthy planters as a source of enrollments and income" (p. 30). The reason for what might seem an incongruous liaison is not hard to identify. "The American college was an extension of merchant wealth" (p. 76). A wealthy merchant in colonial America was perforce engaged with the slave trade or slave-based commerce.

The Global Economic Revolution 1775-1815

Strangely, the protracted debate about the "Williams thesis" has not been about whether slave-based commerce was important for British industrialization, but about whether the sugar islands experienced "decline" prior to abolition of the slave trade in 1807. An eminent historian has written: "Many have simply shied away from the tangled question of West Indian decline, and, in spite of excellent analysis of the problem by some writers, we are no closer to a generally accepted answer than we were a hundred years ago" (Curtin 1954, p. 157). This was Philip Curtin writing in 1954, but no doubt the same could be said today.

In his provocative 1977 book *Econocide*, Seymour Drescher argued that the abolitionist cause accelerated at a time when the slave trade was at historic peaks of investment and volume, and that the British West Indies continued to prosper until they were denied access to new supplies from Africa. "Slavery was first attacked where and when it was leading the international pack" (p. 30). In response, Selwyn Carrington (2002) maintained that the previously well-functioning mercantilist trading system was severely disrupted by U.S. independence, leading to stagnant trade throughout the 1780s. Pointing to many signs of an "economy in distress" (p. 243), Carrington concluded: "By the 1790s it was also clear that sugar plantations based on slavery could not be a long-term profitable capitalist activity" (p. 276). As Barbara Solow put it: "It would have come as a great surprise to the British planters in the West Indies in 1807, to learn that there was no distress in the colonies" (2014, p. 55). Taking a somewhat different tack, David Ryden (2009) suggests that pre-abolition "decline" was indeed real for Jamaican planters, in three specific senses: first, because of their desire to trade directly with the American mainland, planters correctly perceived that mercantilist policy was working against their interest; second, the sense of easy and cheap control of their slaves came to an abrupt end with the 1791 rebellion in St. Domingue; third, planters suffered after 1799 from overproduction and declining prices of sugar, weakening their capacity to resist (pp. 17-18).

In my view, it is not necessary to resolve this debate in order to understand the transition to the new global economy of the nineteenth century. Because the turbulent wartime years of 1793-1815 were dominated by issues of conflict and strategy, it is virtually impossible to identify long-term economic trends that would have prevailed in "normal" times.

Despite the persuasiveness of his critics, Drescher has one powerful and undeniable point: Britain *could* have expanded its slave empire after 1807, especially on the frontier of newly acquired territories such as Guiana and Trinidad, if the nation had possessed the political will to do so (pp. 92-112). One cannot assert that slavery had come to its historical end as a profitable system, if the claim is taken literally as an economic proposition. The subsequent expansion of slave regimes in Cuba and Brazil, not to mention the U.S. South, proves otherwise. The total volume of the Atlantic slave trade during the first half of the 19th century was nearly as large as that of the second half of the 18th century, illegality notwithstanding (Findlay and O'Rourke 2007, p. 228). It seems wiser to accept the premise that abolition altered the course of history, compared to a policy of nonintervention. As Drescher concludes: "There is no reason why capitalism should be perceived as the great unmoved mover in this process" (1977, p. 166).

The proposition advanced here is more modest: In the new economy that emerged after 1815, the role of slavery was peripheral and no longer required. Propelled by political hegemony and technological leadership, British manufactured goods found diverse new international markets, which did not require captive colonial buyers, naval protection, or slavery as a mode of production. As nations opened their doors to British imports, albeit often under political pressure, long-distance trade become safer and cheaper. In a separate but complementary development, the locus of primary product supplies shifted from the tropics to the temperate and semi-tropic zones, all but eradicating an essential role for slave labor. As Findlay and O'Rourke conclude: "The technological and geopolitical underpinnings if globalization were…much weaker before 1800 than they would be afterwards" (2007, p. 308).

Was the emergence of this brave new global world clear to all the major players in 1807 or 1815? Obviously not. The Corn Law of 1815 tried to keep farm prices at high wartime levels, anticipating future conflicts. Home-market advocates decried the folly of exposing manufactures to the risks of insecure foreign markets, which could be blocked by import duties at any time (Gamble, p. 35). Even in the 1820s, defenders of the West Indian sugar preference argued that the integrated shipping and trade networks of the West Indies and Canada were crucial in counteracting the maritime power of the United States (*Ibid*., p. 156). As events unfolded, however, the wisdom of free trade seemed confirmed, by unparalleled export growth

and prosperity. Rather than a once-and-for-all swing from one full-blown ideology to another, we can better view the process as an exercise in collective learning, in which the outcomes and their agreed-upon interpretation only emerged with clarity much further down the path.

The discussion of markets for Industrial Revolution exports is chiefly though not exclusively about cotton goods, which accounted for nearly half of all British exports in the first half of the nineteenth century (Davis 1979, p. 14). Production of cotton textiles in England was virtually nonexistent as of 1750, so the rise of this product line was central to the technological transformation of industry. Cotton was a "fashion fabric" in the 18th century. Until the 1790s, according to Griffiths, Hunt and O'Brien (1992), almost half of all recorded inventions in the British textile industry were concerned with the nature and appearance of the end product. The authors argue that the proximate impulse towards mechanization in cotton derived from efforts to attain "a more varied and higher-quality product mix to be achieved within an expanding manufacturing base" (2008, p. 646). Perhaps it should not be surprising therefore, that the fastest-growing market for British manufactured goods to 1775 was the northern mainland of British North America (Figure 3). At that time, however, a British mercantilist observer might nonetheless maintain that most of the purchasing power of these free consumers derived from slave-based commerce; and, that the ascendancy of this particular market depended on its "captive" colonial status. As an "American Farmer" put it in 1775:

> The mother country has the power of introducing her own fabrics as cheap as she pleases and under whatever advantages and bounties or premiums she likes to grant; which she can do in her exportation of them to no other market. Elsewhere they meet with duties on importation, and perhaps prohibitions; but in America the manufactories of Britain are sold openly in every market without duty or clog. (Quoted in Smith 1995, p. 47.)

Remarkably, however, after 1783, North America again emerged as the leading importer of British cotton goods, and the U.S. remained a major customer even after the advent of protectionism in 1816. The West Indies were important importers during the war years, but subsequently faded. After 1815, the British exported cotton goods to a diverse

portfolio of global buyers, primarily for the simple reason that these goods were of high quality and affordable. As summarized by Ralph Davis: "Cheap cotton fabrics could be bought by large numbers of people in Britain, Europe, the Americas and Asia who were too poor to be good customers for other textiles, while muslins and other fine cottons appealed to the tastes of the well-to-do" (1979, p. 14). Davis shows that "new" markets for cotton goods grew far more rapidly than "old" markets after 1815 (p. 21). Figure 4 shows their global diversity.

