

CHAPTER 1

Slavery and the Civil War

1.1 REVOLUTION AND FORMATION OF THE UNITED STATES

This book incorporates the history of Black and other disadvantaged minorities into our accepted narratives to provide an inclusive American economic history. Three important events in 1776 initiated developments that are important in this inclusive American economic history: Adam Smith published *The Wealth of Nations*, James Watt patented the steam engine, and the American colonists signed their Declaration of Independence. One event was economic, second historical, and the third American. Together, they laid the foundation of American economic history with cumulative progress for whites and slavery and segregation for Blacks. I describe these three events in turn to reveal their implications and their omissions.

Adam Smith published *The Wealth of Nations* in 1776. This book is the bible of the new religion known as economics. Smith argued that the division of labor was the source of productivity. As he expressed it at the start of *The Wealth of Nations*, “It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest.” In other words, the purchase of dinner is a commercial activity of mutual benefit, not a charitable gift. Smith illustrated his mechanism with a pin factory and then with dinner. He implicitly extended his argument to national wealth, but not in this explicit form (Smith, 1776, Book I, Chapters 1–2; Skidelsky, 2019).

Adam Smith’s writing highlighted the income inequality typical of many agricultural economies. While we cannot pin down the exact numbers, it is likely that only the top 10 percent of people in Great

Britain could read his book. Smith noted that he was conscious of the rest of the population in his discussion of investment: "When the stock which a man possesses is no more than sufficient to maintain him for a few days or a few weeks, he seldom thinks of deriving any revenue from it." However, as with the founding documents of the United States, Smith concerned himself primarily with the educated class. He was typical of his age in ignoring slaves. But he was prescient in his description of what freedmen and then segregated Blacks would face (Smith, 1776, Book II, Chapter 1).

James Watt patented the steam engine in 1776. This was the start of the British Industrial Revolution, and many English cotton factories powered their machines with steam power. American cotton factories were powered mostly with waterpower, as the New England ports were close to the fall line of several rivers. In both countries, steam power led to railroads in the course of the nineteenth century, making overland transportation competitive with water transport for the first time in history. African Americans were brought from Africa by sea, and some of them later would be porters on Pullman cars.

The invention of the steam engine relegated Smith's observations about the division of labor to a lesser part of economic history. Gains from the division of labor now are spoken of as "Smithian growth," in contrast to the economic growth deriving from steam-powered energy, initially in mines and factories prevalent during the Industrial Revolution. This is not a criticism of Adam Smith, who could not have forecast the future, but a reminder that he wrote in the late eighteenth century. Nevertheless, his insights into the productivity effects of the division of labor are still cited and utilized today.

The American colonists issued their Declaration of Independence in 1776. As noted in Introduction, "all men are created equal" did not include African immigrants. When Southern farmers first began to expand farming in the seventeenth century, they employed white and Black workers equally, subject to restrictions held over from medieval practices of lords and their dependent farm workers. The farmers' problem was not Africans, it was lack of labor to work their abundant land. (A few Northern areas, like the Hudson River Valley, had similar problems.) American farmers encouraged European immigration by

loaning immigrants the money to get to America with their farm labor obligations as security. European workers became indentured servants, who would regain their freedom of action when they had paid back their loan and their indentures were over.

The farmers did not apply this approach to African immigrants because the Africans did not come to America voluntarily. English and Dutch migrants mostly came because they wanted to come, while African migrants were purchased and brought to America against their will. As Oscar and Mary Handlin stated in a classic article, "To raise the status of Europeans by shortening their terms would ultimately increase the available hands by inducing their compatriots to emigrate; to reduce the Negro's term would produce an immediate loss and no ultimate gain" (Handlin and Handlin, 1950).

The expansion of the African slave trade at the end of the seventeenth century provided Southern planters with abundant labor in a framework that developed to differentiate between whites and Blacks. The difference that had opened up between European and African immigrants led to landowners' fears of plots and conspiracies among the Black immigrants and to restrictions on Black workers. The Handlins concluded, "At the opening of the eighteenth century, the Black was not only set off by economic and legal status; he was 'abominable,' another order of man" (Handlin and Handlin, 1950).

Edmund Morgan, another respected colonial historian, asserted more recently that Southern planters adopted racism to justify their use of slavery. In other words, he reversed the causation in these early events. Racism was not the result of economic choices, but invoked to justify and defend economic decisions made on other grounds: "Racism thus absorbed in Virginia the fear and contempt that men in England . . . felt for the inarticulate lower classes. . . . And by lumping Indians, mulattoes, and Negroes in a single pariah class, Virginians had paved the way for a similar lumping of small and large planters in a single master class." Morgan closed his book with the assertion that this slavery mentality outlived the Civil War, asking, "Was the nation of equals flawed at the source by contempt for both the poor and the Black? Is America still colonial Virginia writ large?" (Morgan, 1975, 386–87).

The answer, alas, is yes. Morgan's recreation of colonial thought seems more accurate than the Handlins'. Colonial farmers adopted slavery and then borrowed from their English compatriots the same divisions Adam Smith adopted in his books. The illiterate and poor of eighteenth-century Britain were prosecuted for small crimes or vagrancy and imprisoned or sent abroad. They were ignored or mentioned only briefly by the colonial elite. They were the abhorred poor. In the American colonies they were predominantly but not exclusively Black. Native Indians and later Latinos also were abhorred.

Education reveals the severe nature of American slavery because American slave owners discouraged the education of slaves in order to minimize revolts. Roman slaves, who similarly were captives of war but often were freed, had owners who encouraged slaves to be educated and perform responsible economic roles. Adam Smith appreciated Cicero's able speeches because Marcus Tullius Tiro, his slave and secretary, recorded and published them. Cicero freed Tiro as he was so useful to him. Education increased the value of Roman slave labor to the owner and the probability that the slaves would be freed; manumitted slaves became Roman citizens (Temin, 2013, Chapter 6).

Slavery in antiquity and modern times can be classified as open and closed systems. In open slavery, slaves can be freed and accepted fully into the free society. In closed slavery, slaves are seen as a separate group, not accepted into free society, and to marry among the general population. Roman slavery was open; freedmen were Roman citizens, and marriages with widows were common. "By contrast, American slavery [was] perhaps the most closed and caste-like of any [slave] system known" (Watson, 1980, 7).

Think of a continuum of incentives among workers. Modern jobs are near, but not at, the open end; one can be fired or demoted for nonperformance. American slavery was near the opposite end; the threat of punishment was ubiquitous, while rewards for good service were rare. Roman slavery, by contrast, was more like modern jobs, although rural and unskilled slaves in ancient Rome may have experienced something like American slavery (Temin, 2004).

Education shows a mechanism repeated time and again in our history. The ruling class decides that the pariah class has an uncomfortable trait.

The ruling class in fact often projects some of its own uncomfortable traits onto the pariah class. Then the ruling class sets up conditions to create or sustain these traits in the pariah class. So, if Blacks – or other immigrants – were uncivilized, then make it illegal to educate them. Then Blacks can be condemned for their ignorance. American slavery was outlawed by the Fourteenth Amendment, but the master class still impedes the education of the pariah class by direct and indirect means.

The three events of 1776 foretell the story ahead. They concerned economics (Smith), history (steam power), and America (independence). Ironically, the American event overlooked the role of enslaved persons in the South. And that is the point here. This book describes the history of Black and other disadvantaged minorities to present an inclusive American economic history. While there are extensive libraries of Black history and white economic history in the United States, there has not been enough attention to bringing them together.

This early history of the United States embodies themes that pervade later history as well. Jefferson saw the future of the United States in its past with a concentration of agriculture. This proved accurate for the South up to the Civil War, when the emphasis shifted to settling the outer portions of the Louisiana Purchase. The North, following Hamilton's spirit, was committed to industrialization in the East and transport to the West. The western expansion occupied the North after the Civil War and distracted it from reconstructing the defeated South along more inclusive lines. Workers in both activities were composed of immigrants who were accepted into white society after some delays, while Blacks continued to be held in involuntary servitude.

For example, many Irish came in response to the famine at mid-century. They were grouped initially with Blacks as despised manual workers. The new immigrants joined with abolitionists to oppose slavery out of sympathy with their attempts to free Ireland from English rule. Only when many Irish Americans had abandoned this stance were they considered whites who then joined other whites and adopted their racial views as their own (Temin, 2017, 54).

Bernard Bailyn noted that there were few Blacks in colonial New England, but he asserted that slavery made the New England economy prosper. Profits from the Atlantic trade came from the flow of New

England's products to slave plantations and the sugar and tobacco that slaves produced.

Without the sugar and tobacco industries, based on slave labor, and without the slave trade, there would not have been markets anywhere nearly sufficient to create the returns that made possible the purchase of European goods, the extended credit, and the leisured life that New Englanders enjoyed. Slavery was the ultimate source of the commercial economy of eighteenth-century New England. Only a few of New England's merchants actually engaged in the slave trade, but all of them profited by it, lived off it. (Bailyn, 2000, 254–55; see also Solow, 1991)

The Declaration of Independence did not come at the start of the Revolutionary War; it was a sequel to the earlier French and Indian War, 1754–63. France and Britain both wanted to control North America at that time. France had Canada, and England held the thirteen colonies east of the Appalachian Mountains. France and Britain came into conflict over access to the Ohio River west of the mountains, and the British won after several years of fighting.

