



# Technology and the World the Slaves Made

Robert Gudmestad

*University of Memphis*

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## Abstract

The study of American slavery is a crowded field and each year the historical profession witnesses the publication of several new books. Despite this steady onslaught of scholarship, significant gaps remain in our understanding of slavery and its influence on the South. One area that has lacked sustained attention is the nexus of slavery and technological development. Several new books demonstrate that changes in technology profoundly altered the lives and labor of slaves. Historians have approached the presence of technology in a slave society from several different traditions. Some scholars argued that plantation development and mechanical progress were difficult to wed together, while others noted the progressive nature of southern agricultural production, but discussions of white attitudes and behavior overshadowed the effects of machinery on the lives of slaves. An innovative approach has emphasized the employment of slaves in factories, but such works have done little to provide insight into how technological innovation influenced plantation slaves. Several new studies have reversed these trends and promise to lead us in important directions. Examinations of the cotton gin, steamboats, sugar plantations, and clocks have revealed that technology brought enormous change to the bulk of slaves, not just those living in urban areas or working in factories. Patterns and practices of work, opportunities for autonomy, and time away from the master's unstinting gaze, all changed because of mechanical innovation. Taken together, these new works also provide clues to the making and remaking of the southern economy and society.

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Although historians have not traditionally associated slavery with technology, new scholarship in American slavery shows that technology exerted a profound, though often overlooked, effect on making and remaking the world of the slaves.

Perhaps historians of slavery have neglected technology because they have often linked the peculiar institution to a commitment to the status quo or, at least, reluctance to change. Much historical scholarship has contrasted a North that was pursuing progressive change and a South that seemed to be committed to preserving the institution of slavery by limiting the influence of outsiders. On a theoretical level, Eugene Genovese has argued that southern slaveholders were caught in a dilemma. They wanted to increase their profits, but not at the expense of challenging the social order. Masters struck a compromise and allowed only limited technological development;

the “labor lords” preferred the known to the unknown. The unstated portion of the argument is that better machines often put people out of work. Firing bondservants was not an option, though, so the use of slavery as a tool of racial control blunted the drive towards mechanical innovation. This argument and ones similar to it for the non-capitalist nature of the South generally minimize the influence of technology or the rate of change for slaves’ lives.<sup>1</sup>

Historians have also cited practical reasons why machinery did not always mesh with slavery. Slaves, this argument runs, did not try to improve technology because they had no incentive to do so. Since they were not stakeholders, tinkering with or changing machinery would bring them no benefits. Defiant or poorly trained bondspeople might also damage new and expensive equipment. Presumably it was a risky venture for slaveholders to entrust new and possibly delicate machinery to people who had to be coerced to work. In a society where much capital was tied up in slave ownership, masters were loathe to risk money on uncertain investments.<sup>2</sup>

Not all historians believe that technology and slavery are incompatible. A number of older works make it clear that slavery and change (sometimes referred to as progress) were quite compatible. Lewis Gray, for instance, argues that slave labor adjusted to new conditions and often became more efficient over time. But for Gray and others, agricultural change of any type becomes synonymous with technological innovation. The two are related, but not equivalent. For instance, crop rotation or improved fertilizer is not the same as using machinery. James Oakes separates these ideas when he argues that “slave labor inhibited technological development” even while slaveholders pursued scientific farming and transportation improvements.<sup>3</sup> Oakes, though, does not address the extent to which machinery altered the life and labor of slaves. Reaching back to the eighteenth century, Joyce Chaplin notes how agricultural innovation became an “anxious pursuit” by engendering significant tensions in eighteenth-century South Carolina and Georgia. While Chaplin discusses how whites welcomed mechanical invention (mainly cotton presses and cotton gins) in their quest for modernity, her narrative overlooks the importance of machinery to the lives of slaves. Chaplin centers her discussion on the masters rather than the slaves. While she makes it clear that the number and percentage of slaves increased, the nature of their work changed, and they wrung some concessions from master, her analysis does not explore these implications. Indeed most historians subsume the influence of technology within larger arguments about political economy and change rather than extending their inquiries to focus on how machinery changed the day-to-day existence of bondservants.<sup>4</sup>