Cotton textiles were the export leader, but they were not the whole show. As Peter Temin (1997) shows, by 1815 Britain's comparative advantage in manufactured goods was broad, including many non-factory industries that were beneficiaries of cost reductions in metals such as copper, iron, tin, and lead. The list of refined metals and metalwares enjoying rapid export growth between 1814-16 and 1844-46 includes Hardware and Cutlery; Hand guns and swords; Iron bolts, rods, castings; Copper sheets and nails; and Tinplate (Davis 1979, p. 27). Davis writes: "By 1850 Britain had become the supplier of refined metals and semi-finished products to the world" (*Ibid*., p. 28). After 1850, exports moved further up the ladder to steam engines and other sophisticated types of equipment and machinery.

The extension of sales around the world was supported by an ongoing decline in ocean freight rates and other infrastructure costs. Although the major impact of the metal steamship came only at mid-century, freight rates on cotton fell markedly after 1820 because of tighter packing on board and at the ports (Harley 1988, pp. 856-860). Even without breakthrough technologies, shipping speeds increased through increased hull strength, caused by greater use of iron reinforcing, to reduce leakage and allow more sails to be set safely (Kelly and O'Grada 2019, p. 460.) The British also gained customers by providing credit, and by the increasing use of bills of exchange, which facilitated multilateral trade. English manufacturers could thus gain sales from Latin American exports to Europe and the United States (Miller 1993, pp. 78, 95). Increased exports to Asia were possible because of the demise of the English East India Company, which lost its monopoly on trade with India in 1813, and the China trade in 1833 (O'Rourke 2006, p. 195). After passage of the Reciprocity of Duties Act in 1823, free trade advocates pointed out that British shipping activity grew twice as fast on "unprotected routes" opened under the reciprocity agreements as on the protected routes (Chambers 1961, p. 62).

This discussion would not meet the approval of the New Historians of Capitalism such as Sven Beckert, who view the antebellum cotton economy as an unholy alliance between the oppressors of Lancashire and the slave drivers of the South. In essence, these scholars are transporting the Williams thesis from the mercantilist 18th century to the industrial economy of the 19th. This intellectual move is tempting, but in my view, the temptation should be resisted. Not only had the times changed both economically and ideologically, but cotton was not sugar. Sugar was grown in unhealthful and unappealing places, and the work routine was brutal and debilitating. Sugar plantations required large investments in fixed capital, limiting ownership to a privileged few. In contrast, cotton could be cultivated efficiently at any scale, in locations that would have been settled by free farmers in the absence of slavery. The Industrial Revolution and slave-grown cotton were undeniably linked, but this connection was no means historically inevitable or necessary. As will be argued here, that is the true tragedy of American slavery.

Capitalism and Cotton in the American South

The British surge in cotton goods production put pressure on traditional sources of raw cotton, leading to soaring prices in the 1780s and 1790s (Broadberry and Gupta 2009, p. 290). The initial supply response came from the West Indies, where production tripled between 1780 and 1790 (Beckert 2014, p. 90). Most of this new cotton was cultivated by slave labor, which Beckert argues was essential: "It was slavery that allowed these planters to respond rapidly to rising prices and expanding markets" (p. 91). But cotton historian Michael Edwards points out that much of the cotton exported from the British West Indies actually originated in diverse foreign sources. Despite the urgings of the Board of Trade, planters were reluctant to divert acreage to cotton, because sugar was more profitable (1967, p. 79). Beckert acknowledges that as late as 1791, most cotton grown for manufacturing purposes was produced by small farmers in Asia, Africa and Latin America (p. 84). The mere correlation between slavery and early West Indian cotton thus tells us nothing about the nature of the connection.

The same is true for the rise of cotton on the mainland. Popular history dates the take-off from Eli Whitney's invention of the cotton gin in 1793, but historians have long known that this event was merely a blip in a more extended transition. Roller gins had been in use for

some years in the West Indies, and Whitney's saw gin was at first highly imperfect (Aiken 1970). Angela Lakwete (2003) shows that the two alternatives co-evolved in competition with each other for more than three decades. Clearly the demands of the Industrial Revolution lay behind the new interest in cotton and the search for solutions to the ginning bottleneck, but the connection to slavery was predetermined. In the 1780s and 1790s, farmers in Georgia and South Carolina were actively searching for an alternative to tobacco, as well as to grains and indigo, whose prices were falling. Joyce Chaplin points out that tobacco and cotton "required remarkably similar techniques of cultivation," including hoeing up the plants into hills or ridges, topping and suckering, and pressing the harvested products into hogsheads (1991, p. 188). With respect to slavery, Chaplin writes: "Early cotton cultivators used cotton to preserve a world already shaped by commercial agriculture and slavery" (p. 199). There was no Barbados-type transition to slavery from an alternative system; slavery was an "initial condition" for southern farmers in the new nation.

From the 1790s onward, slavery and cotton were tightly linked. The nature of this association is fundamental to assessing the historical essentiality of slavery for industrial capitalism. For Beckert, the essence of the matter was slavery's inherently violent character: "Cotton demanded quite literally a hunt for labor and a perpetual struggle for its control. Slave traders, slave pens, slave auctions, and the attendant physical and psychological violence of holding millions in bondage were of central importance to the expansion of cotton production in the United States and of the Industrial Revolution in Great Britain" (2014, p. 110). In this view, Beckert was preceded by no less an authority than Karl Marx, who wrote in 1846:

> Without slavery there would be no cotton, without cotton there would be no modern industry. It is slavery which has given value to the colonies, it is the colonies which have created world trade, and world trade is the necessary condition for large-scale machine industry…to do away with slavery would be to wipe America off the map. (Letter to Pavel Vasilyevich Annenkov, 28 December 1846.)

According to Beckert, this argument was "simply common sense in elite circles" (p. 244).

The cross-sectional relationship between farm size and cotton would seem to support this thesis (Figure 5). Although Beckert invokes "economies of scale inherent in slave-based cotton production" to explain this pattern (p. 110), the slavery debates of the 1970s established that the association between cotton and farm size was not driven by efficiency but by specialization in cotton, otherwise known as commercialization. Controlling for crop mix, there is virtually no evidence for scale economies in the censuses of 1850 and 1860 (Wright 1979, pp. 222-225). Drawing on records from 142 plantations and 6,200 slaves, Alan Olmstead and Paul Rhode (2008) show that most of the antebellum growth in picking productivity (averaging 2.3 percent per year) was attributable to improved "picker-friendly" cotton varieties, interacting with westward migration. Plantation fixed effects eliminate scale economies entirely (pp. 1151-54). The unusually high-performing plantations may have been among those whose records are studied by Caitlin Rosenthal (2018), who reports that planters were fixated on picking rates, suggesting analogies to Frederick Winslow Taylor and "scientific management."

