

The axe, the hoe, and the plough: cultivation on the Anglo-Atlantic frontier in the eighteenth century

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Where does modernity arise? Once, it seemed obvious that modernity originated in a metropolitan core and spread outwards, usually unevenly and almost invariably with disruptive consequences. This core-to-periphery model is not something that finds much favour today, being at odds with postcolonial historiography and the new Global History of the last few decades, two schools that are comfortable with multiple modernities and which eschew unidirectional historical trajectories. Having said that, there are older historiographical traditions in which the periphery was something more than a blank canvas on which the narrative of modernity, scripted and refined elsewhere, was inscribed. The Turner thesis in American historical scholarship, for instance, assigns a determinant role to the 'frontier', where new social practices burst forth. 'What the Mediterranean Sea was to the Greeks, breaking the bond of custom, offering new experiences, calling out new institutions and activities, that and more, the ever retreating frontier has been to the United States directly, and the nations of Europe more remotely.' It was on the frontier where individualism, materialism, and democracy – key features of modernity – were to triumph.

This paper examines the Anglo-American frontier of the eighteenth century as a stimulant of modernity. It does so by shifting the definition of 'frontier'. The frontier to be discussed here is not Turner's 'Great West', it is the plantation frontier that ran from the Chesapeake, south through the Carolinas and down into the Caribbean, to terminate in Demerara. The impact of this frontier can be traced in the history of implements that, quite literally, marked out the boundary between the cultivated and the wild: the axe, the hoe, and the plough.

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The potent association that nineteenth-century Americans made between the axe and their country's unfolding national destiny has been explored by David E. Nye in his *America as Second Creation: Technology and Narratives of New Beginnings* (2003). The axe heralded cultivation in two senses. It heralded the conversion of unproductive, thicketed forest into a grid of well-tended arable agriculture, and it allowed civilisation to penetrate spaces that had previously been the abode of

savages. In this way the axe came to be seen as the quintessential American (i.e. US) technology, developed by American smiths to meet the challenge posed by the limitless forest that confronted them.¹ Its characteristic narrow bit and heavy poll gave the American or Yankee felling axe a destructive power and a balance that wasn't known to Old World axes.

Yet there is little positive evidence to support this narrative and a great deal of evidence to suggest otherwise. American smiths were too few in number and too dispersed to meet the rocketing demand for metal implements in the colonial world. Demand was met by Old World merchants who drew upon sophisticated, high-volume production networks in England and Scotland. The firm of John Crowley, to name one outstanding example, operated a number of sites, chiefly in the North East of England, in the 1710s and 1720s. It had the capacity to turn out axes in huge numbers, using teams of specialised hammermen and water-driven grinding facilities. The inventory taken after John Crowley's death in 1727 reveals quite how much capacity the firm did have. Its 'Great Warehouse' at Greenwich was packed with goods for export. There were, stored along just one aisle, over 6,500 felling axes of the basic Crowley model. That was not all. The Crowleys also manufactured a variety of axes aimed at overseas markets: there was the Carolina axe, the New England axe, the Virginia axe, the Greenland axe (presumably intended for the whaling industry), even the South Sea axe (probably destined for Spanish America).² The American axe, in other words, was not American at all. It was a European product that was attuned to distant markets.

The axe was not merely the means by which modernity was brought to bear on the wild, unmapped American interior, as Nye argues; it was also a modern commodity in its own right. It was mass-produced. Its production rested upon an elaborate division of labour and the command of hard-to-source raw materials (notably Swedish 'Orgrund iron', the feedstock for English cementation steel furnaces).³ It was subject to successive redesigns, underpinned by flows of commercial information within Britain's Atlantic empire that multiplied and accelerated across the eighteenth century. Manufacturers responded to feedback from New World customers. The axe displayed all the characteristic features of modern consumption, in fact. It was an article that underwent elaboration and differentiation, as the basic patterns ('falling axe') spawned new variants ('New England felling axe'). The felling axe was already, in the early eighteenth century, a branded good, with a brand hierarchy (one headed by the Crowleys). When a significant tool manufacturing sector emerged in

¹ Henry J. Kauffman, *American Axes: A Survey of their Development and their Makers* (Morgantown PA: Mastof Press, 2007) takes this view. James M. Gaynor and Nancy L. Hagedorn, *Tools: Working Wood in Eighteenth-Century* (Williamsburg, VA: The Colonial Williamsburg Foundation, 1997), pp. 61-62, is more equivocal.