When historians have related technology to the slave experience, they have usually concentrated on industrial settings. Robert Starobin and Charles Dew have pioneered efforts to analyze how improvements in technology changed the lives of slaves. Dew, in particular, links slaves’ skill and knowledge

of an industrial process to their familial relations. His careful examination of slavery at Buffalo Forge shows how the peculiar institution could involve more than naked oppression, as the forge's owner used incentives such as overwork and cash payments to motivate his slaves. Dew makes it clear that skilled slaves who understood a particular technology approached the status of free laborers in their relations with their owners. Across the state in Richmond, slaves were vital to industrial production. Midori Takagi shows that in 1860, about half of all male adult workers in the city were slaves. Bondservants exerted significant control over their lives and tended to live in African American communities in the city's poor districts. These vibrant communities nurtured autonomy in the lives of slaves and caused white authorities to fret that a slave rebellion was inevitable. At the same time, the vast hiring market made slave labor fungible and increased the value of bondservants. Although the process of "hiring out" came freighted with potential dangers, it made slavery adaptable to technological innovation.<sup>5</sup>

Beyond the industrial South, the technology most associated with slavery is probably the cotton gin. The story of Eli Whitney is a standard tale in most American survey classes and southern history textbooks. One popular book, for instance, describes Whitney's visit to Mulberry Plantation in Georgia. There, Whitney built a simple machine that solved the problem of separating the seed from the lint. "The birth of the cotton gin," the text tells us, "heralded the coming of the cotton revolution." Although a bit vague, this account implies that Whitney's invention broke the logjam that inhibited cotton production. This well-known story, although correct in its particulars, does not accurately portray Whitney's contribution to cotton production and, by extension, to the world of the slaves. Recent scholarship on slavery in nineteenth-century America makes it clear that it is time to rethink Whitney's importance and examine the influence of technology on the world of the slaves.<sup>6</sup>

*Inventing the Cotton Gin: Machine and Myth in Antebellum America*, by Angela Lakwete, takes direct aim at the Whitney story.<sup>7</sup> Lakwete makes it clear that Whitney did not "invent" the cotton gin. And while he built a better cotton gin, he was not the only one to improve the machine. As it turns out, Whitney's business partner Phineas Miller was simply better at publicizing Whitney's achievement and securing a patent. Cotton gins using rollers had been in existence for centuries in a variety of cultures. The chief virtue of roller gins was their capacity to preserve the length of the cotton fiber. Longer strands improved quality and made for easier weaving. Roller gins, though, tended to crush seeds and were difficult to operate. Despite these significant difficulties, Lakwete concludes that in 1800 – about the time Whitney built his new cotton gin – ginning technology was not a bottleneck to cotton production.<sup>8</sup>

Whitney and others pioneered the use of a saw gin, which used coarse wire teeth that rotated through a metal grate. The new gin required comparatively little skill to operate and ginned an enormous amount of

cotton. Its chief drawback was that it tore the cotton fiber, making it difficult for manufacturers to weave the cotton into cloth. Eventually most manufacturers learned to use the shorter cotton and saw gins dominated production. Roller gins did not go out of existence, but remained mainly on the Atlantic coast for the longer strands of the Sea Island cotton. The saw gin accelerated the amount of farmland put into cotton production because more cotton could be ginned in a shorter time.

A key consideration for the purposes of this essay is what the new gin technology meant for American slaves. For starters, slaves worked as mechanics in gin factories. It is now clear that slaves were involved in previously unknown phases of the southern economy: they didn't just pick the cotton but also built the machines that processed the staple. Lawkete identifies the slaves who worked for Daniel Pratt and, in a particularly interesting passage, describes how a slave named Jim ran away in 1855. She also argues that the cotton gin became an "ideological weapon" that was used against former slaves in particular, and the South in general.<sup>9</sup> The enduring myth that it took an enterprising northerner to "fix" a southern problem gave credence to the idea of sectional and racial ineptitude. Southerners, white and black, were lazy and dull-witted, according to this view. Technology led to the growth of the Cotton Kingdom, which led to southern identity, which led to the Civil War. The enduring nature of the myth of Eli Whitney reduces a complex issue into a sound bite. Lakwete demonstrates that a variety of individuals (including slaves) improved the cotton gin and that Whitney's contribution was not a leap in the fossil record to some higher form of life.

