

***Johnny Moesel* – Did the Industrial Revolution in Britain occur because of transatlantic slavery?**

Since Marx identified slavery in 1867 as the 'pedestal' of Europe's industrialisation,¹ transatlantic slavery has been contentiously cast as a leading cause of Britain's Industrial Revolution. Though this relationship is ultimately real, historiography has often located it wrongly. The seminal Williams thesis² and its subsequent adherents have emphasised foundational capital accumulation from both slave-trading and slave-holding, yet this approach is undermined by the relative economic insignificance and fungibility of these profits. Moreover, this overemphasis on capital misconstrues the very nature of the Industrial Revolution as merely a period of aggregate macroeconomic growth, thereby ignoring slavery's most significant contribution: its determination of the Revolution's qualitative direction. Instead, the Revolution is better understood as a qualitative transformation in the structure and orientation of the British economy, and so factors that shaped this character should also be regarded as causes rather than mere influences. By extension, slavery's deepest yet understated contribution was to provide the material that determined the qualitative direction of this transformation: slave-grown American cotton. Thus, whilst transatlantic slavery did not fund the Industrial Revolution as traditionally claimed, its contribution was nevertheless decisive – not only in bringing the transformation about, but in determining what it became. Transatlantic slavery was at once a cause of the Revolution, and constitutive of it.

Any assessment of slavery's impact on the Industrial Revolution depends on our understanding of the Revolution itself. There is now a broad consensus on its definition, the transition from an agrarian economy to a modern industrial one,³ but a key divergence on how that economic process should be measured. The historiography on slavery has largely treated the Revolution as a quantitative process, thereby using macroeconomic indicators, growth and export volume, as the

¹ Karl Marx. 1867. "Capital: A Critique of Political Economy, Volume I." *Hamburg: Otto Meissner*.

² Eric Williams. 1944. "Capitalism and Slavery." *Chapel Hill: University of North Carolina Press*.

³ Jacques Barzun. 2026. "The Industrial Revolution." *Brittanica*.

metrics for evaluating slavery's impact.⁴ This paradigm identifies one primary role of slavery: that its capital profits and raw exports funded industrialisation. However, this quantitative understanding has significant limitations. Most pressing, its growth statistics actually present the Revolution as very modest. Crafts and Harley estimate output per worker grew by just 0.4% annually from 1780-1830.⁵ Given the period's apodictic significance, this discredits the measure rather than diminishing the Revolution. It demonstrates that industrialisation should foremost be understood as a qualitative, not quantitative, process. Growth was a lagging product of the Revolution, not its essence. That essence was a qualitative shift in the structure and orientation of the economy: structurally, the replacement of dispersed handicraft by concentrated, mechanised factory production organised around a dominant leading sector; and in orientation, the turn from an inward, agrarian economy to an outward-facing one. This reframing transforms slavery's role. Whilst the potential role of funding to effect transformation persists, a qualitative transformation opens up another avenue of impact: that slavery might be a character determinant, as opposed to merely providing an input. This essay shall ultimately find that, whilst slavery's profits were too insufficient and substitutable to effectively fulfil the former role, its cotton was central to the unique expression of industrialisation in Britain.

The original argument, that the profits of the Triangular Trade funded industrialisation, is flawed. Williams's 'direct-tracing' approach used late-eighteenth-century Liverpoolian samples to claim a 30% return per slaving voyage, yielding the surplus that supposedly funded industry: 'it was only the capital accumulation of Liverpool which... stimulated the manufactures of Manchester'.⁶ But his method extrapolates this sample too readily, and is predicated on inflated figures. Williams's failure to account for extensive shipping costs or slave mortality in his profit

⁴ See the following historiographical breakdown, which conveys that both sides of the Williams debate primarily rely on such measures: Jennifer Agel. 2023. "Marxian Social History vs. New Economic History: The 'Williams Thesis' and the Debate on Slavery's Relationship with the British Industrial Revolution." *The Graduate Review, Bridgewater State University* 8, no. 3.

⁵ N. Crafts and C. Harley. 1992. "Output Growth and the British Industrial Revolution: A Restatement of the Crafts-Harley View." *The Economic History Review* 45, no. 4.