There is one major problem with the exclusive focus on picking rates as an index of plantation performance: slaves could only pick as much cotton as the fields produced, so that annual production per worker was limited by acres planted as well as by yield per acre. Once the planting decision was made, the only reasons owners would care about picking rates is that cotton in the fields could be damaged or destroyed by extreme weather, and because harvesting the crop quickly was advantageous in marketing. These considerations were important but typically of second-order as components of productivity and profit. Thus, the essence of the matter is the extent of cotton acreage planted on large slave plantations.

Writing in the 1970s, I suggested that crop choice could be explained as behavior towards risk. Small farmers practiced "safety-first" agriculture, planting enough corn to feed their families and livestock, treating cotton as a "surplus crop." Slave owners, in contrast, had sufficient wealth to bear these risks and maximize expected profits (Wright 1978, pp. 55-74). With the benefit of a few decades of thought and research, we can now augment this interpretation in at least two dimensions. First is the realization that slavery itself provided insurance against one of the main farming risks in nineteenth-century America: a lack of labor at the time of the harvest. Because cotton had two labor peaks – cultivation from April to June,

and harvest from September through December – slavery was in many ways ideally designed for commercialization. A planter could risk a large cotton acreage, knowing that he had a "captive labor force," even for a bumper yield (Hanes 1996). Perhaps surprisingly, in the grain-growing areas of Virginia, slavery and wheat displayed a similar affinity (Irwin 1988). The common element was that slavery offered "labor for the picking."

A second consideration is that, as John Clegg (2017) has emphasized, credit markets provided a source of market discipline as well as a means of expansion. Slavery enabled planters to enlarge their operations and specialize in cash crops, but the same operators may also have been impelled by credit commitments to choose cash flow over safety. The Census of 1860 includes remarkable detail about wealth, yet we cannot yet match this to information about credit status or net worth. Nonetheless, recent research shows that slave values served as backing for extensive networks of credit, within localities and across long distances. Slaves were attractive as collateral, because slave property was mobile and slave wealth was highly liquid (Kilbourne 1995; Martin 2010, 2016; Gonzales, Marshall and Naidu 2017). Mobile wealth allowed slave owners to leapfrog across space onto the best cotton lands in the region, where their captive laborers were set to work draining, clearing and improving land, and building residential and farm structures (Weiman 1991). Small wonder that cotton and slavery displayed a mutual "affinity."

The reader is entitled to wonder: Does this body of scholarship not add up to a more sophisticated version of the Marx-Beckert thesis that slavery was "of central importance to the expansion of cotton production in the United States"? Appearances can be deceiving. Yes, the advantages of slavery for attracting capital sped the advance of the cotton frontier. But the slave South was a suboptimal supplier of cotton for three distinct reasons. The region closed the African slave trade in 1807 and failed to recruit free labor, making labor supply inelastic. Slaveholders neglected infrastructure, so that large sections of the antebellum South were bypassed by the slave economy and left on the margins of commercial agriculture. Finally, the fixed-cost character of slavery meant that even large plantations aimed at self-sufficiency in foodstuffs, limiting the overall degree of market specialization (Gallman 1970).

In an ironic twist on the Williams-Drescher debate, closing the African slave trade in 1807 was supported by southern representatives as strongly as by those from free states (Mason 2000). Those who deviated from this regional consensus suffered political consequences. Of the twenty-five South Carolina low country representatives who voted to re-open the trade in 1804, fourteen were not returned to office the following year (Shugerman 2002, pp. 286-287). As slave prices rose over time, proposals arose to press for reopening of the trade, reaching their peak in the 1850s. But no southern state ever adopted such a measure, and the issue was considered politically off-limits everywhere. After voting for secession in 1861 by 84 to 14, the Mississippi convention voted down a resolution for reopening by 66 to 13. The reason for this ostensible contradiction is not difficult to identify: To re-open the African trade was to threaten the wealth of thousands of slaveholders across the South (Wright 1978, pp. 150-154).

Attracting free labor was another option. But slave states devoted little or no efforts in this direction, a policy divergence that dates from colonial times but was accentuated during and after the American Revolution. According to Aaron Fogleman: "…in the late eighteenth and early nineteenth centuries, something fundamentally and permanently altered the nature of North American migration…These developments transformed an immigration primarily of slaves, convicts, and indentured servants into one of free subjects" (1998, pp. 44-45). We tend to think of "mass migration" as beginning with the Irish famine of the 1840s, but immigration rates to the American mainland grew continuously after 1815 (Figure 6). David Eltis estimates that more than 80 percent of all migrants to the Americas between 1820 and 1880 were free persons, almost exactly matching the slave share for the preceding sixty-year period (2002, p. 67). These newcomers went overwhelmingly to the free states. In contrast, Peter McClelland and Richard Zeckhauser (1982) report that the most prosperous areas of the Southwest displayed net white *outmigration*, even during cotton booms, at times when one might have expected a rush of immigration and development. The result for the region was low population density and underdevelopment, and a level of cotton production well below potential.

Regional transportation patterns also diverged in the early national period. Turnpikes built by state-chartered corporations crisscrossed the northeastern states between 1792 and

the 1830s, but (as de Tocqueville noted) southern states are barely represented on these lists (Klein and Majewski 2008). During the canal boom of the 1830s, five times as many miles were constructed in northern than in southern states. Railroad mileage per square mile was three times greater in the North than in the South, where lines were "generally inferior in construction, rail, motive power and rolling stock" (Wright 1986, pp. 21-22). Southern underinvestment in infrastructure was also directly related to slavery. The two leading explanations are that physical capital formation was "crowded out" by the appreciation of slave wealth (Ransom and Sutch 1988), and that the mobility of slave property reduced incentives for owners to engage in real estate development (Wright 1986, pp. 17-33).

The best evidence for these propositions is what happened after slavery's demise. The wartime and postwar years of "cotton famine" were times of great hardship for Lancashire, only partially mitigated by high-cost imports from India, Egypt and Brazil. After the war, however, merchants and railroads flooded into the southeast, enticing previously isolated farm areas into the cotton economy (Weiman 1985). Production in plantation areas gradually recovered, but the biggest source of new cotton came from white farmers in the Piedmont (Harris 1994, Temin 1983). When the dust settled in the 1880s, India, Egypt, and slave-using Brazil had retreated from world markets, and the price of cotton in Lancashire was back to its antebellum level (Figure 7). Although self-sufficiency in food and feed remained aspirational, the great majority of southern cotton farms in the postwar era were specialized, purchasing grains and meats from other parts of the country (Ransom and Sutch 1977, pp. 153-159).