Lakwete's book helps to clarify the ways that technology, and specifically the cotton gin, influenced the life and labor of slaves. While it is true that a new cotton gin did not single-handedly usher in the cotton revolution, its contribution was still significant. A quicker machine that could clean vast amounts of cotton expanded the possibilities of the staple crop production and enhanced the value of cotton land and, by extension, slaves. Land in states like Alabama, Mississippi, Louisiana, Arkansas, and Texas became much more desirable. White migrants to the region used slaves to fulfill their dreams of economic success. The interstate slave trade transferred millions of slaves from the established states along the eastern seaboard to the newer states near the Mississippi River. In the process, this "Second Middle Passage" wreaked havoc on slave life by destroying families and sending enslaved people to a harsher climate and an unforgiving work regime. The expanding Cotton Kingdom brutalized slaves. In the case of the cotton gin, better technology probably worsened the lives of slaves.

The interaction of technology and slavery comes into clearer focus in Thomas C. Buchanan's *Black Life on the Mississippi: Slaves, Free Blacks, and the Western Steamboat World*.<sup>10</sup> Buchanan finds that a new technology, the steamboat, provided both opportunity and despair for African Americans in the Mississippi River valley, which bisected the new Cotton Kingdom. African

American workers on steamboats, numbering up to 20,000 in the decade before the Civil War, had a surprising amount of autonomy. Slaves who worked as barbers, firemen (stoking furnaces), porters, stewards, cooks, clerks, roustabouts, or deckhands might haggle for better wages or make their own arrangements for employment. A slave might move from ship to ship with his master's approval or rent a room in a river town such as St. Louis or New Orleans. This "self hire" for a slave like William Wells Brown brought status, pride, and, eventually, dreams of freedom. Autonomy provided unusual opportunity. Milton Clarke, a steamboat slave, used his employment to advantage by tracking down his sister Dela who had been sold downriver to New Orleans.

Buchanan brings concepts associated with maritime slaves – mobility and the crossing of boundaries – to bear in his analysis of the Mississippi River valley. Especially in the Lower South, slaves did most of the work on riverboats. As they hauled freight or purchased food served on board they came in contact with other slaves. Moving up and down the river, African American workers were able to establish intricate webs of information that ran through communities and plantations that touched the river. News and rumors could go from New Orleans to Louisville in less than a week. Steamboats provided a means for a select group of slaves to gain intelligence about the world outside the plantation. The knowledge that free soil was only a few days away by boat could be a powerful piece of news for a disgruntled bondperson. The Missouri Supreme Court put it bluntly, writing that a steamboat slave "will be associated with free negroes, and others who will not be unlikely to leave him in ignorance of the various opportunities which present themselves for escape."<sup>11</sup>

Steamboats provided a tempting means of escape for slaves. Brown worked for several years on a riverboat before running away. One day he transferred to a steamer bound for Cincinnati. Since he was intimately acquainted with the river culture, Brown easily blended into boat's work culture. When the steamboat touched Ohio soil, Brown picked up a piece of freight and carried it ashore. He simply kept walking, all the way to freedom. Buchanan includes a number of similar stories in the book, which is one of the work's strengths. The reader develops a good sense for the steamboat culture that a man like Brown could manipulate to his advantage. The transience of life on the river meant that enslaved steamboat workers were less likely to be missed if they ran away. And slaves who cultivated contacts along the river called in favors during escape attempts, making the journey a little less perilous.

If some slaves used the opportunities created by steamboats to make a better world for themselves, it is also true that steamboats undid the world of others. As Buchanan argues, the interior of a western steamboat could be a "terror" for African Americans.<sup>12</sup> While a few slaves used riverboats to repair their shredded family ties, thousands more were separated from their loved ones by the steamboats' whistle. Countless slaves went downriver on

steamboats, often in chains, bound for the slave markets and plantations of Louisiana and Mississippi. Slave traders forced their human commodities onto steamboats, where slaves became just another form of freight, packed next to the cotton bales, crates, and animals. As a steamboat worker, Brown himself prepared fellow bondpeople for sale in the slave markets of New Orleans. Moreover, the proximity of white and black laborers within the close quarters of the steamboat often escalated racial tensions. Shipboard brawls were common and violence on steamboats seemed endemic. Female slaves working as waitresses or chambermaids faced the specter of sexual violence. Passengers or crewmembers who propositioned, fondled, or raped black women faced almost no consequences for their debauchery.