⁶ Eric Williams, 1944.

calculations leads Engerman to suggest a revised margin of just 7.5%.⁷ Nor could such profits be relied upon to reach industry, as Williams assumes: Richardson finds colonial money more often financed projective class ostentation and political ambitions than productive investment,⁸ and Pares shows that the flow into industry largely postdated emancipation,⁹ by which point it cannot have meaningfully funded an industrialisation process already so far advanced. In any case, though 7.5% remains healthy when compared to the standard consol rate, its yield is bounded by the trade that generates it; and it is at the aggregate level that Williams's thesis collapses. Slave-trading profits exceeded 0.5% of national income in only one twenty-year interval, 1761–80.¹⁰ Even (impossibly) assuming that every penny were channelled into industry, Engerman finds they could have contributed at most 7% of industrial capital formation at its 1770 peak.¹¹ Too slight a fraction of the economy to fund even a portion of an industrial transformation, it is mathematically infeasible that the revised profits of slave-trading supplied the foundational capital as Williams claims.

Nonetheless, 'transatlantic slavery' also encompasses slave-holding and its profits, which later defenders of Williams have held as more important still. Solow spearheads this development, estimating that in 1793, the profits of the 'slave-sugar complex' amounted to almost 5% of British GDP;¹² or, almost 80% of her total domestic investment.¹³ Consequently, were slaveholding to indeed generate such a surplus, even a modest diversion of it into British industry might have profoundly influenced the Revolution. The argument, however, requires that the plantation economy was a 'leading sector': one capable of drawing the wider economy behind it, which would demand both sufficient macroeconomic weight to shift the national output, and linkages through which its expansion transmits to other industries. The plantation industry possessed neither. First, its macroeconomic weight was

⁷ Stanley Engerman. 1972. "The Slave Trade and British Capital Formation in the Eighteenth Century: A Comment on the Williams Thesis." *The Business History Review*, 46.

⁸ Richardson, Patrick. 1968. "Empire and Slavery." *New York: Harper & Row*.

⁹ Pares, Richard. 1937. "The Economic Factors in the History of Empire." *The Economic History Review* 7, no. 2.

¹⁰ Stanley Engerman, 1972.

¹¹ *Ibid.*

¹² Barbara Solow. 1991. "Slavery and the Rise of the Atlantic System." *Cambridge University Press*.

¹³ *Ibid.*

unexceptional. In 1805, West Indian sugar, the dominant product of the system, generated £5.4 million in value added – against £14.7 million for iron or £12.8 million for woollen textiles.¹⁴ The entire sector only constituted around 2.5% of national income.¹⁵ This slightness, however, was matched by sugar's strategic insignificance in the productive chain. In contrast to the comparatively smaller coal sector, sugar provided relatively limited inputs to other industries and possessed a limited role as an intermediate product, being terminal rather than generative. Too slight to move the aggregate and too isolated to transmit what growth it had, the slave-sugar complex cannot have been the leading sector Solow's argument requires.

A comparison with other slavery-supported European powers confirms that there is minimal systematic connection between the size of a plantation system, in absolute or relative terms, and metropolitan development. The French sector expanded rapidly from 1714-91: by 1770 the French Caribbean yielded 17% more sugar, nine times more coffee, and thirty times more indigo than its British counterpart.¹⁶ The Brazilian and Cuban slave systems likewise comprised far greater shares of the Portuguese-Brazilian and Spanish economies, respectively, than any equivalent estimate for Britain's eighteenth-century colonies.¹⁷ Yet neither Iberian power nor France achieved sustained industrial growth until long after abolition. If plantation wealth were sufficient to industrialise a metropole, Europe's first industrial economy should have been Portuguese. The wealth of slaveholding was thus neither of an economic weight to 'lead', nor of a strategic position to transmit, nor, being fungible, unique in its availability; whatever distinguished Britain, it was not the profits of her slave-holding plantations.

Slavery's profits, therefore, could neither fund nor lead the Revolution. But if that Revolution were a change in the economy's character, then whatever determined

¹⁴ Stanley Engerman, 1972.

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ Eltis et al. 2000. "The Importance of Slavery and the Slave Trade to Industrializing Britain." *The Journal of Economic History* 60, no. 1.

that character would equally be a cause of the Revolution itself. Identifying said determinant first requires locating the transformation, which was concentrated rather than general. Had mechanisation been widespread, aggregate growth would have clearly registered it; Crafts and Harley's 0.4% annual output estimate¹⁸ is irreconcilable with broad-based industrialisation. Therefore, as previously defined, Britain's economy changed structurally into mechanised production organised around a leading sector: cotton. By 1830, cotton furnished just over half of British exports¹⁹ and was established as the leading sector of industrialised Britain. Cotton's capacity to lead, however, relied upon transatlantic slavery. What industrialisation required was not just a supply of cotton, which India had cultivated for centuries, but a supply with unbounded volume and competitive value. Transatlantic slavery provided the key conditions for this supply; only the American South possessed both an uncultivated frontier and the specific medium-staple fibre required by Lancashire's machinery, as opposed to the mechanically incompatible Indian Surat supply.²⁰ The former was necessary as it provided an elastic supply capacity that fulfilled the expanding demands of British industry. Crucially, the benefits of the vast frontier depended on slavery. As Domar observes, where land is abundant a free labourer offered wages will decline them and take up the land on his own account.²¹ Because cotton agriculture demanded highly concentrated gang labour, only an owned workforce could be assembled in sufficient numbers and forcibly moved westward as older soils exhausted. Slavery was thus not the manner in which American cotton happened to be grown, but the requisite condition of its being grown at all. The record follows: between 1820 and 1860 roughly 80% of world supply was American,²² and 75% of the fibre entering British mills was picked by the enslaved.²³