Beckert fully acknowledges these post-emancipation developments. He writes: "Reconstruction resulted in a rapid, vast and permanent increase in the production of cotton for world markets in the United States…So successful was the reconstruction of cotton growing in the United States that it came to be seen by imperial bureaucrats and capitalists everywhere as a model…The emergence of new forms of cotton-growing labor in the United States was, in the wake of the emancipation of the world's preeminent cotton growers, the single most important change within the empire of cotton" (2014, pp. 291-92). He does not seem to notice that these sentences undermine the previous three hundred pages of his book.

Slavery and U.S. Growth

The preceding section suggests that if slavery had been abolished nationally at the time of the Constitution, the Cotton South would have developed through family-scale farms like the rest of the country, delivering as much or perhaps more cotton to the eager textile mills of Lancashire, and building a more diverse and prosperous regional economy in the process. Many historians will respond that they are less interested in hypothetical histories that did not happen, preferring to focus on the undeniable fact U.S. slavery persisted and grew. The question then becomes: what was the significance of slave-based southern expansion for U.S. economic development? Beckert is in no doubt: "It was on the back of cotton, and thus on the backs of slaves, that the U.S. economy ascended in the world (p. 119). In their introduction to a recent collection, Beckert and Rockman put it even more strongly: "During the eighty years between the American Revolution and the Civil War, slavery was indispensable to the economic development of the United States (2016, p. 1).

As with the British case, timing is crucial in assessing these claims. As discussed above, the port cities of colonial North America were intimately tied to slave-based commerce in the Atlantic economy. These trade connections revived after independence, and northeastern ports flourished during the Napoleonic Wars, at least until Jefferson's Embargo of December 1807. The legacy of this urban and financial development clearly fostered later economic activities. If one were looking for a Williams-type transition from mercantile to industrial investment, post-Embargo New England provides a nearly ideal example. Wealthy New England merchants such as Francis Cabot Lowell turned to cotton textiles, launching the innovative Boston Manufacturing Company in 1813 (Dalzell 1987). In contrast to Lancashire, however, American textiles were designed for the protected domestic market, as opportunities in foreign trade declined. A generation later, the same New England capitalists turned their attention to railroads and development in the Midwestern states (Johnson and Supple 1967).

Beckert and Rockman, however, along with Edward Baptist, clearly mean to include the rise of cotton in their narrative. In an earlier article, Rockman wrote: "But no matter how frequently southern slaveholders denounced bourgeois liberalism, there can be little doubt that the slave system played an indispensable role in the emergence of a national capitalist

economy…the simultaneous expansion of slavery and capitalism [was] no mere coincidence" (2006, pp. 346-347). Baptist writes: "Cotton also drove U.S. expansion, enabling the young country to grow from a narrow coastal belt into a vast, powerful nation with the fastest-growing economy in the world" (2014, p. 113). In this formulation, the New Historians of Capitalism are reviving an intellectual tradition associated with Douglass North, often regarded as one of the first contributions in cliometrics. In 1961, North wrote:

> Cotton was strategic because it was the major independent variable in the interdependent structure of internal and international trade. The demands for western foodstuffs and northeastern services and manufactures were basically dependent upon the income received from the cotton trade…it was cotton which was the most important influence in the growth in the market size and consequent expansion of the economy…Cotton played the leading role (1961, pp. 67-68, 194).

There is just one difficulty: this Cotton Staple Growth theory has largely been rejected by cliometric research.

Drawing on contemporary southern newspapers, railroad reports and periodicals, Diane Lindstrom (1970) confirmed Fishlow's finding that the South provided only a limited market for imported foodstuffs: "the needs of the lower South for flour and corn were insufficient to absorb the output of these products from the upper South, to say nothing of their serving as a major outlet for western produce" (p. 113). The reason for this pattern is that most cotton plantations were themselves self-sufficient in food, planting ample corn crops to spread the fixed costs of slave labor across the year, and maintaining swine to feed the residents (Gallman 1970). Taken together, the evidence rejects the claim that "the growth of the market for western foodstuffs was geared to the expansion of the southern cotton economy" (p. 68).

As a market for northeastern manufactured goods, the South was sizeable in the immediate aftermath of the War of 1812, but its role was never dominant and diminished over time. Using capture-recapture methods to analyze the coastal trade from New York City, Lawrence Herbst (1978) estimated that no more than 16.4 percent of northern manufacturing output went South in 1839, of which only a subset was attributable to surging exports of

cotton. In her study of economic development in the Philadelphia region, Lindstrom (1978) found that manufacturers rarely sold goods in distant markets before 1840, and when they did, these markets were normally in the East. Longer-distance trade grew over time, but primarily along east-west lines. The transportation revolution hastened both western settlement and commercialization, together comprising the majority of demand growth for U.S. manufactures. Figure 8 shows that total income of the South steadily declined as a share of national income, from the Revolution to the eve of the Civil War. Even during the 1850s, the most prosperous decade in southern economic history, the region's share of national income ticked downward from 31.4 percent to 30.5 percent, primarily because of slower population growth.

Baptist asserts that "almost half of the economic activity of the United States in 1836 derived directly or indirectly from cotton produced by… slaves" (2014, p. 322). As Olmstead and Rhode show, this figure is an egregious overstatement, generated by double-counting outputs, inputs, asset sales and financial transactions (2018, p. 13). Cotton production accounted for about five percent of GDP at that time. Cotton dominated U.S. exports after 1820, but exports never exceeded seven percent of GDP during the antebellum period. True, cotton textiles were important for U.S. industrialization, and New England mills used the same slave-grown raw material as their competitors in Lancashire. But location within national boundaries had little economic significance for this industry. As a bulky but lightweight commodity, raw cotton travels easily, and transportation costs play little if any role in textiles geography. The protective tariff – strongly opposed by the slave South – was of far greater importance for the competitiveness of the antebellum industry (Harley 1992, 2001).

As New Historians of Capitalism have emphasized, financial connections between the slave South and northern money markets were extensive and important, servicing not just cotton but the interstate slave trade (Schermerhorn 2015). The Natchez branch of Biddle's Bank of the United States offered accommodation paper to planters so aggressively in the 1830s that the Bank found itself in possession of numerous slaves and several plantations after the failures of 1837 and 1839 (Kilbourne 2006). To the extent that outside credit financed moves onto better cotton land, it contributed to productivity growth. Olmstead and Rhode's picking rate graph shows impressive gains, strongly correlated with the shift to the southwest.

Equally evident is the fact that the rate of advance was slowing over time, as one would expect from a growth source driven by geographic shifts (albeit, augmented by improvements in cotton plants). Because overall labor supply was inelastic, the primary effect of capital inflows was to drive up the price of the limiting factor. Soaring antebellum slave prices, often taken as signs of robust performance, can also be seen as symptoms of economic dysfunction.