Although Buchanan's focuses squarely on life and culture on the boats, slaves did not have to work or travel on a steamboat to have their lives influenced by this new technology. On plantations along the rivers, for instance, landowners established woodyards to sell fuel to steamers. Planters often detailed a few slaves to the riverside to chop up wood that would otherwise be not used. Woodyards were a steady cash cow for planters, since a large steamboat burned fifty to seventy-five cords of wood a day. With wood selling for \$2 to \$4 a cord, planters could earn thousands of dollars a month with almost no expense. Steamboats also made slave labor more responsive to changing demands. Owners sent rented slaves quickly and cheaply up and down the river. And, probably most importantly, steamboats made the massive transportation of cotton a reality along the Mississippi River. Flatboats and keelboats could carry limited amounts of freight, but large steamboats carried over 4,000 cotton bales at a time. Cheap and efficient transportation of cotton to market made the staple even more profitable – and fastened slavery more firmly to the lower Mississippi River valley. Like the cotton gin before it, steamboat technology became a pillar of the southern economy and led to profound changes in the lives of slaves.

It was in sugar production, though, that technology had the biggest impact. In *The Sugar Masters: Planters and Slaves in Louisiana's Cane World, 1820–1860*, Richard Follett describes a world of sugar plantations that was technologically advanced and fully capitalist. White slaveowners in southern Louisiana created a process of agro-industrial sugar production that generated a particularly ruthless form of slavery. Sugar plantations were heavily industrialized when compared to other agricultural pursuits in the South. Whites who produced sugar spent an average of \$20 per acre on machinery, a figure much higher than the average for cotton planters. Slaves had to be familiar with steam engines, vacuum processing, cane carriers, and conveyor belts. Planters carried out a “technological revolution,” according to Follett, and were constantly refining their methods and machinery in the hopes of boosting production – and enhancing profits.<sup>13</sup>

Technology enormously influenced the life and labor of slaves involved in producing sugar. Since most of the work was physically demanding, the sugar masters preferred young, male slaves who were physically more powerful

than women or older slaves. This age and gender selectivity wreaked havoc in slaves' lives. Up to 85% of slaves sold to sugar planters were men. Slaves imported to sugar plantations came as individuals, not in family units, and the relative paucity of women made stable family life difficult, if not impossible, for many slaves. The natural growth rate of 6–7% on sugar plantations was appallingly low, as a combination of few women, poor healthcare, meager diet, and murderous working conditions caused slave mortality to soar. These conditions were made worse by factory-like discipline. Masters used horns and chimes to reinforce time consciousness, leading Follett to conclude that “time defined the sugar regime.” The sheds and production facilities of sugar plantations resembled factories rather than plantations. Follett even asserts – perhaps without enough evidence – that the slave quarters looked like small industrial villages. His point is clear enough: sugar plantations were hives of capitalistic production.<sup>14</sup>

Faced with such brutal conditions, one might expect the bondpeople to engage in sabotage, work slow downs, or similar activities to impair sugar production. Many of the slaves were highly skilled and could withhold their talent at key moments. Follett, however, finds little evidence of endemic workplace resistance. There were certainly isolated episodes, but nothing that would indicate a widespread assault on masters' power. Planters skillfully and deviously used a series of incentives to coax the maximum amount of labor from their slaves. Follett contends that economic rewards like bonuses and the opportunity to raise their own crops gave slaves some leverage in the master-slave relationship. Such incentives induced slaves to work harder and overlook their lack of material comforts. Rewards also brought stability to the plantation since slaves tacitly acquiesced to their terms of enslavement. This delicate dance of paternalism or reciprocity allowed slaves to assert their individuality and gave masters the opportunity to pose as a civilizing force for their slaves. The undercurrent of wage labor within slavery produced a unique form of capitalism.

Follett's book is an interesting counterweight to Dew's examination of industrial slavery. If we accept that sugar masters were able to develop their plantations into a type of factory, then the effects on slaves were noticeably different than what might be found at Buffalo Forge. The sugar masters imposed a harshly Dickensian regime, whereas the slaves in Dew's book were treated with some respect. Increased mechanization, then, created opportunities for exploitation in the sugar world rather than opportunity for slave agency. The same might be said for bondservants involved in hemp production. An increase in cotton production raised the demand for rope for tying bales. Planters diversified their investments by building more ropewalks and factories, especially around Louisville. Most of the steam-driven machinery was operated by slaves, who were cheaper to hire than free laborers. These slaves labored in dangerous and filthy factories. The description of life in rope production squares more with Follett than Dew.<sup>15</sup>