George III of Britain decided after the war that he needed to keep British soldiers in his colonies to protect them from the French. He also decided that the colonists should help pay for the expensive war and the standing army since they were for the colonists' benefit. He instituted the Tea Act and the Stamp Act among other taxes. The Tea Act led to the Boston Tea Party when Bostonians dumped tea into the harbor in late 1773. Tempers flared, and the British marched into Lexington and Concord, Massachusetts, in a fruitless attempt to find American arms in 1775. The Declaration of Independence expressed the colonists' desire to start a new war between Britain and its own colonies.

It is far easier to start wars than is to end them. To end a war, both sides need to stop fighting. This can be arranged in one of two ways. If one side is far stronger, it can fight until the weaker side surrenders without conditions. If the sides are more evenly matched, then they must agree on a peace treaty that binds them both from future violence. The British, with the largest and finest army and navy in the world in the late eighteenth century, thought they were in the first case and that they could easily convince the colonists to abandon their war.

In early December 1776, British commanders believed that they were very close to ending the rebellion, and American leaders feared they might be right. The American rebels had lost every battle throughout the previous five months. George Washington just barely evacuated his army from New York City as the British moved in. But Washington's strategic purposes remained constant: "to win independence by maintaining American resolve to continue the war, by preserving an American army in being, and raising the cost of the war to the enemy" (Fischer, 2004, 372).

On December 25, 1776, George Washington led a ragged army of 2,400 colonials across the Delaware River into New Jersey. There was a terrible storm that night that froze the soldiers and imperiled their voyage, but also kept the British from seeing the colonials coming. The colonials then marched all night and defeated 1,500 Hessians at Trenton. A week later they marched overnight to Princeton and defeated British reinforcements rushing to Trenton. These were small battles – the Battle of Antietam in the Civil War involved one hundred times the number of soldiers – but they were highly significant. The promise of a speedy defeat changed to a continuing struggle (Fischer, 2004, 346–62).

By the spring of 1777, many British officers concluded they could not win the war, and the Americans were confident they would not be defeated. The war continued into 1781 with fighting in the North and the South in what appeared to be a stalemate. The French entered the war to defeat their traditional rivals, the British, in 1778, and broke the stalemate. Washington defeated Cornwallis in Yorktown, Virginia, in 1781 (Ferling, 2007).

While Washington's steadiness was critical in his military success, his views on slavery changed rapidly after 1775, and he began to speak of slavery as a great evil. He wrote of his opposition to slavery in 1777 and emancipated slaves in his will, although his estate was largely his wife's. Washington's views of African immigrants were hardly as well-known as his military victories, but it is intriguing to realize that the South was not universally supportive of American slavery (Fischer, 2004, 15.)

The colonies, now states, signed the Articles of Confederation and Perpetual Union in 1781 and negotiated peace with Britain in 1783. But

the Continental Congress needed unanimous consent to impose taxes or raise money in other ways. States therefore failed to honor or repudiated their wartime debts. Delegates to the Continental Congress requested a meeting to propose amendments to the Articles of Confederation. This gave rise to a group in Philadelphia that set out to write a new constitution, which was ratified by all the states in 1788 (Maier, 2010).

The delegates came from all over, and Robert McGuire and others have tried to understand how where they came from affected their choices for the federal government while at the convention. Delegates from large states and coastal areas favored issues that increased the power of the national government over the states. Delegates who represented slave owners were less likely to vote for federal power. The slave owners and their descendants would continue this preference for local rather than national control long after slavery was abolished. Even in the twentieth century, Southern Senators fought for state and local administration of New Deal measures and the GI Bill. These regional patterns from the late eighteenth century lasted for two centuries (McGuire and Ohsfeldt, 1986).

In order to get universal support for the Constitution, the Philadelphia negotiators made compromises with the slave-owning states. They chose not to mention slaves or Blacks by name, but employed euphemisms to make their points, perhaps in response to views like George Washington's. The most important compromise was for allocation of taxes and representatives among the states: "Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons (US Constitution, Article I, Section 2)." The final phrase, "three fifths of all other Persons," was eliminated in the Fourteenth Amendment, Section 2.

There were 1.70 million whites and 0.92 million Blacks in the South in 1800. Three-fifths of 0.92 is 0.55. If we add this number to 1.70, it increases it by over 30 percent. There were of course property requirements to vote in various states, but a one-third increase in voting and

representation seems about right. This was a huge concession to the slave-owning South, and it ensured their political dominance in the United States for the foreseeable future. All United States presidents for fifty years after the Constitution was ratified were slave owners, with the isolated exceptions of single terms by the revolutionary John Adams and his son, John Quincy Adams (*U. S. Historical Statistics*, 1975, Series A172–194).

To get an idea of how much this concession mattered, consider the effect of mass incarceration today. The Census ruled that prisoners should be counted where they are imprisoned, and most prisons are in rural settings. Since prisoners cannot vote, they are like enslaved persons in the early nineteenth century. They are counted in the representation from rural areas, which helps to explain why there is much discussion of rural voters in the early twenty-first century, despite the exodus of white people from those areas. But while their impact affects policy in rural states, the number of prisoners compared to the total state population is an order of magnitude smaller than the number of slaves. (If I had data for rural populations, the numbers would be closer.)

The Constitution, having allowed this concession to the South, tried to offset its effect by asserting that the slave trade could be abolished after twenty years: “The Migration or Importation of such Persons as any of the States now existing shall think proper to admit, shall not be prohibited by the Congress prior to the Year one thousand eight hundred and eight, but a Tax or duty may be imposed on such Importation, not exceeding ten dollars for each Person” (Article I, Section 9). Again, slaves were not named. Moreover, the offset was limited. Slave imports were allowed for twenty years while the voting aid from slaves took effect immediately. Northern opponents of slavery wanted a compromise, but they lacked the power or perhaps the negotiating skills that delegates from slave-owning states had.

Alexander Hamilton, who had been George Washington’s aide during the war, was appointed Secretary of the Treasury in Washington’s cabinet. He issued three reports in 1790–91 that were designed to provide an economic foundation for the new country. The first report on public credit urged Congress to assume the wartime debts of the colonies that

had not been paid under the Confederation. New excise taxes would provide money for purchasing bonds and paying interest.

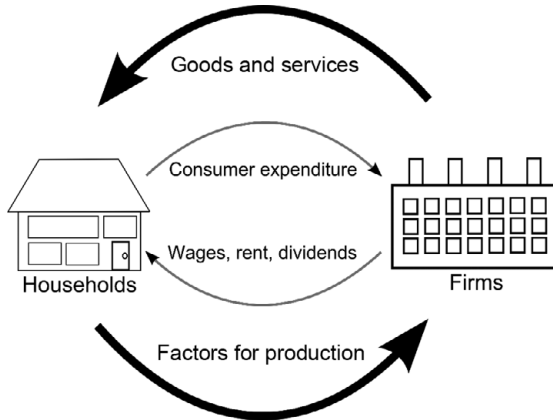
This report was violently opposed by James Madison, who followed Jefferson's lead. It was Hamilton's first report, and it would pay all bonds regardless of who owned them after the war. Economic historians have lauded this report as a means to create a good reputation for American debt that would enable the new country to borrow and invest. Madison argued that poor people had sold their bonds to speculators who would gain from Hamilton's plan. He was persuaded to support the report in exchange for moving the nation's capital from Philadelphia to a new portion of Virginia, not by any help to poor people.

The second report recommended that the government propose to charter a national bank for twenty years. Madison again opposed the national bank, saying that the Constitution left that function to the states. I will say more about the national bank when discussing the 1830s.

The third report was on manufacturers. While Hamilton praised agriculture, he argued for manufacturing in addition. Domestically, manufacturers would increase demand for agricultural products and provide employment for varied workers. Internationally, manufacturers would free the United States from having to search out foreign sources and make the United States a good trading partner. Hamilton argued for several programs to encourage manufacturers, from tariffs to raising money for transportation of goods.

The two subjects of Hamilton's reports are connected by what economists call the circular flow model, shown in Figure 1.1. Think of a circle with people on one side and businesses on the other. Money and debts go around clockwise while manufacturers and other goods go around counterclockwise. The two flows are equal and opposite, for people need to work to earn money from farms or businesses, which they spend to buy products, and businesses need to sell their products for money to be able to pay their workers.

Adam Smith explained how this works: "It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest." The circular flow model summarizes how buying your dinner fits into the economy as a whole with the interaction of people and businesses. (The model ignores



1.1. Circular flow model. https://upload.wikimedia.org/wikipedia/commons/b/b8/Circular_flow_of_goods_income.png

slavery, which was central to the economy Hamilton was improving. I will show how slavery fits in a little later.)