It would wrap this analysis into a tidy, self-contained package to conclude that Anglo-American industrial and financial interests recognized this growing dysfunction and in response, fostered or at least encouraged the antislavery campaigns that culminated in Civil War. This is not exactly how it happened. Slave owners had extensive business and financial ties to northern firms, most of whom apparently felt no compunctions and would have happily continued these arrangements indefinitely. Many of the "Cotton Whigs" associated with the textiles industry cultivated personal ties with southerners in the 1830s; an English visitor to the Lawrence family was amazed at "their sympathy with the Southerners on the slavery question" (O'Connor 1968, p. 133). In his book on New York City's elite, Beckert reports that most bourgeois New Yorkers, especially merchants and bankers, wanted to accommodate the South politically (2001, p. 85). During the secession crisis, New York Mayor Fernando Wood openly favored the city seceding from the Union and setting itself up as a free city.

Despite these common interests, the slave South increasingly assumed the role of obstructer to a national pro-growth agenda. Not only did southerners favor low tariffs, but southern presidents vetoed seven Rivers & Harbors bills between 1838 and 1860, frustrating the ambitions of entrepreneurs in the Great Lakes states (Egnal 2009, pp. 101-122). The Dred Scott decision of 1857, apparently opening the territories to slavery, sharply depressed the share values of railroads who had plans for construction in Kansas (Wahl 2006). In the 1850s, the South stood in opposition to a Homestead Act, the Pacific Railroad, currency reform, and federal support for agricultural research and education, measures that were favored by a majority of northern farmers, as well as business interests (Ron 2016, pp. 367-374). Regional differences in economic interests and policies by no means imply that these groups had active reasons to push for abolition. But when the slave South seemed intent on expanding into new territories, perhaps even into the free states through such measures as the Fugitive Slave Act,

many northerners came to believe that their economic interests were under threat. Beckert writes that a rising group of upper-class New Yorkers believed "the political power of southern slaveholders over the federal government was nothing less than a threat to the development of the United States and to their own economic wellbeing…Moreover, the political power of southern slaveholders, these businessmen began to argue, prevented necessary reforms in the banking, currency, credit, and transportation systems" (2001, pp. 90-91).

Slave owners, for their part, were riding high in 1860, perhaps captives of their own King Cotton rhetoric, which held that the South "can defy the world – for the civilized world depends on the cotton of the South" (Wright 1978, p. 146). Evidently, they conflated elite financial success with southern economic strength. Slavery was unquestionably the basis for the former, but the opposite held true for the latter. By 1860, the civilized world still needed cotton, but it no longer needed slavery.

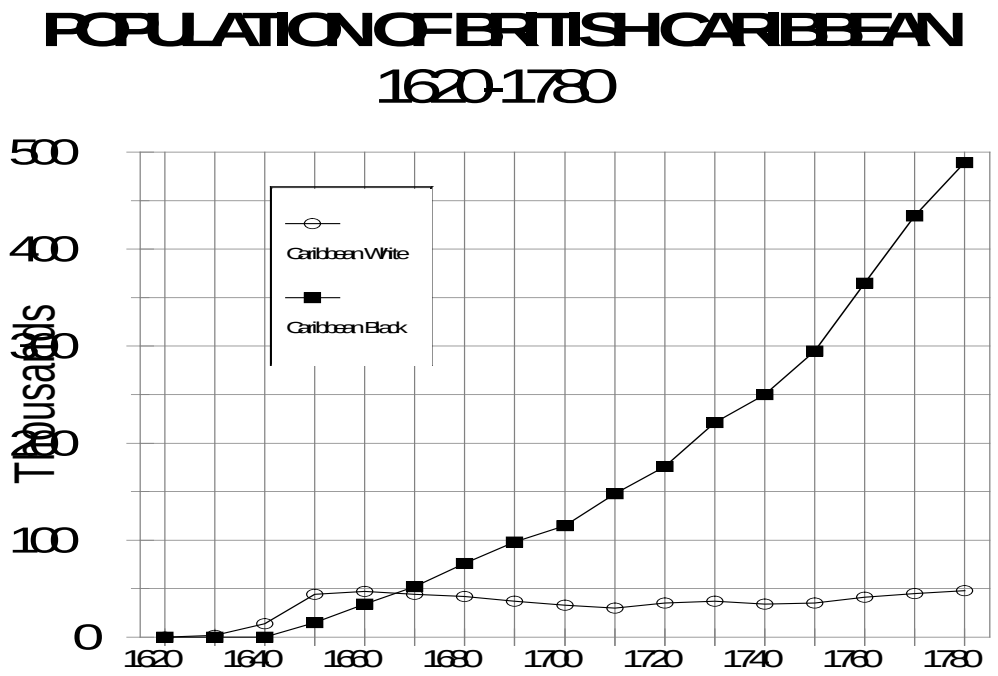
Conclusion

In recent decades, scholars have increasingly emphasized the "modernity" of slavery and slaveholders, pointing to features such as international connections, financial sophistication, and openness to innovation. The aggregate impact of this body of research is powerful and important. Yet it leaves unanswered the question of why so many contemporaries outside of these areas came to believe that slavery was economically backward as well as morally shameful. Of course, there were sweeping changes in ideologies and worldviews across these centuries. But this essay argues that an additional contributing factor was that, because of deep changes in markets, technologies, and geopolitical structures, slavery – though still highly profitable to its practitioners – no longer seemed essential for the capitalist economies of the nineteenth-century world.

Figure 1.