¹⁸ N. Crafts and C. Harley, 1992.

¹⁹ D. McCloskey. 1994. "The Industrial Revolution in Britain 1780 1860: A Survey." *The Economic History of Britain since 1700*.

²⁰ Rönnbäck finds that not until the early twentieth century did investment permit improved yields of foreign varieties in India; the incompatibility was therefore agronomic rather than transitional.

Rönnbäck. 2022. "Cotton cultivation under colonial rule in India in the nineteenth century from a comparative perspective." *Economic History Review* 75:2.

²¹ Evsey Domar. 1970. "The Causes of Slavery or Serfdom: A Hypothesis." *The Journal of Economic History* 30, no. 1.

²² Sven Beckert. 2014. "Empire of Cotton: A New History of Global Capitalism." *New York: Alfred A. Knopf*.

²³ *Ibid*.

Moreover, without the cotton industry, there would not have been the leading sector capable of sustaining mechanised factory production; and therefore no Industrial Revolution as here defined. Rostow held that 'leading sectors' possess high income elasticities of demand, capture market growth disproportionate to income growth in the wider economy, and generate external economies in linked sectors.²⁴ Cotton was the only material capable of assuming this position. Iron and coal fail the first condition; their demand is derived, arising only from the industries that consume them. A producer good cannot lead an economy that has not yet been led. By extension, only a consumer good of elastic mass demand could qualify, which confines the field to textiles (not food, for example, due to Engel's Law²⁵). Of the four textile fibres, only cotton qualifies. Silk, being a luxury of small demand, fails on scale. Wool fails on land; replacing Britain's New World cotton with domestic wool would have required, by Pomeranz's calculation, 'over 23,000,000 acres in 1830',²⁶ patently unviable when compared against a total British cropland of 17,000,000 acres.²⁷ Flax, though conversely viable by acreage requirement, was too brittle to effectively machine spin until 1825 – six decades after cotton's mechanisation. Only cotton satisfied the conditions to emerge as the leading sector of industrialisation, being both unbounded in supply and suited to the machine. Therefore, given that no other sector could have assumed cotton's position, and that cotton itself was obtainable only through slavery, Britain could not have industrialised otherwise. This transforms slavery's role from incidental to indispensable.

In conclusion, transatlantic slavery was indeed the cause of the Industrial Revolution, though not in the traditional conceptualisation of their relationship. Contrary to the logic of the Williams thesis, the profits of slave-holding and slave-trading were insufficient to have meaningfully funded British industrialisation. Furthermore, their minimal role in foundational capital accumulation was completely fungible, and therefore can qualify as a cause neither through scale nor non-substitutability. This

²⁴ W. Rostow. 1960. "The Stages of Economic Growth: A Non-Communist Manifesto." *Cambridge University Press*.

²⁵ Carle Zimmerman. 1932. "Ernst Engel's Law of Expenditures for Food." *The Quarterly Journal of Economics* 47, no. 1.

²⁶ Kenneth Pomeranz. 2000. "The Great Divergence: China, Europe, and the Making of the Modern World Economy." *Princeton: Princeton University Press*.

²⁷ *Ibid.*

second failure in Williams's argument was inevitable. To seek a quantitative cause is to seek something fungible by its nature; a scalar sum is by definition substitutable. Williams therefore hunted in a category that could yield no necessary cause at all. By the same measure, the wider New Atlanticist²⁸ case collapses: credit networks, mercantilist structures and rising domestic consumerism undoubtedly shaped industrialisation, yet Britain would have drawn each from the Levant, the Baltic, and the East, as she partly already had. They were touched by slavery; they were not owed to it. By contrast, the cotton sector was the defining sine qua non of British industrialisation, and transatlantic slavery in turn the sine qua non of that very sector. And here the relation ceases to be causal at all. A cause stands apart from its effect. Even were a cause essential, it could still be envisaged as a separate entity from its effect, though they be umbilically linked. But the qualitative change of the Revolution and its cotton cannot be thus separated. Slavery was not a condition of the leading sector but the substance of it, and thereby of the Revolution entire. Slavery was not just a cause, but a constituent of Britain's industrialisation. Marx, then, was right; slavery was indeed the 'pedestal... pure and simple'²⁹ of industrialisation – both propping up the statue of industrialisation, and a part of that statue itself.