It is easy to see where the goods come from, but harder to understand where money comes from. Ancient Greece and Rome had coinage and loans by banks, and specialized loans were added as trade expanded again in the early modern period. The most widespread loans in the early history of the United States were in bills of exchange. A bill of exchange was a loan that would be paid back at a later time – often three or six months – in a different place. The addition of another place was to simplify loans for trade, as in selling cotton from the American South to Britain, where customer would be paying off their loans.

Bills of exchange are confusing because they were most useful when travel and communication were slow. To clarify this connection, recall that the Constitution gave the federal government the power to tax, including taxing imports by tariffs. The Constitution was needed because the Confederation lacked this power, which is why there were so many state debts outstanding in the 1780s. Article I, Section 8, states the first power of the new federal government as follows: “The Congress shall have Power to lay and collect Taxes Duties, Imposts and Excises.” It was this power to tax that enabled Hamilton in his first report to Congress to

recommend assuming all state debts. Tariffs were the primary tax that funded the government at that time, which Hamilton recommended in his third report.

The new national debt carried an interest rate to compensate investors for investing in government bonds. Banks – led by the national bank Hamilton recommended in his second report – handled the transfer of money from the tariff payments to the investors. This movement of money within and between banks is not visible to most observers, but it is an important function of the banking system. Bills of exchange were like government or business debts in function, but differed in their form. The interest for lending money was collected at the beginning of the loan as a discount from the initial bill. This is why these bills often are listed as “discounts” in bank statements. As David Hume said a century earlier, “It is well known of what advantage it is to a merchant to be able to discount his bills on occasion” (Hume, 2012).

Bills of exchange also were paid in a different place, and this adds another step in pricing them. The discount on the original bill was both an interest charge and an exchange rate for another currency. Economic historians have used this double charge to estimate exchange rates. They assume that the interest charged for a bill of exchange is the same interest rate paid for commercial loans, loans by businesses, which are repaid in the same currency as the loan. Subtracting this from the discount gives an estimate of the exchange rate charged. Today, we assume that investors, lenders, and borrowers knew all of this and competed with each other to create market prices for loans. It is that assumption that enables economic historians to make their calculations by assuming that there is a uniform interest rate for competing loans.

Hamilton’s reports contained wise policy, particularly for a new country that needed to recover from a war, pay its debts, and promote expansion. They all were adopted and provided a framework for America’s subsequent economic growth and westward expansion. Southerners who wanted a minimal federal government opposed them, although they too were interested in westward expansion. Their descendants appeared again in more recent times, as I will describe in Chapter 7 (Chernow, 2004; Wilentz, 2018).

1.2 LOUISIANA PURCHASE, MISSOURI COMPROMISE, AND ITS AFTERMATH

President Jefferson bought the Louisiana Purchase from France in 1803. The United States thereby gained land west of the Mississippi River that greatly enlarged the land area of the nascent United States, extending the area Britain had held onto east of the Mississippi River at the end of the French and Indian War thirty years earlier. The war was very expensive, and Britain's efforts to tax the colonists to help pay its debt raised violent protests. The purchase also was expensive, but purchase was a far easier way to extend the United States westward than the French and Indian War. Hamilton's first report to Congress ensured lenders to the new country that their loans to the United States would be paid. Even though Jefferson had opposed Hamilton's reports that restored financial stability to the country after the Revolutionary War, he was happy to utilize the financial tools it gave him.

We think of this transaction as a purchase, but for France it was a sale. France needed the money to fight Britain as it turned away from America to face the threat to Europe under Napoleon's rule. And from the French point of view, the financing of Louisiana was financed by a large and long-lived bill of exchange. France got the money from the sale immediately, although the United States would only pay over time as it settled and incorporated the new land. And while the United States paid in dollars, the French received French francs.

The financial question was who loaned the money in the meantime. This was such a large transaction that it was more like a royal loan than a commercial sale, and it was arranged by Alexander Baring – who went on to help finance many other government loans over time – and other investment bankers. They appealed to the buyers of Hamilton's loans when he paid off the wartime bonds and to other wealthy investors and traders in France and Holland. While the negotiations were difficult and the payments long-lasting, the interest rate on this "bill of exchange" turned out to be only 6 percent (Neal, 2020).

Jefferson also ended the slave trade five years later in 1808, as soon as possible after the Constitution was adopted. These two actions made sure

that new slaves would not be brought in to farm the newly purchased lands, but that Blacks already enslaved in the South would be sent west to the new lands. Ira Berlin asserted that there were four large migrations of Blacks in the United States. The Western Passage brought Africans from Africa before 1808 to farm Southern land in the first migration. The Louisiana Purchase stimulated the second migration as new lands were opened for settlement (Berlin, 2010).

Farmers were encouraged to migrate west into territories carved out west of the Allegheny Mountains. Once there, the farmers sought to join the original thirteen states in the United States. Eight additional states were admitted to the union from 1803 to 1819. The Constitutional compromise enabled the new states to acquire influence in the House of Representatives. And each state would also send two senators to Washington. This could easily alter the balance of power between the antislavery North and the proslavery South.

This was a major concern to contemporaries, and they made sure in these early years that the Senate balance would be unchanged. There were two new states admitted before the Louisiana Purchase, on the land gained by the French and Indian War, one above the other on the map, Tennessee was a slave state and Kentucky was free. Six more states were admitted after the purchase, three slave states, Louisiana, Mississippi, and Alabama, and three free states, Ohio, Indiana, and Illinois. So far, so good. The Senate balance held.

Then Missouri, containing a lot of slave-holding landowners, applied for statehood. This set off a furious debate in Congress about the westward spread of slavery. An antislavery position was proclaimed by a Representative from Vermont, starting with the euphemisms used in the Constitution to refer to enslaved people:

Hitherto, slavery has not been so recognized by the General Government, as to cause our national character to be materially affected by it; for, although there are states in the Union which, from the necessity of the case, may be termed slave-holding States, it cannot, with truth, be alleged that, as a nation, we have permitted slavery. But if, under present circumstances, Congress shall solemnly decide that it cannot restrain the unlimited extension of it, and that a want of power to do so results from an

unqualified recognition of it by the Constitution, our national character will become identified with it; and instead of its being, as heretofore, a local malady, and susceptible of cure, it must henceforth be regarded as affecting the whole system, and past the hope or possibility of a remedy. (Wilentz, 2018, 199–200)

Feelings clearly were running high, and Speaker Henry Clay maneuvered successfully through the conflicts and produced what became known as the Missouri Compromise. There were two parts. Missouri was to be admitted, balanced by the new state of Maine (previously part of Massachusetts). The Senate balance would be unchanged by admitting one slave and one free state. In addition, slavery was not to be allowed elsewhere in the Louisiana Purchase north of 36°30'. This was a well-known latitude, and it continued the line that divided slaves in Tennessee and freedom in Kentucky. Missouri was north of the line, but no other slave states would be permitted north of the line.

Clay's compromise allowed Congress and the country to progress peacefully on, but not without costs. The intensity of the debate had aroused a lot of emotion, and the tension between states was increased. The tension appears to have been intense enough to discourage the western expansion that had been so exuberant. There were eight new states in the first thirty or so years of the United States, but no other states were admitted into the United States for more than fifteen years after Clay's compromise; the wind appears to have gone out of the western sail. In the words of a historian of the compromise: "[T]he Missouri Controversy can perhaps best be understood as a flash of lightning that illuminated the realities of sectional power in the United States and ignited a fire that smoldered for a generation. . . . When this check to slavery's growth was repudiated by the Kansas–Nebraska Act of 1854 and the Dred Scott decision of 1857, the smoldering embers burst into flame" (Forbes, 2007, 5).

While extensive growth was proceeding in the West, intensive growth was prospering in the East. Cotton plants grow bolls containing cotton-seeds. The seeds need to be removed if the fibers are to be spun and woven, and wool was easier than cotton to prepare in early modern times. Cotton agriculture and industry got a huge stimulus from the invention of the cotton gin by Eli Whitney in 1793. The cotton gin

removed the seeds by combing the cotton fibers into a semblance of linear threads by means of a circular comb that could be turned by hand or other power. The cotton gin lowered the cost of making cotton cloth and started the modern cotton industry. Regional trade grew faster than in the eighteenth century, and international trade grew with clipper ships to China.

Nathan Appleton cooperated with others to introduce the power loom and the manufacture of cotton on a large scale into the United States. He established a water-powered factory at Waltham, Massachusetts in 1814 that employed the first power loom ever used in the United States, copied from the British by a bit of industrial espionage. Appleton sent his foreman to Britain to observe a British cotton factory; the foreman returned with plans for the power loom. Appleton and others purchased the water power at Pawtucket Falls, and he was one of the founders of the Merrimac Manufacturing Company and of the city of Lowell in 1821. Even though the steam engine was a pivotal part of American economic development, water power was key to the rise of the largest antebellum industry.