The shift to more industrial production coincided with a growing time consciousness, as can be seen in *Mastered by the Clock: Time, Slavery, and Freedom in the American South* by Mark M. Smith. Masters increasingly used the clock to bring order and routine to their agricultural pursuits. Modernity could be glimpsed on the watch's face. The turn towards scientific agriculture bolstered the concept of using time to regulate slave activities, and some planters anticipated the teachings of Frederick W. Taylor. Once slaveowners started relying on the clock to measure tasks, allocate free time, and increase efficiency on their plantations, the technology of measuring time exerted a powerful influence over slaves' lives. Whites tried to encourage steady, rather than strenuous, work and instill a sense of time consciousness in their slaves. The clock became another master, as bells, chimes, and shouts signaled the start of the work day, a lunch break, or the time to be in bed. Masters wanted slaves to understand that they (the masters) gave time – and they could take it away. As Smith points out, clock time was “the ideal plantation regulatory and disciplinary device.”<sup>16</sup>

This dramatic reshaping of slave labor on plantations came freighted with a number of tensions. Whites became “mastered by the clock” when they valued punctuality above all else. Examples of southerners rushing to catch a train or to get a letter to the post demonstrate that time can be the most unforgiving of masters. Slaves did not always comply with the new emphasis on watching the clock. Smith argues that tendency of some African Americans to resist white time sensibilities was less a heritage of Africa than a strategy of resistance to slavery. Slaves at first retained a task-oriented sense of time, but masters were able to inculcate a sense of clock time in bondservants, especially through the use of punishment. The marriage of the watch and the whip proved to be a most unhappy one for slaves. Bondservants deliberately ran afoul of masters' time discipline as a way to challenge of white authority.

Smith's book is important to understanding the influence of technology on slaves' lives. So many of the changes for slaves – working in a factory, loading freight on a steamboat, or processing sugar cane – were directly tied to making efficient use of time. Masters tried to wring every last advantage they could from their slaves; parsing the day into hours and minutes could bring coherence and structure to a variety of tasks. Although Smith remains committed to a pre-capitalistic view of the larger antebellum South, many of his examples point in another direction.

Perhaps a better approach might be for historians to approach the South as an emerging capitalist society. In this paradigm, slavery would not be automatically yoked to pre-bourgeois assumptions. Instead slavery served as a filter for economic choices. In many cases planters made economic decisions for their bondservants – spending money for food, clothing, and tools. The plantation system, with its proven profitability and ability to enforce a racial caste, led to conservative economic behavior. Southern industry, although perhaps an attractive investment, may not have given enough control of



slave behavior nor imparted sufficient prestige to whites. Yet the South was coming under the sway of the “market revolution,” and white southerners were more aggressively pursuing connections with national and international markets. This lurch towards a more vibrant economy set off tremors that shook the South and made slaveholders consider whether their ambitions might ultimately threaten the social order.<sup>17</sup>

Slaves were not spectators to market forces that were making inroads into the South. As recent scholarship is making clear, bondservants were involved in an informal economy and sometimes participated as equals in the marketplace. The well-worn paradigm of slave agency might prove its utility in showing that slaves made economic decisions that influenced the course of the southern economy. The study of the advance of technology into the lives and labor of slaves, then, might hold some clues for understanding the fundamental nature of the antebellum South.<sup>18</sup>

### Notes

<sup>1</sup> E. D. Genovese, *The Slaveholders' Dilemma: Freedom and Progress in Southern Conservative Thought, 1820–1860* (Columbia: University of South Carolina Press, 1992); E. Fox-Genovese and E. D. Genovese, *Fruits of Merchant Capital: Slavery and Bourgeois Property in the Rise and Expansion of Capitalism* (New York: Oxford University Press, 1983).

<sup>2</sup> These concerns and the relevant historiography are listed in A. G. Crothers, “Agricultural Improvement and Technological Innovation in a Slave Society: The Case of Early National Northern Virginia,” *Agricultural History*, 75 (Summer 2001): 136–8.

<sup>3</sup> L. C. Gray, *History of Agriculture in the Southern United States to 1860*, 2 vols. (Gloucester, MA: Peter Smith, 1958), 1: 469–71, 2: 779–810; J. Oakes, *Slavery and Freedom: An Interpretation of the Old South* (New York: Vintage Books, 1990), 53. Gray's discussion of technology is severely limited. He notes that small farmers and “middle class” planters were “very slow to adopt improved implements” (2: 794) and most mention of technology involves plows and threshing machines.