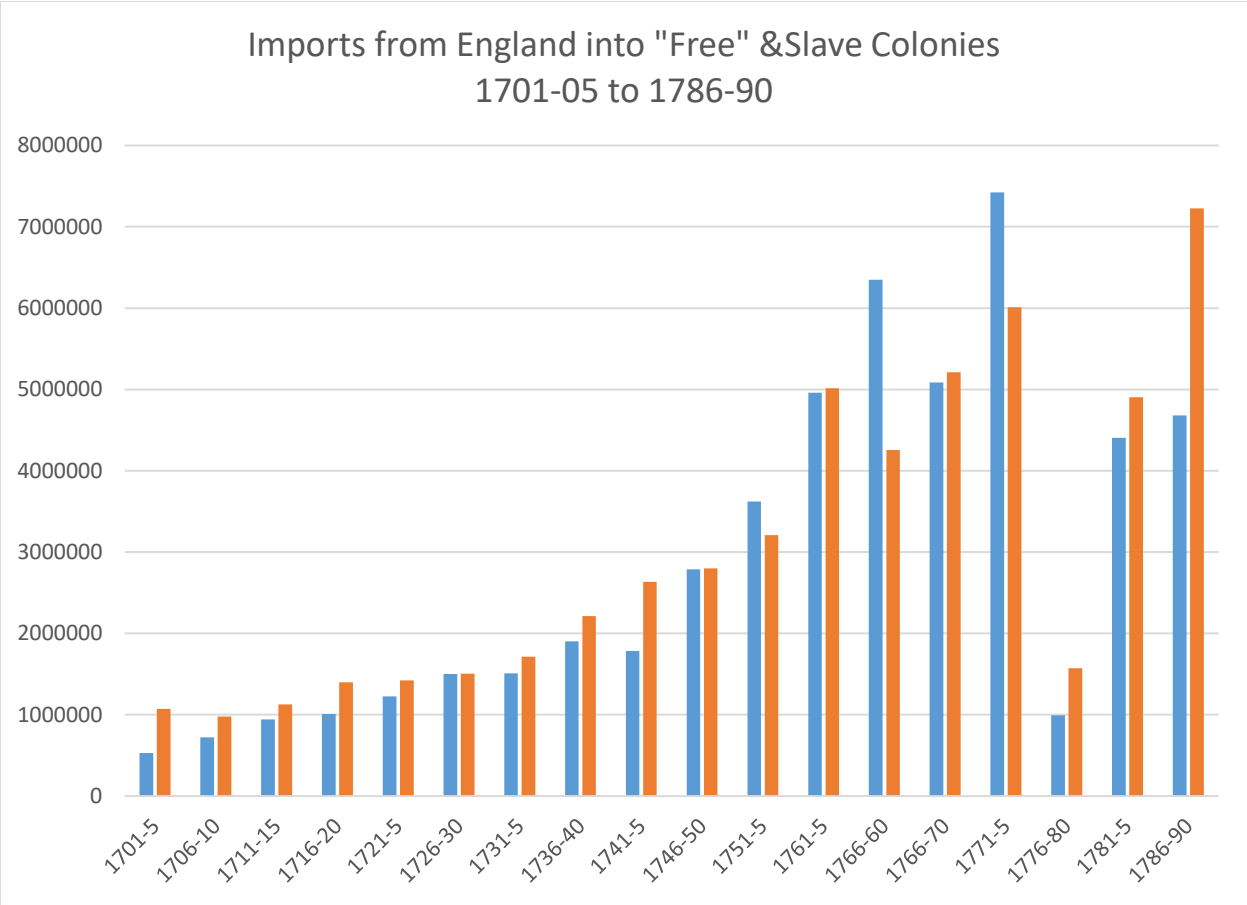
Source: Carter et al, *Historical Statistics of the United States*, Series Eg 430-435; Schumpeter, *English Overseas Trade Statistics*, p. 18.

Figure 2.



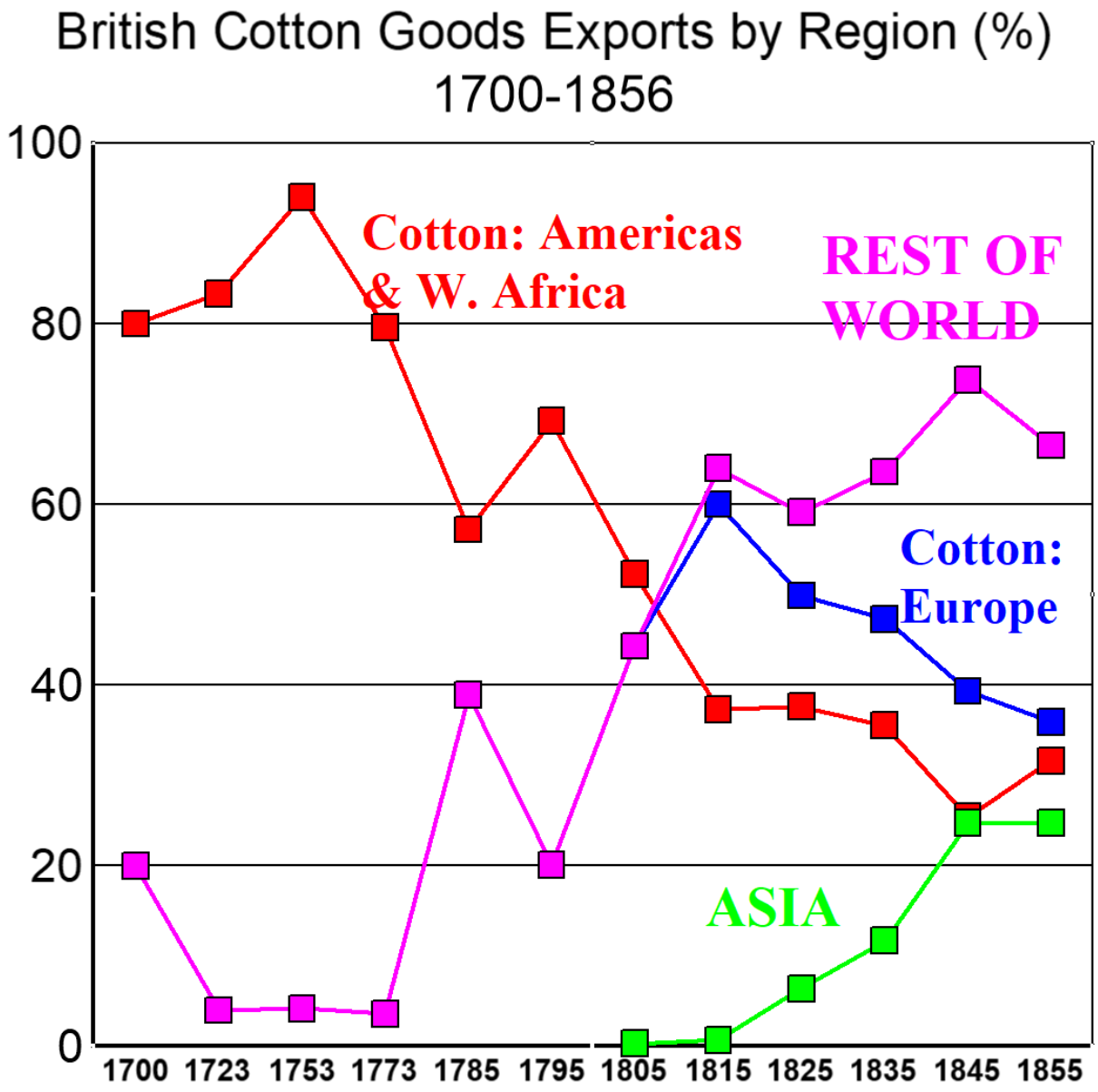
Source: McCusker and Menard, *Economy of British North America*, pp. 153-154.