² Suffolk Record Office (Ipswich), Ashburnham MSS, HAI/GD/5/1-17/1, 'An Inventory of the Goods which were at Greenwich at the Decease of John Crowley Esq Jany 2 1727/8'.

³ Chris Evans and Göran Rydén, *Baltic Iron in the Atlantic World in the Eighteenth Century* (Leiden: Brill, 2007).

the United States in the nineteenth century it simply took up where British makers left off. To be sure, American makers devised new, mechanised production processes in the 1830s and 1840s but the technological breakthroughs made by the Connecticut-based Collins Manufacturing Company did not lead to a consolidated design for the 'American Axe'. They led instead to a profusion of fresh patterns: the Yankee, the Kentucky, the Ohio, the Georgia, the New Orleans, etc.⁴

Moreover, it is hard to see why the much-vaunted 'American axe' should be specific to what was to become the United States. After all, it cannot really be argued that the forests of North America posed a uniquely challenging arboreal obstacle. There were other eighteenth-century frontiers in Brazil and Siberia that were just as daunting. In fact, even if we restrict ourselves to the Anglophone Atlantic, the clearing of timber was far more pronounced in the Caribbean than it was in British North America. The rise of the sugar plantation in the West Indies had sweeping deforestation as its concomitant. Barbados provides the paradigmatic case, with the wholesale removal of timber between the mid-1640s and the mid-1660s: 'at Barbados all the trees are destroyed, so that wanting wood to boil their sugar, they are forc'd to send for coals from England'.⁵ In succeeding decades the Leeward Islands suffered the same fate. The rainforest was left clinging to slopes too precipitous for conversion to cane fields or cattle pens, but every other surface was cleared. And on it went, culminating in the assault on Cuban forests in the nineteenth century. Here, the axe was not the expression of frontier individualism; it was part and parcel of black servitude. Indeed, it might be said that black servitude in the West Indies was a condition for the emergence of the free, white woodsman in North America. Once the sugar islands had been denuded of timber it became necessary to import immense quantities of wood from New England and the Mid-Atlantic to meet burgeoning Caribbean demand for construction and packaging materials. Characteristically then, the 'American axe' was not an instrument swung by homesteaders on a distant frontier; it was a tool used by teams of contract forestry workers from Maine to Maryland who stood at one end of a maritime commodity chain that led to Kingston, Jamaica, or Bridgetown, Barbados.

The American frontier was sometimes a temperate place, edged forward by North European settlers. Yet it was far more frequently a tropical or semi-tropical space defined by the axe-wielding slave. The axe, moreover, was usually found in conjunction with another implement that was almost a badge of office for enslaved Africans: the plantation hoe. Indeed, the hoe has a far better claim to be the signature instrument of environmental transformation in the New World than does the axe. The

⁴ David M. Rubenstein Rare Book & Manuscript Library at Duke University, Collins Manufacturing Company papers #917. Donald R. Hoke, *Ingenious Yankees: The Rise of the American System of Manufactures in the Private Sector* (New York: Columbia University Press, 1990), chapter 3.

⁵ Quoted in David Watts, *The West Indies: Patterns of Development, Culture and Environmental Change since 1492* (Cambridge: Cambridge University Press, 1987), p. 186.

axe, after all, has been a universal human tool from the Palaeolithic to the present. The only thing distinctive about European axes was that they were made of metal. That was a fundamental distinction, of course. Native peoples lacked ferrous metallurgy and in the pre-Colombian era had to rely on makeshifts that were much weaker and less durable than European axes. Even so, the axe was common both to Europeans and those they encountered in the New World. The hoe was a different matter. Whereas the hoe, whether fashioned from animal bone or fire-hardened wood, was ubiquitous in aboriginal agriculture, it did not feature in European farming, not as the primary instrument of tillage. That role was taken by the plough. And that, no doubt, explains why the plough looms large in the literature of improvement in eighteenth-century Europe. The claims of new and improved models were pressed and counter-pressed. Prizes were offered and competitions staged. The plough always took ideological priority. Yet European on the plantation frontier almost always resorted to the hoe. English settlers in the Chesapeake adopted Native American methods of raising tobacco, planting seedlings in scooped-up mounds of soil rather than ploughed furrows. Their one adjustment was to introduce metal-bladed hoes. In South Carolina, English planters seized upon African modes of rice cultivation to serve European markets. These were, needless to say, reliant upon the hoe, since the enslaved Africans who were carried to the Carolina Lowcountry came from regions where the prevalence of the tsetse fly ruled out the use of large quadrupeds capable of pulling a plough. As for sugar, the New World's premier crop, it was produced by a system of brutally regimented hoe husbandry that had been developed in São Tomé in the fifteenth century, finessed in Pernambuco in the sixteenth century, and transplanted to the Caribbean in the seventeenth.