The growth of the cotton industry, trade related to it, and other production led the nonfarm part of the labor force rise dramatically from 1800 to 1840. Table 1.1 reveals that over one-third of people in Northern states lived in cities by 1860, while less than 10 percent of people in Southern states lived in cities. The North embraced industrialization while the South remained agricultural. The overall growth of the American economy has been roughly estimated from the scarce data, and it looks like per capita GDP grew around 1.3 percent a year on average for the period from the Constitution to the Civil War (David, 1967).

This economic growth was aided by the origin of a Black working class in Southern cities. The cities were small before the Civil War, and Blacks were a minority in them, but Black workers helped urban growth not only as general laborers and household workers, but also as skilled craftsmen and craftswomen. Free Blacks were paid less than slaves and poor whites in the Southern cities, presumably because free Blacks gravitated toward urban living. Women also aided this effort in the cotton industry, which however was only a small part of the Southern economy (Trotter, 2019, Chapter 1).

Table 1.1 Urban population of the United States in 1860^a

Region	Counties with urban populations	Total urban population in the region	Percent of region's population living in urban counties	Region's urban population as percent of US urban population
Northeast ^b	103	3,787,337	35.75	61.66
West ^c	108	1,059,755	13.45	17.25
Border ^d	23	578,669	18.45	9.42
South ^e	51	621,757	6.83	10.12
Far West ^f	7	99,145	15.19	1.54
Total ^g	292	6,141,914	19.77	100.00

Notes:

^a Urban population means people living in a city or town of at least 2,500.

^b Includes Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

^c Includes Illinois, Indiana, Iowa, Kansas, Minnesota, Nebraska, Ohio, and Wisconsin.

^d Includes Delaware, Kentucky, Maryland, and Missouri.

^e Includes Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia.

^f Includes Colorado, California, Dakotas, Nevada, New Mexico, Oregon, Utah, and Washington.

^g Includes District of Columbia.

Source: U.S. Census of Population, 1860.

The Watt steam engine was an important stimulus to this economic growth, which paralleled the growth of the British cotton industry. The Watt engine, like the Newcomen engine that preceded it, was a “low-pressure” engine. That is, it derived its power from the pressure of the atmosphere pushing against a vacuum produced by the condensation of steam. Shortly after 1800 a new type of steam engine, the “high-pressure” engine, was introduced. This engine used steam at higher than atmospheric pressure to push against the atmosphere in the same way that the low-pressure engine used the atmosphere to push against a vacuum. It therefore operated without a condenser. Steam was exhausted into the air at the end of the stroke, and the cumbersome apparatus for condensing it and producing a vacuum was no longer needed.

The possibility of using high-pressure steam was known before 1800, but its use required well-made boilers and accurately machined cylinders and pistons – items that were not within the skills of machinists before the start of the nineteenth century. As a result of many improvements in the years around 1800, some possibly connected with the production of the Watt low-pressure engine, mechanical skill was improved to the

point where high-pressure steam could be employed. The high-pressure steam engine with cylindrical boilers was introduced simultaneously in Britain by Richard Trevithick and America by Oliver Evans in 1803–4. This development, which was an application of new mechanical skills to known mechanical principles, came simultaneously in both countries, indicating that there was a community of skills in the two lands, at least among a few adventurous machinists.

A generation later, almost all stationary steam engines in Britain were low-pressure and almost all American steam engines used high pressure. The American engines were built by 250 different builders, and the average builder made less than five engines. Steam engines were built locally except in the South. The New England cotton industry used water power instead of steam in places like Lowell that were on a river's fall line. The ability to build steam engines appears to have been widespread, and high-pressure steam engines were used in the nascent railroads in both countries. But sail was still the preferred means of transport at this time, and international trade grew as the cotton trade and its internal trade prospered (Temin, 1966).

Andrew Jackson became President in 1829 and moved vigorously to deal with problems he saw with arrangements made by the previous generation. The first problem was the desire for land in the South that was occupied by Indians. George Washington sought to integrate Indians into white society as autonomous nations, but Indians did not learn English or adopt Christianity.

In contrast to African immigrants, Indians were treated as autonomous nations and had signed treaties with the United States. Indian society remained strong, while African Americans were isolated from their former comrades and far from their original communities. Despite these differences, native Indians and imported African slaves were not among the European immigrants that formed the basis of the United States. They were not regarded as equal to the descendants of European immigrants.

President Jackson signed the Indian Removal Act in 1830 continuing the voluntary exchange of land west of the Mississippi for eastern lands relinquished by the Indians and did *not* authorize forced eviction. Jackson said to Congress, "This emigration should be voluntary, for it

would be as cruel as unjust to compel the aborigines to abandon the graves of their fathers.” But he then exceeded his presidential power and ignored previous treaties to force Indians to move. This forceful effort was enforced by a federal bureaucracy that focused on saving money rather than ensuring safety of the movers. They emphasized speed over safety, and the result was that 60,000 Indians were moved west of the Mississippi River and 4,000 of them died along the way or shortly thereafter. The move has been known ever since as the Trail of Tears (Ehle, 1988; Cave, 2003; Davis, 2009–2010).

As noted earlier, the expanding cotton trade required financing, and banks multiplied. The new generation of political leaders was not comfortable with Hamilton’s second report to Congress recommending a national bank. Most banks were chartered by states, and the Second Bank of the United States, chartered by President Madison in 1816, stood alone. President Andrew Jackson vetoed the charter renewal for the Second Bank in 1832 for reasons that are incoherent.

President Jackson opened his veto message by labeling the Second Bank a monopoly: “It enjoys an exclusive privilege of banking under the authority of the General Government, a monopoly of its favor and support, and, as a necessary consequence almost a monopoly of the foreign and domestic exchange.” The Second Bank was the government’s fiscal agent, and it dominated the exchanges, that is, the business of transferring money from place to place. Since the tariff provided about 90 percent of the federal government’s revenue, these earnings needed to be transferred from the coast to the interior to be spent on the military, pensions for soldiers, and the public debt (Temin, 1969, 29n3).

The reasons for using a single fiscal agent are simple. The alternative was to use a variety of agents. Instead of a single bank with many branches, there would be many banks in different places. The government would not be able to deal with a single agent that would allocate funds among its branches; it would have to make these administrative decisions itself. The more fiscal agents it had, the greater would be the government’s ordinary expenses. Jackson appeared here to be supporting state banks over the Second Bank, even though it would cost the government more.

Jackson also objected to the Second Bank's objective to redeem its notes at par as "a bond of union among the banking establishments of the nation, erecting them into an interest separate from that of the people." Jackson appeared here to be opposed to all banks, not just the Second Bank. Jackson ended his veto message by saying: "We can at least make a stand against all new grants of monopolies and exclusive privileges, against any prostitution of our Government to the advancement of the few at the expense of the many." The relevance of that claim to the Second Bank is unclear, particularly as Jackson turned to his "pet banks" to reallocate the government's tariff revenues (Temin, 1969, Chapter 2).

The economic turmoil of the 1830s often has been blamed on Jackson's incoherence, but it appears more likely that it was the result of events far away that related to United States banks that financed the increasing trade of cotton and other goods. Prices of American goods rose by 59 percent after 1834 and then collapsed in the 1837 banking crisis. The inflation has been blamed on the banks, but it came from an increase in silver imports from Mexico. These imports remained steady at four million dollars a year from 1825 to 1833. They then doubled in 1834–35. Bank reserve ratios barely moved in these years; the quantity of money rose because the banks' silver reserves rose.

Table 1.2 shows the supply of money and its determinants in the 1820s and 1830s. Money at this time was composed of banknotes and silver, and the proportion that was banknotes increased sharply in these decades. Banks issued banknotes, and the banks had to be prepared to honor people holding banknotes who wanted to convert them to silver. In other words, banks held silver as reserves for their banknotes. The reserve ratio is the ratio of silver reserves to the number of banknotes issued. The supply of money rose rapidly until 1837. Their reserves grew also after 1835. The reserve ratio fell from around 30 percent to around 20 percent before 1825, and stayed constant as money rose rapidly in the 1830s.

The cause of these exports was not increased Mexican silver production. It instead was a change in the location of their exports. New England clipper ships were engaged in the China trade. They normally took Mexican silver with them to exchange with British traders for bills of exchange payable in London. The British used the silver to buy tea from the Chinese. The British traders however decided that they would rather

Table 1.2 The supply of money and its determinants, 1820–39

Year	Money	Reserves	Reserve ratios
	\$ millions	\$ millions	%
1820	85	41	32
1825	106	29	19
1830	114	32	23
1835	246	65	18
1836	276	73	16
1837	232	88	20
1838	240	87	23
1839	215	83	20

Source: Temin, *Jacksonian Economy* (1969), p. 71.

pay for the Chinese tea with opium from India, using bills of exchange to transmit sales in place of silver. The Chinese government resisted British opium to spare their subjects from addiction. The result was a series of Opium Wars between the Chinese and British.

American traders then were unable to take Mexican silver to China for trade because the wars destroyed the existing trade networks. The silver, not sought elsewhere, ended up in American banks. With constant reserve ratios, the banks loaned more and issued more bank notes. With more money floating around a roughly constant amount of goods, prices rose.