Figure 3



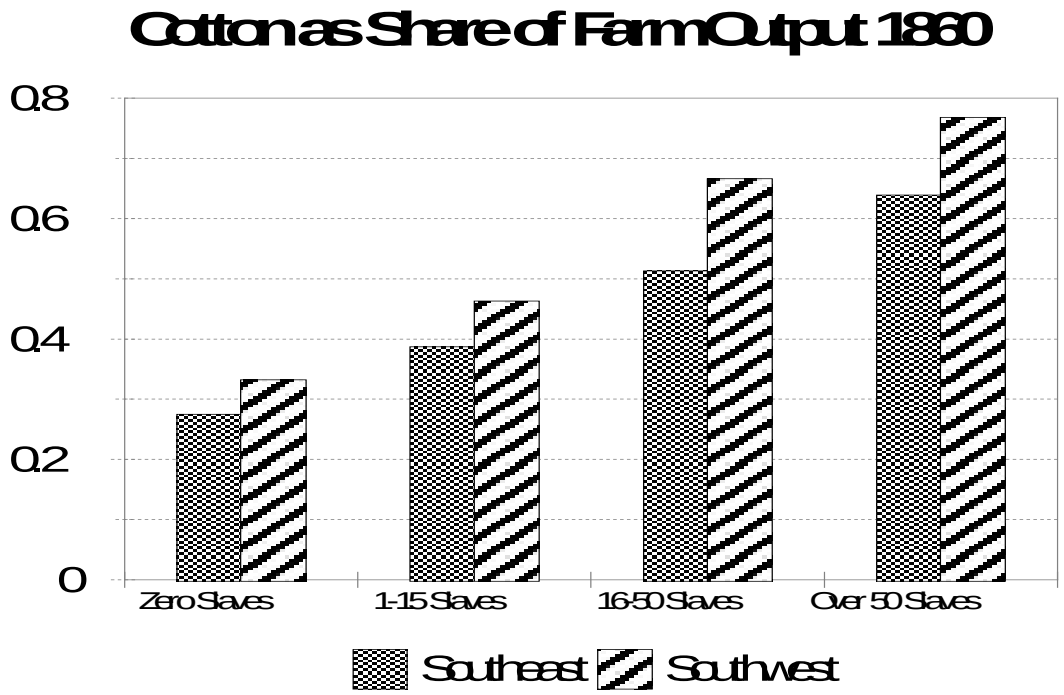
Source: Carter et al, *Historical Statistics of the United States*, Series Eg 437-442; Schumpeter, *English Overseas Trade Statistics*, p. 18.

Figure 4.



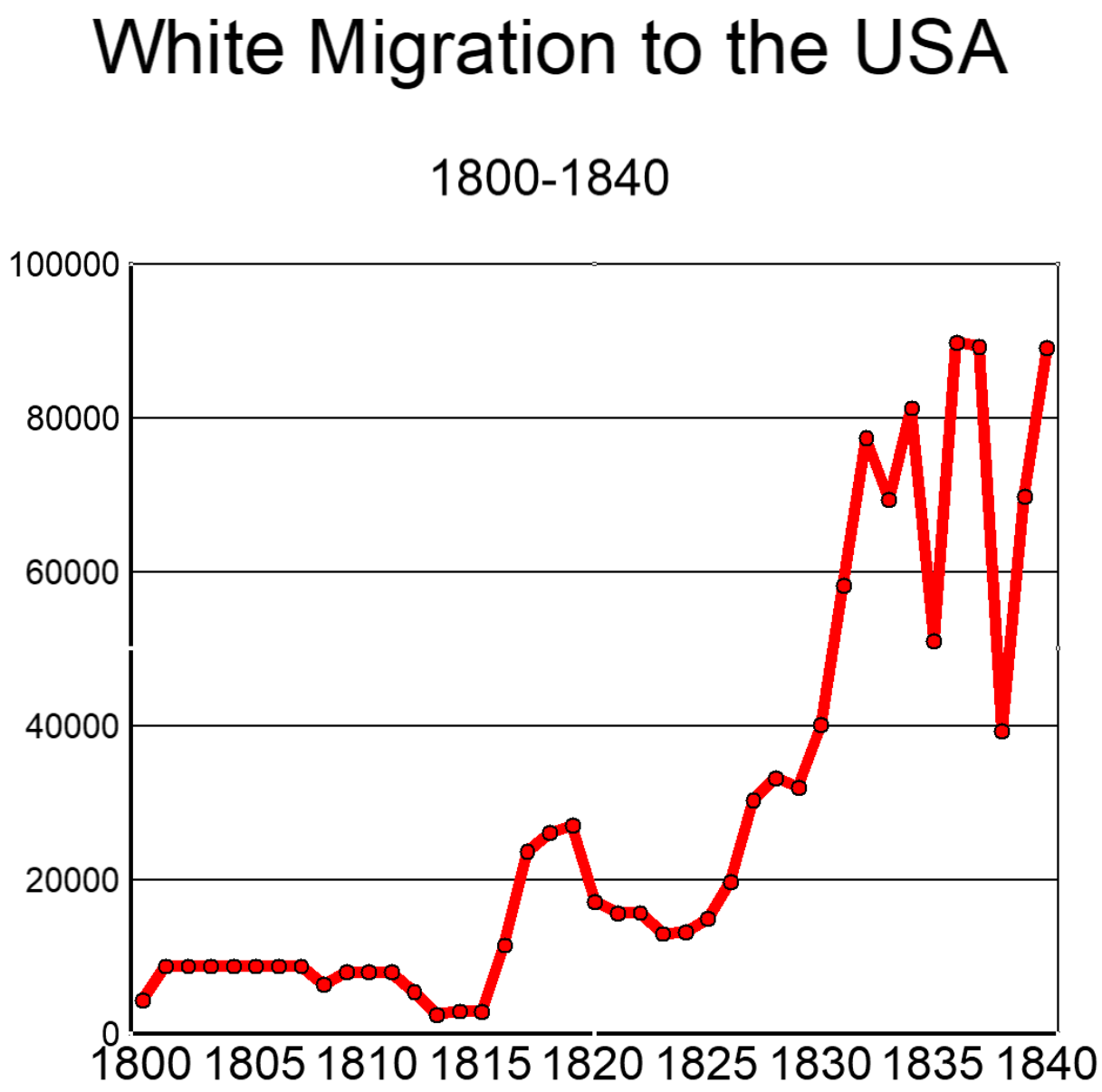
Source: Mitchell, *European Historical Statistics*