<sup>4</sup> J. Chaplin, *An Anxious Pursuit: Agricultural Innovation and Modernity in the Lower South, 1730–1815* (Chapel Hill: University of North Carolina Press, 1993).

<sup>5</sup> R. S. Starobin, *Industrial Slavery in the Old South* (New York: Oxford University Press, 1970); C. B. Dew, *Bond of Iron: Master and Slave at Buffalo Forge* (New York: W. W. Norton, 1994); M. Takagi, *Rearing Wolves to Our Own Destruction: Slavery in Richmond, Virginia: 1782–1865* (Charlottesville: University Press of Virginia, 1999); M. T. Gavin, “From Bonds of Iron to Promised Land: The African-American Contribution to Middle Tennessee's Antebellum Iron Industry,” *Tennessee Historical Quarterly*, 64 (Spring 2005): 25–43. The most recent work on slave hiring is J. D. Martin, *Divided Mastery: Slave Hiring in the American South* (Cambridge, MA: Harvard University Press, 2004).

<sup>6</sup> W. J. Cooper, Jr. and T. E. Terrill, *The American South: A History*, 3rd ed., 2 vols. (New York: McGraw Hill, 2002), 1: 180. See also p. 209 of the same volume: “The invention of the cotton gin made it economically feasible to grow enough cotton” to meet world demand. Another southern history texts that places primary importance on the cotton gin is J. B. Boles, *The South Through Time: A History of an American Region*, 3rd ed., 2 vols. (Upper Saddle Ridge, NJ: Pearson Prentice Hall, 2004), 1 :161.

<sup>7</sup> A. Lakwete, *Inventing the Cotton Gin: Machine and Myth in Antebellum America* (Baltimore: Johns Hopkins Press, 2003).

<sup>8</sup> *Ibid.*, 45–6. This interesting and important point is not elaborated upon in the text, a surprising omission.

<sup>9</sup> *Ibid.*, 177 (quotation). Jim's story is told on pp. 109–10. For more on Daniel Pratt's gin factory, see C. J. Evans, *The Conquest of Labor: Daniel Pratt and Southern Industrialization* (Baton Rouge: Louisiana State University Press, 2001). Despite Evans's focus on the contribution of Pratt to southern industrialization, he is silent on most issues discussed in this essay.

- <sup>10</sup> T. C. Buchanan, *Black Life on the Mississippi: Slaves, Free Blacks, and the Western Steamboat World* (Chapel Hill: University of North Carolina Press, 2004).
- <sup>11</sup> *Ibid.*, 103. Scholarship that incorporates resistance is too numerous to mention, but significantly there is no common agreement as to what constitutes the concept. Recent works on maritime slavery that stress agency are W. J. Bolster, *Black Jacks: African-American Seamen in the Age of Sail* (Cambridge, MA: Harvard University Press, 1997); D. S. Cecelski, *The Waterman's Song: Slavery and Freedom in Maritime North Carolina* (Chapel Hill: University of North Carolina Press, 2001).
- <sup>12</sup> *Ibid.*, 53.
- <sup>13</sup> R. Follett, *The Sugar Masters: Planters and Slaves in Louisiana's Cane World, 1820–1860* (Baton Rouge: Louisiana State University Press, 2005). The quotation is from p. 30.
- <sup>14</sup> *Ibid.*, 110.
- <sup>15</sup> J. F. Hopkins, *A History of the Hemp Industry in Kentucky* (Lexington: University of Kentucky Press, 1951), 115–16, 132–6.
- <sup>16</sup> M. M. Smith, *Mastered by the Clock: Time, Slavery, and Freedom in the American South* (Chapel Hill: University of North Carolina Press, 1997). Quotation on p. 117.
- <sup>17</sup> Harry Watson describes the South as having a “dual economy,” or a mixture of capitalist and non-capitalist elements. See H. L. Watson, “Slavery and Development in a Dual Economy: The South and the Market Revolution,” in M. Stokes (ed.), *The Market Revolution in America* (Charlottesville: University of Virginia Press, 1996), 43–73.
- <sup>18</sup> D. C. Penningroth, *The Claims of Kinfolk: African American Property and Community in the Nineteenth-Century South* (Chapel Hill: University of North Carolina Press, 2003). Penningroth states that slaves were not “budding capitalists” (pp. 76–7) but my point is that they were actors in an economy where they had long been assumed to be silent witnesses.

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