This had to come to an end, which it did spectacularly in the 1837 banking panic. The ultimate cause of the crisis was the Chinese Opium War that disrupted American trade and set the inflation in motion. The panic also was the result of Jackson's veto of the Second Bank, leaving the American banking system without a leader. Three events in 1836 and 1837 precipitated the crisis: The Bank of England refused to discount British loans to the United States, President Jackson forced buyers of public lands use specie instead of banknotes, and he distributed the government surplus that had accumulated after the Revolutionary debt had been paid off. Jackson's first move forced people to withdraw money from banks; his second move moved money westward

and hampered trade. In 1837, the price of cotton fell, and Jackson's actions moved bank reserves out of New York (Temin, 1969, Chapter 4; Rousseau, 2002).

The price of cotton fell rapidly after the banking panic, the manufacture of cotton goods fell, and urban employment fell in American cities. States defaulted on their loans in 1839 as plans for canals and railroads were put on hold. Blacks of course suffered as their owners lost income in these hard years. As is often the case, the pain was felt more by the workers than the owners. Lower cotton prices meant less food and other care because slave owners maintained their style of living through thick and thin, while the variations in their incomes were passed down to their slaves.

I noted earlier that Jackson used "pet banks" to distribute government funds around the country. These banks thought that the government deposits were going to be stable and expanded their loaning more than other banks. The crisis started early in 1837 when New York Bank Commissioners uncovered various illegal activities in two large pet banks that led to runs on these banks. These troubles show the effect of corruption in the Jacksonian period, and they probably did more to precipitate the bank crisis than Jackson's actions in 1836–37 did.

As a result of this corruption, the pet banks contracted more than other banks when the 1837 banking crisis came. Few banks failed, but the money supply decreased sharply. As economists calculated recently: "Had the liabilities of the pet banks grown at the same rate as those of other commercial banks after 1833, our calculations indicate that the money stock would have been about 16 percent lower in 1836 and would have declined 30.3 percent less in 1837" (Hilt, 2020).

Jackson may have been a revolutionary, but he was following Jefferson's lead in relying on private banks to distribute the government surplus and allocate taxes. This appeal to state rights and private fiscal agents that anticipated later privatizations had a severe cost. The pet banks expanded rapidly, and the 1837 monetary decline was very large. If Jackson had not relied on his pet banks, the 1837 crash would have been milder. We cannot calculate effects on the rest of the economy as the antebellum economy differed greatly from our modern economy, but it is likely that the hungry 1840s would have been a lot better off.

The difficulties slaves and masterless poor whites had to pay for food with cotton at lower prices would have been far smaller.

Frederick Douglass escaped from slavery in this period. His mistress had taught him to read, which was illegal. She wanted him to be able to read the Bible, and he became aware of the wider world around him. As conditions worsened for him, he escaped from Maryland to the North with the woman who would become his wife. Douglass fell in love with Anna Murray, a free Black woman who lived in Baltimore. Murray encouraged him and supported his efforts to gain his freedom by aid and money. She gave him a sailor's uniform and some money to cover his travel costs, and he carried identification papers and protection papers that he obtained from a free Black seaman. His entire journey to freedom by rail and steamboat took less than 24 hours. Although Douglass emerged as a leading Black author and speaker, his wife never learned to read and write, illustrating how hard it is to make up for an early lack of education (Blight, 2018).

At about the same time, slaves revolted on the coastal ship, *La Amistad*, that was moving them from Cuba to another Caribbean island. The Mende way of fighting, using knives in a surprise attack, carried the day. The Africans wanted to sail back to Africa, but they did not know how. They asked a former owner to guide them, and he sailed slowly west in the day and north at night. They came aground at Montauk, in New York, that recently had abolished slavery in the state. Cinque, the African leader, became a symbol of freedom when a portrait of him in an African setting was painted and publicized.

The Africans were defended by John Quincy Adams in Congress and others in different venues. They were freed by the Supreme Court and helped back to Africa. Their story shows the value of education. We cannot fault newly captured Africans for lacking education, but we should fault American slave owners for attempting to maintain this ignorance forever. A rebellion is only a start to a better place; one needs knowledge to continue on that path (Rediker, 2013).

Blacks were not alone in suffering during the hard years of the 1840s. Poor Southern whites who did not possess more education or skills than slaves also were impoverished. They faced reduced demand for their labor in farming and related activities as the price of cotton fell, and

those poor whites who owned land before the 1837 banking crisis lost this land to slave owners in the crisis because they could not pay their bills. We do not know how many poor whites were affected since they were largely illiterate and not in the federal census, but they may have been about as numerous as Southern slaves, doubling the presumed effects of 1837 in the South.

In addition to being landless, these poor whites competed in the labor market with enslaved labor, which led to dramatic declines in their standard of living as their wages fell. This led to large migratory movements of poor whites in search of better labor markets, but migration did not solve the problem as westward movement of slaves matched the movement of poor whites. Even more political and social institutions were being formed in the South to deal with the problem of poor whites, who were frequently jailed for small offenses, forced into unfair labor contracts, and socially ostracized from whites as Southern society became increasingly unequal and favorable to large landowners (Merritt, 2017).

The Specie Circular, whatever its macroeconomic effect, made life more difficult for poor whites who found it impossible to raise the hard cash needed to buy government land. They were frozen out of purchased land and became squatters instead. Plantation owners responded by buying up land around their plantations to keep the squatters out of their neighborhood. The poor whites then were forced into the Appalachian hills or Southern cities to find land they could farm or jobs if they chose urban settings.

Why are poor whites important to the story of racial inequality? They confirm Morgan's division of Southern society into master and pariah classes. The template developed in the antebellum era to police and stigmatize poor whites was applied brutally to Blacks after Emancipation. The political violence and coercion that was used against Blacks had been practiced against poor whites before the Civil War. The restrictive labor policies, which were attempts to depress wages and create a monopoly of planters, had their roots in white bargaining in the antebellum era. Similarly, the role of the carceral state, where punishment for the smallest offenses was imprisonment, and where jury trials were largely shams, fueled the increases in Black incarceration after the Civil War (Merritt, 2017).

As cotton growing moved westward, Maryland shifted into a varied agriculture that reduced the local demand for slaves. Maryland slaves were at risk of being sold to expanding areas, stimulating them to seek freedom in nearby free states. The most famous escape was by Harriet Tubman, born Araminta Ross and known as Minty while she was a slave in the Eastern Shore of Maryland. She was nearly killed as a young teen when an angry overseer threw an iron weight at another slave and hit Minty. She suffered from headaches, seizures, and sleeping spells the rest of her life, diagnosed by biographers as temporal lobe epilepsy. She married a free Black in 1844 and became Harriet Tubman as a result; he was free but their children would be slaves.

Harriet's owner died in 1849 with lots of debts, which left his slaves liable to be sold down south to pay his debts. Tubman had been upset by the sale of her three sisters, and she decided that it was better to choose her own fate than to suffer on the auction block. She tapped into a local underground organization that helped slaves escape. Traveling by night, using the North Star and instructions from Black and white helpers, she arrived in Philadelphia in free Pennsylvania. Her escape was solitary and more arduous and probably more risky than Frederick Douglass's escape a decade earlier.

Tubman returned to the Eastern Shore approximately thirteen times to liberate her family and friends, brought about seventy former slaves to freedom, and gave instructions to an additional fifty more slaves who found their way to freedom. Like Frederick Douglass's wife, she remained illiterate all her life. With two strikes against her – temporal lobe epilepsy, and illiteracy – she still turned out to be a remarkable woman.

Tubman relied heavily on a long-established, intricate, and secretive web of communication among African Americans to accomplish her rescues. Although white Quaker and abolitionist support was vital to Tubman's survival and success, the widespread African-American community provided the protection and sustenance she needed in her continuing fight for freedom. She was often referred to as Moses for the obvious parallel (Larson, 2004).

Increasing escapes from border states increased white support for slavery under tough rules. After the Fugitive Slave Act was signed in

1850, McAllister, the commissioner to adjudicate cases in Harrisburg, Pennsylvania, said: “We do not want to make Pennsylvania a place of refuge for absconding slaves or free negroes; they are a miserable population – a tax and a pest” (Blackett, 2013, 35).

A third escape from slavery in the 1840s was by Linda Brent who described her path to freedom in an 1861 autobiography, reprinted recently. Brent made two important points. First, female slaves suffered even more than male slaves. Enslaved women were treated more harshly than enslaved men, and they frequently were used – often against their will – as sex objects. In Brent’s words, “Slavery is terrible for men; but it is far more terrible for women.” Second, escape from slavery could be unsuccessful or take a long time. Brent’s escape took about seven years, many of them endured in hiding and finally ending in legal transactions in the North (Jacobs, 2001).