Figure 5



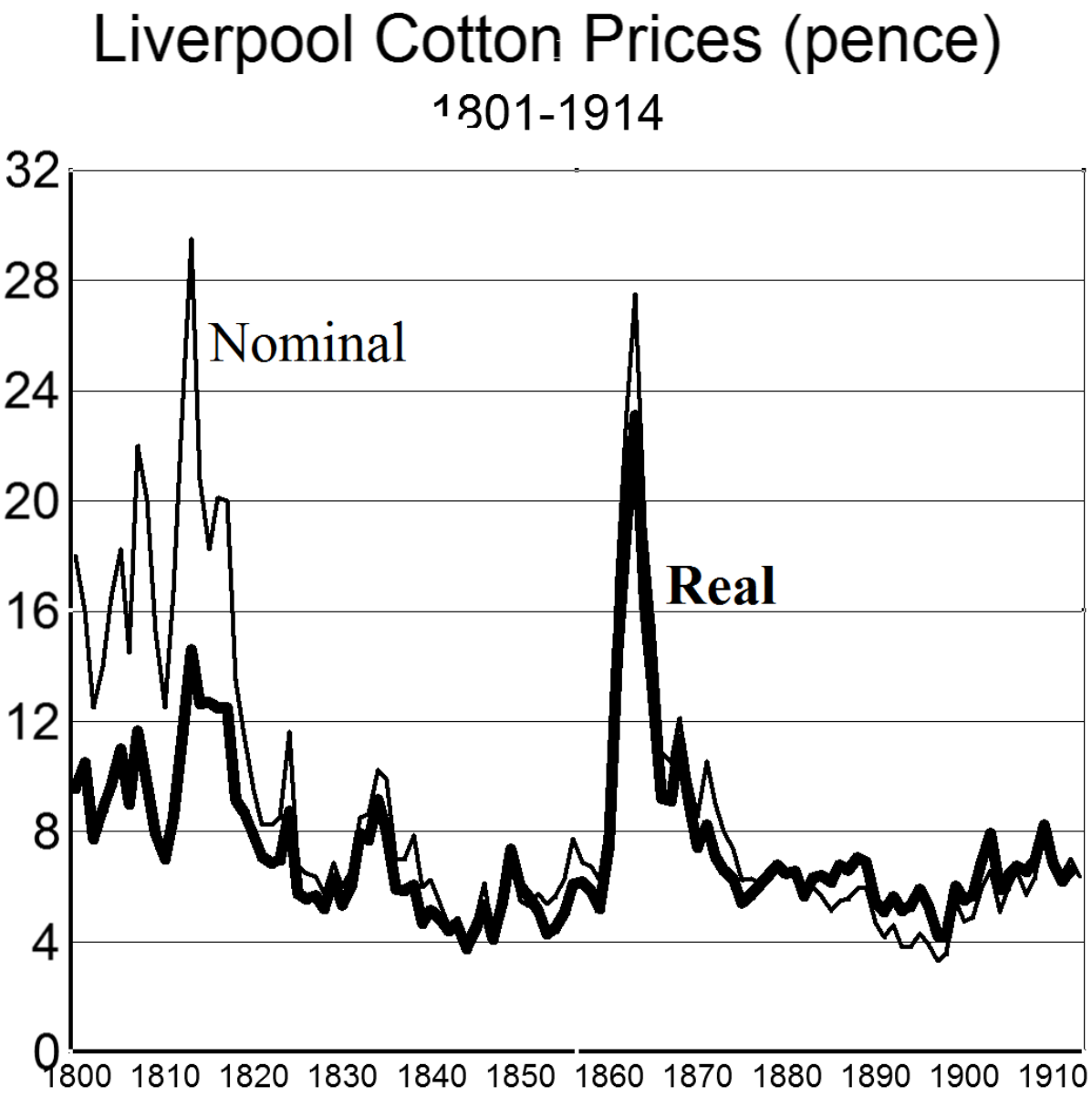
Source: Wright, *Slavery and American Economic Development*, p. 100. Original source is Parker-Gallman sample. Definitions of prices and outputs follow procedures in Fogel, Gallantine, and Manning, *Without Consent or Contract: Evidence and Methods*, pp. 205-09.

Figure 6



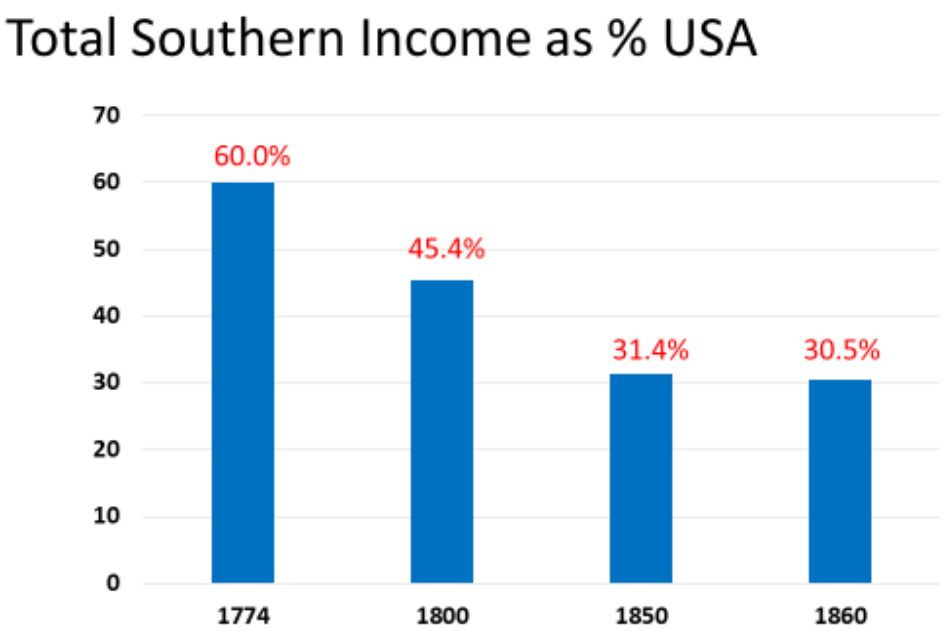
Source: Carter et *al*, *Historical Statistics of the United States*, Series Ad17.

Figure 7.



Source: Mitchell, *British Historical Statistics* (1988), pp. 722-3, 760.

Figure 8.



Source: Lindert and Williamson, *Unequal Gains*, pp. 80-82, 98-99.

Table 1 Average Annual Value and Destination of Commodity Exports From New England and Middle Atlantic Colonies, 1768-1772 (pounds sterling)

	Great Britain	Ireland	Southern Europe	West Indies	Africa	Total
Fish	L 206		L57,195	L94,754		L152,155
Livestock, Beef, pork	2,516		1,660	105,810		109,986
Wood Products	8,618	4,982	4,405	76,614		94,619
Whale Products	40,443		804	20,416	440	62,103
Grains, grain products	15,570	9,709	179,278	194,725		399,282
Rum	471	44	1,497		16,754	18,766
Other	53,467	37,561	2,523	6,438	1,077	65,110
Total	145,344	52,991	249,885	501,678	18,271	965,646

Source: McCusker and Menard, *The Economy of British America*, pp. 108, 199, Using data from James F. Shepherd and Gary M. Walton, *Shipping, the Maritime Trade, and the Economic Development of Colonial North America*

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