Word Count: 1996

²⁸ See Blackburn, Inikori, Wallenstein, etc.

²⁹ Karl Marx, 1867.

Bibliography

- Agel, Jennifer. 2023. "Marxian Social History vs. New Economic History: The 'Williams Thesis' and the Debate on Slavery's Relationship with the British Industrial Revolution." *The Graduate Review, Bridgewater State University* 8, no. 3.
- Barzun, Jacques. 2026. "The Industrial Revolution." *Brittanica*.
- Beckert, Sven. 2014. *Empire of Cotton: A New History of Global Capitalism*. New York: Alfred A. Knopf.
- Crafts, N. and Harley, C. 1992. "Output Growth and the British Industrial Revolution: A Restatement of the Crafts-Harley View." *The Economic History Review* 45, no. 4.
- Deane, Phyllis, and Cole, W. A. 1969. *British Economic Growth, 1688–1959*, 2nd ed. Cambridge: Cambridge University Press.
- Domar, Evsey. 1970. "The Causes of Slavery or Serfdom: A Hypothesis." *The Journal of Economic History* 30, no. 1.
- Eltis, David, and Engerman, Stanley. 2000. "The Importance of Slavery and the Slave Trade to Industrializing Britain." *The Journal of Economic History* 60, no. 1.
- Engerman, Stanley. 1972. "The Slave Trade and British Capital Formation in the Eighteenth Century: A Comment on the Williams Thesis." *The Business History Review*, 46.
- Harley, C. Knick. 2004. "Trade: Discovery, Mercantilism, and Technology." In *The Cambridge Economic History of Britain*, edited by R. Floud and P. Johnson. Cambridge: Cambridge University Press.
- Heblich, Stephan, Redding, Stephen J., and Voth, Hans-Joachim. 2022. "Slavery and the British Industrial Revolution." *NBER Working Paper Series*, no. 30451. Cambridge, MA: National Bureau of Economic Research.
- Hyde, Francis, Parkinson, Bradbury, and Marriner, Sheila. 1951. "The Port of Liverpool and the Crisis of 1793." *Economica* 18, no. 72.
- Inikori, Joseph. 1987. "Slavery and the Development of Industrial Capitalism in England." *The Journal of Interdisciplinary History* 17, no. 4.
- Marx, Karl. 1867. *Capital: A Critique of Political Economy, Volume I*. Hamburg: Otto Meissner.
- McCloskey, D. N. 1994. "The Industrial Revolution in Britain 1780 1860: A Survey." *The Economic History of Britain since 1700*.
- Mitchell, B. R., with Deane, Phyllis. 1962. *Abstract of British Historical Statistics*. Cambridge: Cambridge University Press.
- Pares, Richard. 1937. "The Economic Factors in the History of Empire." *The Economic History Review* 7, no. 2.

- Pomeranz, Kenneth. 2000. *The Great Divergence: China, Europe, and the Making of the Modern World Economy*. Princeton: Princeton University Press.
- Richardson, Patrick. 1968. *Empire and Slavery*. New York: Harper & Row.
- Rimmer, W. G. 1960. *Marshalls of Leeds, Flax-Spinners 1788–1886*. Cambridge: Cambridge University Press.
- Rönnbäck, Klas. 2022. "Cotton Cultivation Under Colonial Rule in India in the Nineteenth Century from a Comparative Perspective." *The Economic History Review* 75, no. 2.
- Rostow, W. W. 1960. *The Stages of Economic Growth: A Non-Communist Manifesto*. Cambridge University Press.
- Solow, Barbara. 1991. "Slavery and the Rise of the Atlantic System." *Cambridge University Press*.
- Solow, Barbara, and Engerman, Stanley. 2004. *British Capitalism and Caribbean Slavery: The Legacy of Eric Williams*. Cambridge: Cambridge University Press.
- Thomas, Paul, and Bean, Richard. 1974. "The Fishers of Men: The Profits of the Slave Trade." *The Journal of Economic History* 34, no. 4.
- Williams, Eric. 1944. *Capitalism and Slavery*. Chapel Hill: University of North Carolina Press.
- Zimmerman, Carle. 1932. "Ernst Engel's Law of Expenditures for Food." *The Quarterly Journal of Economics* 47, no. 1.