1.2.1 TIME ON THE CROSS. This support for slavery brings up a controversy about the productivity of slavery aroused by an ambitious 1974 book by Robert William Fogel and Stanley L. Engerman, *Time on the Cross*. The authors collected a massive data set on American slavery and argued that slavery was an efficient way of organizing work, harking back to the Handlin’s classic statement. Their argument for this point utilized the tools of economics and stimulated continuing discussion of their arguments and their methods.

Time on the Cross burst on the academic world to great acclaim. It was featured in popular magazines like *Time* and *Newsweek* and won the Bancroft Prize in American history in 1975. It was reviewed widely in academic journals, and Robert Fogel won the Nobel Prize in economics in 1993, with Douglass North, “for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change” (Nobel Prize, 1993).

Time on the Cross presented a paradox. The title declared that slavery was a tragic and awful institution like a crucifixion, while the content of the book argued that twentieth-century African Americans should take pride in the contribution of their enslaved ancestors to the antebellum Southern economy. The presentation of the book made these conflicting claims hard to unify by splitting the book’s contents into two volumes.

The first volume presented their argument in great detail, and the second volume provided the numbers and theoretical arguments that underlay the claims in volume one. To understand this complex statement and to evaluate its conclusion, we need to interrupt the narrative history for some economic analysis.

Fogel and Engerman made several assertions to support their conclusions. They claimed that enslaved people consumed more than free people in the South. And they argued enslaved people were *not* exploited under slavery. We need to follow Marc Bloch, the medieval historian who explored the source of his information, “into the kitchen” to explore how the numbers were calculated and evaluate these claims (David and Temin, 1974, 1979) .

Fogel and Engerman derived their estimates of slave consumption from large plantations that had over fifty slaves and were at least fifty wagon miles from a city. But less than a quarter of slaves lived on plantations of this size. Given that Fogel and Engerman claimed there were economies of scale in plantation agriculture, this sample overestimated the average consumption of enslaved persons. Their estimates of consumption by free Northern workers came from late nineteenth-century estimates identified by their authors as no more than reasonable guesses on the slenderest basis. In other words, the raw data were misleading, overestimating slave consumption by looking at a biased sample and comparing these data with guesses about free labor a generation later.

The interpretation of these infirm observations raises more questions. The energy required to be field hand in a gang on an antebellum cotton plantation was far higher than the energy required for someone making shoes or constructing houses around 1880. The growth of factories during the Industrial Revolution reduced the calorie needs for more workers as the nineteenth century progressed. Even if enslaved persons on large plantations consumed more than free workers years later, they may have been eating less than they needed to perform their work.

Adult slaves on large plantations were more active and needed more energy than free workers because the labor force participation rates were higher than those of free people. In particular, enslaved women and children worked in the field while free women and children more

frequently worked in their houses. Fogel and Engerman claimed in volume one of their book that slaves on large plantations had more pecuniary income per capita than they would have earned if they had been free small farmers. They referred readers to volume two and argued that the labor income of the slave family was 15 percent larger than the labor income of the corresponding free family.

The resolution of this apparent paradox of forced labor is simple. Fogel and Engerman assumed that the women and children of free farm families were putting in the same labor effort as was exacted from their enslaved counterparts. The economists went from men to families too easily, forgetting that family life was far different for free and enslaved people, as seen in Harriet Tubman's experiences. When free Southern farm folk refrained from volunteering for slavery, they were choosing to live their lives the way they wanted rather than being forced to work at the discretion of their owners. Slaves were not more efficient than Northern farmers; they were forced to work more (David and Temin, 1979).

Now consider Fogel and Engerman's description of their finding on the rate of exploitation of American slaves: "Slaves were exploited in the sense that part of the income which they produced was appropriated by their owners. However, the rate of expropriation was much lower than has generally been presumed. Over the course of his lifetime, the typical slave field hand received about 90 percent of the income he produced" (Fogel and Engerman, 1974, I, 5–6).

This is a startling conclusion. It suggests that the Southern attachment to slavery was motivated by a 10 percent charge on the slaves. This is such a small gain that it seems highly unlikely that it could have been the motivation for all of the conflict between the regions of the fledgling United States. There must be something in the measurement that generates such a surprising conclusion.

Fogel and Engerman defined their rate of exploitation as the "expected present value" of a newborn slave. This is the value at the time of the slave's birth of the anticipated future earnings he will produce, less the anticipated future cost of his maintenance. Both of these flows are discounted to the time of the slave's birth. This is a concept from the theory of economic investment that cries for explanation.

Recall the education of Frederick Douglass. His owner's wife taught him the alphabet so he could read the Bible. She clearly was thinking of investing in Frederick's future value, but she had no idea what actually would happen. No one knows when educating a youngster what he or she will do with this education when grown. The first thing about present value is that investors need to make an allowance for the uncertainty of their investment.

The one thing Frederick's owners knew about was that the results of their present activity would emerge years later. A literate slave could do things that an illiterate one could not. He would be more valuable in times to come. How could Frederick's owners have known how much effort they should put into his learning the alphabet? If that seems like a silly question, given how slave owners thought about their slaves, it arises only because Fogel and Engerman used this economic concept in their book. And while his wife thought of religion, the slave owner thought about how much cotton to plant. What he thought his crop would be worth when harvested would affect his investment in planting. He had to plan in the present for his income in the future.

Future costs and earnings are worth less than current costs and earnings. How large is this discount? Fogel and Engerman used the interest rate. They took the concept of discounting the future from investment theory, and they took also the measurement of the discount from this theory. The quantities involved in the comparison are less than the simple totals of the slave revenue and maintenance costs because a dollar of income produced or expended in the future is worth less than that at present. The higher is the rate of interest on any principal invested in the present, and the further removed into the future is the anticipated costs or receipts, the smaller will be its present value. A dollar taken from a slave during his youth must count for more in the present value of all such expropriations than does a dollar taken earned in his life.

For the first decade or so of a slave's life, the costs of caring for him exceeded the value of the revenue he produced. Only thereafter would a slave earn positive net revenue. In reckoning the present value of net revenues anticipated at the time of his birth, each dollar of negative net revenue during his childhood counts more heavily than each dollar of

the positive net revenue taken in his adulthood. Using the 10–12 percent exploitation rate referred to in Fogel and Engerman's text, the sum of discounted net revenues is about one half of the simple sum of expected total revenues.

Fogel and Engerman attempted to sidestep these problems by making strong assumptions that allowed them to use different data. They argued that in a competitive market for slaves, the equilibrium price of a newborn slave – labeled the “value of a birthright” – could not be substantially different from the sum of discounted expected net revenues over his lifetime. If we are prepared to grant their unverified assumption that the market for newborn slaves was in competitive equilibrium, then they seemed to have found a way to calculate the net present value of a new slave.

However, the estimated value of a birthright did not derive from market prices at which actual transactions in newborn infant slaves were bought and sold. It was extrapolated from a large body of information about the appraised values placed on older male slaves. These values were found in probate records that did not indicate the geographical or temporal make-up of the sample. They also did not specify the size of estates that were probated, and Fogel and Engerman did not attempt to explain the relationship between appraisal values and market values.

The appraised values were averaged for each age and then fitted to a curve by an informal analysis. This use of averages does not generate accurate statistical estimates of the margin of error surrounding the fitted age profile. In view of the importance that Fogel and Engerman attached to the value at zero age – the intercept of the curve – the absence of a proper estimate of the standard error is a serious omission. Since most price observations were of adult slaves, the value at birth was out of the statistical sample, adding to the error of the estimate.

The yield of a slave is subject to random variation, and only a slave owner who was utterly indifferent to risk would have found the asset worth buying when the present value of its expected yields was close to its purchase price. Most people are risk averse, and the net revenue expected from a slave infant could not be known with certainty. The prevalence of risk aversion of potential slave infant buyers implies that the competitive market price of the infant would be a lower bound

estimate of the sum of discounted net revenues. Fogel and Engerman's estimate of the rate of exploitation is a lower bound.

This downward bias is wide for an infant slave. There is a wide distribution of the future physical and intellectual capacities, as of personality traits. Not all slaves were like Frederick Douglass or Harriet Tubman. The variance of the presumed distribution of future net revenues diminished as a male slave passed from infancy to youth and continued to do so as he entered adulthood. Part of the apparent peak of slave prices around age 27 therefore reflects progressively smaller asset-price discounts on account of risk. The high uncertainty about the health, well-being, and future abilities of the infants further depressed the value at birth.

Fogel and Engerman explained their estimate of the rate of exploitation like this: "A substantial part of the income taken from those slaves who survived into the later years was not an act of expropriation, but a payment required to cover the expenses" of rearing children who did not survive (Fogel and Engerman, 1974, I, 155–56).

Free people ordinarily are not required to borrow money for the expenses of their childhood. They are supported by their parents and more generally by their parents' generation. When they become adults, they do not repay their parents with compound interest for the pecuniary cost of their own early years – much less for the upbringing of brothers and sisters prematurely deceased. Instead they support their own children. The way such intergenerational transfers of income are accomplished among the members of free societies does not confront individuals with the costs of raising children and supporting elderly dependents when they themselves are children, but rather allows them to assume these burdens at the same time they earn income in their adulthood. It follows that the undiscounted version of the rate of exploitation is a closer analogue to the proportion of income, which parents devote to the maintenance of children and dependents in a free society. That estimate is around 50 percent, as noted earlier.