When it came to the hoe, there could be no pretence, as there could with the axe, as to the ennobling character of labour. The 'American axe', it would later be claimed, gave expression to individual endeavour; every blow struck with it was an assertion of mastery over the environment. By contrast, the hoe signified the loss of mastery and the subjection of the individual to a ruthlessly policed form of collective labour. In the cane fields enslaved workers were 'drawn out in a line, like troops on a parade, each with a hoe in his hand'.

... it is necessary that every hole or section of the trench should be finished in equal time with the rest; and if any one or more negroes were allowed to throw in the hoe with less rapidity or energy than their companions in other parts of the line, it is obvious that the work of the latter must be suspended... The tardy stroke must be quickened, and the languid invigorated; and the whole line made to *dress*, in the military phrase, as it advances. No breathing time, no resting

on the hoe, no pause of languor, to be repaid by brisker exertion on return to work, can be allowed to individuals: All must work, or pause together.⁶

Even so, the hoe revealed the same capacity for product diversification as did the axe, perhaps more. Already, at the start of the eighteenth century, there was recognition among British tool manufacturers of three distinct markets: the Caribbean, South Carolina, and the Chesapeake. There is abundant evidence that designs altered across time. Hoes used in Tidewater tobacco cultivation, for example, changed shape and gained substantially more bulk between the mid-seventeenth and the mid-eighteenth century. Moreover, the product range grew and underwent differentiation, with the original 'Barbados Hoe' being joined by the Jamaica model, then by the Demerara. Every market and every (unwilling) user was catered for. Hoes began to be adjusted to the exact physical abilities of each sex and every age group, allowing the last particle of available labour power to be extracted. Planters ordered truly miniature implements for infants and issued a boy's or girl's hoe to more mature juveniles. The hoe was not archaic; it was distinctly modern.⁷

For all that, the hoe was never to be accorded the cultural reverence that the axe enjoyed. It was, after all, the tool of slaves and therefore something abject. Indeed, Caribbean planters had such misgivings about the hoe that they made repeated attempts to substitute the plough for it. These failed because hoe husbandry had achieved an ecological efficiency (in minimising moisture loss and averting soil erosion) that made the introduction of ploughing unquestionably retrograde. Even so, sugar planters could never quite rid themselves of the idea that the plough was inherently progressive. It was as though the plough would allow them to be modern, to slip off their Creole trappings and assume the dignity of gentleman farmers on the English model. They could claim to be mainstream agriculturalists rather than exponents of an aberrant and cruel tropical regime. Planters in the new United States took the same view. This is very evident from the statue of George Washington in the Capitol building at Richmond, Virginia. Sculpted by the French master Houdon in the 1780s, it shows Washington in military uniform, resting his left hand on Roman fasces, the symbol of republican authority. The Virginia planter was to be presented as a New World Cincinnatus, and for that a plough was added to complete the tableau.⁸ In actual fact, the plough had rarely featured in Washington's practice as a planter; his slaves worked with hoes. But the hoe

⁶ James Stephen, *The Crisis of the Sugar Colonies: or, An Enquiry into the Objects and Probable Effects of the French Expedition to the West Indies* (London: J. Hatchard, 1802), pp. 9-11.

⁷ Chris Evans, 'The plantation hoe: the rise and fall of an Atlantic commodity', *The William and Mary Quarterly*, 3rd series, 69: 1 (2012), pp. 71-100.

⁸ Tracy L. Kaminer and Scott W. Nolley, *Rediscovering an American Icon: Houdon's Washington* (<http://www.history.org/Foundation/journal/autumn03/houdon.cfm>, accessed 25 July 2014)

could not simultaneously embody the republican virtues of classical antiquity and assert Washington's credentials as a modern farmer. The plough could.

The plantation world to which Washington belonged relied upon the importation of bulk-produced (there were over 23,000 Virginia hoes ready for shipment from John Crowley's Greenwich depot when it was inventoried in 1727) but constantly re-jigged hand tools. Indeed, production systems in Europe were so streamlined that they produced goods cheap enough to be disposable (or recyclable, which is why they rarely appear in the archaeological record). Modernity sometimes arrives in spectacular form (the steam engine, the railroad), but modernity also arrives in the course of everyday practices like the swinging of an axe – provided, that is, that the axe concerned was an authentically modern article, one that arose out of a transatlantic conversation between manufacturers, merchants, planters, and (in ways that have yet to be investigated) slaves.