This economic analysis has shown that Fogel and Engerman, despite the publicity and honors that greeted their book, failed to prove the points they aspired to use to extol the productive effort of enslaved individuals and the benign nature of American slavery. They overestimated

the consumption of slaves leading to the paradoxical question why free farmers did not submit to slavery for themselves. And their estimate of minimal exploitation of slaves was the result of many abstract arguments, including the decision to charge slave children for their own upbringing, which made Southern slavery look like a modern credit union.

In short, Fogel and Engerman wrote mainstream history, viewing slaves as inputs, like steam and water power, to production, instead of considering the views of the enslaved people. Many slaves spoke with their feet and set off for freedom, as typified by our famous – albeit not typical – leaders of the postwar African-American community. The construction of the exploitation index in *Time on the Cross* assumed that families could not preserve themselves as a unit to bring up their children. Each slave was seen as a separate person to finance his or her childhood and training. Harriet Tubman experienced enslaved family disruption. It was the sale of her sisters and her fear of being sold away from what was left of her family that stimulated her to escape from slavery.

That is the view to be presented here. This Black or Northern narrative notes the racial compositions of American slaves and the “closed” nature of American slavery. Free Blacks were tolerated but not allowed full participation in the general white economy. And denying schooling and even literacy to slaves made them unable to compete with whites for good jobs after they were freed. Freed slaves could vote in a few Northern states, but they were not numerous enough to affect the overall pattern.

The South’s vast economic stake in its slave labor force was a major factor in the sectional disputes that preceded the Civil War. In the eleven states that eventually became the Confederacy, four out of ten people were slaves in 1860, accounting for more than half the agricultural labor in those states. In the cotton regions slave labor’s importance was even greater. There had been one million slaves worth about \$300 million in 1805; fifty-five years later there were four million slaves worth close to \$3 billion. The capital embodied in slaves roughly equaled the total capital in farmland and farm buildings in the South in 1860. Southern slave owners were optimistic about the economic future of their region as they

were experiencing an unparalleled rise in the value of their slave assets. Slave labor was the foundation of a flourishing economic system in the South (Ransom, 2001).

It is not surprising that Southerners – even those who did not own slaves – viewed any attempt by the federal government to limit the rights of slave owners over their property as a potentially mortal threat to their entire economic system. “By itself, the South’s economic investment in slavery could easily explain the willingness of Southerners to risk war when faced with what they viewed as a serious threat to their ‘peculiar institution’ after the electoral victories of the Republican Party and President Abraham Lincoln the fall of 1860” (Gunderson, 1974, 922, Table 1; Ransom, 2001).

Northern states also had a very large economic stake in slavery and the cotton trade. The first half of the nineteenth century saw an enormous increase in the production of short-staple cotton in the South, exported to Massachusetts, Great Britain, and Europe (Bailyn, 2000; Ransom, 2001).

By the mid-1830s, cotton shipments accounted for more than half the value of all exports from the United States. There also was a marked similarity between the trends in the export of cotton and the rising value of the slave population. The prosperity of the American economy clearly rested on its ability to produce cotton more efficiently than any other region or country. Bailyn’s description of the colonial North being based on slavery is accurate for the antebellum North as well.

Perhaps the best single indicator of the growth of nonagricultural production and trade in the Northern and Western states is the rise of urban areas in areas where markets became important. About six million people – roughly one out of five persons in the United States – lived in an urban county in 1860, as shown in Table 1.1. This table summarizes the contrast between the backward-looking South and the forward-looking North by depicting the vast difference in urban development in the South compared to the Northern states. “More than two-thirds of all urban counties were in the Northeast and West. Those two regions accounted for nearly 80 percent of the urban population of the country. By contrast, less than 7 percent of people in the 11 Southern states of Table 1.1 lived in urban counties” (Ransom, 2001).

Robert Fogel returned to what he called the slavery debates a quarter century after *Time on the Cross* was published in a series of lectures. He discussed the moral problem of slavery and repeated several points that I have contested earlier. He also added a few that clarify the point of his book. For example, he argued that slavery was immoral because it denied enslaved people of economic opportunity. He of course was discussing American slavery, and he did not mean to condemn all kinds of slavery.

As I said earlier, Roman slavery was far more open than the closed slavery of the Southern states. Manumission was frequent, and Roman freedmen were proud to put their status on their tombstones if they became rich enough to afford them. Education was widespread as it increased the productivity of both slave and master. It is only the severely closed nature of American slavery that appears in Fogel's survey.

Missing in Fogel's summary is an adequate discussion of race. He mentioned racial prejudice in his survey of the literature on American slavery, but he failed to make a connection between the lack of opportunity and the African origin of most American slaves. He appears uninterested in the effects of slavery on freedmen and freedwomen after the Civil War. I will return to this issue several times as the narrative continues (Fogel, 2003).

All people, slave or free, need to have incentives to work. If slaves cannot lay claim to the fruits of their labor, other incentives must be used. These incentives can be classified as positive (rewards for hard or good work), or carrots, and negative (punishment for slacking off or not cooperating), or sticks. Negative incentives dominated the lives of American slaves (David et al., 1976; Patterson, 1982; Fenoaltea, 1984).

Positive incentives were more important than negative ones in motivating Roman slaves. Sticks can get people to work, but generally not to do skilled tasks that require independent work. If it is hard to distinguish poor performance from bad luck when work is complex, carrots are far more effective than sticks in motivating hard work. A manager, for example, would claim that any adverse outcomes were the result of bad luck. Beating or worse punishment would lead to resentment rather than cooperation and possibly more "bad luck." Fogel failed to discuss the nature of control or incentivize American slaves in his discussion of their culture (Fogel, 2003, 46; Temin, 2013, 122).

Fogel and Engerman estimated that slaves were only whipped 0.7 times a year, leaving them ample time to consider other incentives. There are problems with their quantitative estimate, but I want to focus on their conceptualization. Whipping was common on slave plantations, and we need to think about the fear of whipping as much as we think of the frequency. For negative incentives affect behavior through a mental process. And public whipping of some slaves on a plantation undoubtedly made other slaves anticipate punishment if they stepped out of line. We do not know how many whippings a year it took to frighten a large plantation, but we should be aware that incentives operate through the expectations they induce among all the slaves (Fogel and Engerman, 1974, I, 145; Gutman and Sutch, 1976).

We should remember, when discussing the interests of freedmen after the Civil War, that they were not used to the positive rewards that dominate free economies. They only knew negative punishments and were not interested in joining a competitive society. They wanted their independence and to grow food for their families.

Slavery is an abstraction, and Fogel noted variation within the United States between slaves on plantations with different sizes. In his words, "On such matters as the severity of punishment, the supply of clothing, the occupation of the slave, the stability of the family, and the uses of leisure time, the experiences of slaves living on small plantations differed significantly from those living on large plantations" (Fogel, 2003, 41).

How did enslaved people think as they experienced all this? Toni Morrison expressed how American slaves must have felt very succinctly. Words are not data, but they may extend our understanding of the evidence reviewed here:

White people believed that whatever the manners, under every dark skin was a jungle. Swift unnavigable waters, swinging screaming baboons, sleeping snakes, red gums ready for their sweet white blood. In a way, . . . they were right. The more colored people spent their strength trying to convince them how gentle they were, how clever and loving, how human, the more they used themselves up to persuade whites of something Negroes believed could not be questioned, the deeper and more tangled the jungle grew inside. But it wasn't the jungle Blacks brought with them to this place

from the other (livable) place. It was the jungle white folks planted in them. And it grew. It spread. In, through and after life, it spread until it invaded the whites who had made it. Touched them every one. Changed and altered them. Made them bloody, silly, worse than even they wanted to be, so scared were they of the jungle they had made. The screaming baboon lived under their own white skin; the red gums were their own (Morrison, 1987, 198–99) .

1.3 COMPROMISES AND CIVIL WAR

Returning to our narrative, we note that three developments are listed in the literature as setting off the Civil War. The Missouri Compromise of 1820 had set the stage. The three new events were the 1850 compromise about California that further inflamed each side; the Kansas–Nebraska Act in 1854 that set off more local conflicts; and the Supreme Court’s 1857 decision in the Dred Scott case that often is seen as the final straw. The first two of these triggers resembled the Missouri Compromise in that they involved the expansion of the United States to the West.

Henry Clay, the architect of the 1820 compromise, is given credit for the 1850 compromise as well. Instead of any single bill, the later compromise was a set of bills that were separately passed. Together, they responded to the Mexican War of the 1840s and included conquered lands into the union. Texas had declared its freedom from Mexico in 1836 and claimed a lot of land in the American territories that it did not actually administer. It was persuaded to give up a lot of this land in return for the federal government’s assumption of the Texan state debt.

Throughout this period, Southern officeholders from Secretary of State John C. Calhoun to President James Polk actively pursued the expansion of slavery outside of the United States. While the United States, and later Texas, exported cotton with the aid of slaves, Brazil exported sugar with the aid of slaves, and Cuba exported sugar with the aid of slaves. The United States opposed Great Britain as it sought to end slavery around the world by supporting these states and acquiring more slave-owning land for the United States. This desire to expand slavery within the United States was one of the reasons the country engaged in warfare with Mexico to get control of Texas (Karp, 2016).

The addition of Texas to the United States was both a domestic and foreign policy achievement. The Southerners were pleased to have more slave land good for growing cotton. While Northerners sought a domestic cure to the international aims of the South. California had grown in the gold rush of the late 1840s and also wanted admission into the Union. It was firmly antislavery, even though the line established between slave and free states in 1820 ran through the state. It was admitted as a free state, balancing the slave state of Texas.

Despite Clay's efforts, both Southern Democrats and Northern Whigs opposed his combined bill that dealt with states and other issues of slavery. Clay responded by announcing on the Senate floor the next day that he intended to pass each individual part of the bill. But the seventy-three-year-old Clay was physically exhausted as the tuberculosis that eventually killed him began to take its toll. He left Washington and went to recover in Newport, Rhode Island. Senator Stephen A. Douglas, who was very different from Frederick Douglass, then assumed leadership in attempting to pass Clay's proposals through the Senate.

Senator Douglas was a recent entrant to the Senate who had not grown up with Clay's earlier compromise. He did not regard slavery as a moral issue; it was instead a political issue to be decided by voting. The older senators thought this was nonsense, but Douglas was able to negotiate the Texas northern border to the 36°30' line from the 1820 compromise. This set the stage for the admission of California and other parts of Clay's compromise (Remini, 2010).

The compromise that most increased the North–South conflict was a new Fugitive Slave Act that extended the original 1793 Fugitive Slave Act. The new version required federal judicial officials in all states and federal territories, including in those states and territories in which slavery was prohibited, to assist with the return of escaped slaves to their masters in the states and territories permitting slavery. A claimant's sworn testimony of ownership was all that was needed to arrest anyone suspected of being a fugitive slave and any federal marshal or other official who did not arrest an alleged runaway slave was liable to a fine of \$1,000. Suspected slaves could neither request a jury trial nor testify on their own behalf. Any person providing food or shelter was to be subject to six months'

imprisonment and a \$1,000 fine. And ordinary citizens of free states could be summoned to join a posse and were required to assist in the capture, custody, and/or transportation of the alleged escaped slave. The law was rigorously proslavery.

The Fugitive Slave Act met Southern demands, but the North objected to the provisions mandating ordinary citizens to aid slave catchers. Many Northerners deeply resented the requirement personally to help slavery. Resentment toward the act heightened tensions between the North and South, which were inflamed further by Harriet Beecher Stowe, who wrote *Uncle Tom's Cabin*, which emphasized the horrors of recapturing escaped slaves and outraged Southerners (Gara, 1964; Remini, 2010; Bordewich, 2012).

The 1850 Compromise may have succeeded in postponing the American Civil War for a decade, which probably contributed to the North's victory as the Midwest was growing wealthier and more populous and was being brought into closer relations with the Northeast.

During that decade, the Whig Party disappeared and was replaced with the new Republican Party in the North and Democrats in the South. Other historians argue that the compromise only laid the groundwork for future conflict. They see the Fugitive Slave Law as helping to polarize the country, as shown in the enormous reaction to *Uncle Tom's Cabin*. The passage of the Fugitive Slave Act aroused feelings of bitterness in the North.

The Compromise of 1850 helped break down the spirit of compromise in the United States before the Civil War. The compromise strained that spirit, and the deaths of influential senators who worked on the compromise, primarily Henry Clay and Daniel Webster, contributed to increasing tension between the North and South. According to one historian,

The Fugitive Slave Act, the abolition of the slave trade in the District of Columbia, the admission of California as a free state, and even the application of the formula of popular sovereignty to the territories were all less important than the least remembered component of the Compromise of 1850 – the statute by which Texas relinquished its claims to much of New Mexico in return for federal assumption of the debts. (Stegmaier, 1996)

Senator Douglas introduced a bill to organize the territory of Nebraska in order to bring the area under civil control and help promote a railroad from Illinois to Nebraska. Southern senators opposed it. The region lay north of latitude $36^{\circ}30'$ and would become a free state under the terms of the 1820 Missouri Compromise. Douglas responded by proposing to create two territories in the area, Kansas and Nebraska, and repeal of the Missouri Compromise line. Whether the territories would be slave or free was left to the settlers under Douglas's principle of popular sovereignty. Presumably, the Northern territory would oppose slavery while the Southern one would permit it.

The Kansas–Nebraska Act that resulted was an 1854 bill that mandated popular sovereignty, allowing settlers of a territory to decide whether slavery would be allowed within a new state's borders. The conflicts between the proslavery and antislavery settlers that arose in the aftermath of the act's passage led to the period of violence known as Bleeding Kansas, and helped paved the way for the Civil War. By the time Kansas became a state in 1861, however, Southern states had begun to secede from the Union. Douglas's railroad was eventually built, but not along the route he wanted and with funds voted by a Republican Congress during the Civil War. Railroads were the largest companies in the 1850s, and they did not want the South to impede their expansion (Foner and Garraty, 1991; Ferguson, 1995, 65).

Dred Scott v. Sandford, 60 U.S. (19 How.) 393 (1857), was a landmark decision of the US Supreme Court that ruled that the US Constitution was not meant to include American citizenship for Black people, whether they were enslaved or free. The rights and privileges that the Constitution conferred upon American citizens therefore could not apply to them. The euphemisms invented by the authors of the Constitution ended up as a substantive distinction in this decision.

The decision was made in the case of Dred Scott, an enslaved Black man whose owners had taken him from Missouri, which was a slave-holding state, into the Missouri Territory, most of which had been designated "free" territory by the Missouri Compromise of 1820. Back in Missouri, Scott sued in court for his freedom, claiming that because he had been taken into "free" territory, he automatically had been freed and was legally no longer a slave. Scott lost first in Missouri state

court, and then in federal court, which ruled against him by deciding that it had to apply Missouri law to the case. He appealed to the US Supreme Court.

The Court ruled in an opinion written by Chief Justice Roger Taney that Black people “are not included, and were not intended to be included, under the word ‘citizens’ in the Constitution, and can therefore claim none of the rights and privileges which that instrument provides for and secures to citizens of the United States.” Taney went further and struck down the entire Missouri Compromise as a limitation on slavery that exceeded the US Congress’s powers under the Constitution.

Chief Justice Taney and several of the other justices hoped that the ruling would permanently settle the slavery controversy, but it had almost the complete opposite effect. Taney’s opinion “was greeted with unmitigated wrath from every segment of the United States except the slave holding states,” and the decision was a contributing factor in the outbreak of the American Civil War four years later in 1861 (Ehrlich, 1968; Finkelman, 2007).

The geographic shape of the United States changed greatly in the first half century or so of its existence, but the opposition found between Jefferson and Hamilton still endured on the eve of the Civil War. Slave owners had prospered as the industrial production of cotton expanded, but the organization of society and production remained starkly divergent in the North and the South. Slave owners looked backward to preserve their position in their society, while people in free states seemed entranced by future possibilities. The 1849 California gold rush showed that these forward-looking people did not have clairvoyance. The Civil War was in part fought over a general view of the economy – not simply slavery.

For example, cotton growers wanted free trade in order to sell their cotton and buy British manufactures. The cotton industry wanted tariffs to protect their infant industries and help it grow. The iron industry in the North shared the view of the cotton industry, and tariff debates were as regionally determined as slavery debates. President Lincoln did not focus on slavery at the start of his administration, but rather on holding this complex mix of economic issues together in a single country.

Most Republicans opposed slavery in principle, but their opposition was limited to battling its extension into the West. Few Republicans sought to end slavery immediately. These Republicans supported an economic policy to secure Northern domination of western lands as the initial step in a broad plan to end slavery eventually. Preceding disagreements had led to compromises, but the economic argument gained strength in the 1850s and led moderates to become extremists (Egnal, 2010, Introduction).

As interregional antagonism rose to fever pitch, the new Republican Party elected Abraham Lincoln as president in 1860. The new party was a successor of the old Whigs, supported by the railroads that wanted freedom in their westward expansion. In direct response to Lincoln's election as president, seven Southern states seceded from the Union rather than continue to negotiate and compromise over the issue of slavery, which had been the norm for so many decades. Lincoln wanted to preserve the unions' integrity, and he only gradually saw ending slavery immediately as the war dragged on as a tool to win the war.

Lincoln tried to resupply Fort Sumter, outside Charleston, South Carolina – the first state to secede – but was rebuffed by the rebels. A brief siege that led to the surrender of Fort Sumter and started the Civil War that lasted four years and killed over 600,000 Americans. The song, *The Star Spangled Banner*, now helps us remember Fort Sumter, but it dates from the 1812 war with England and an attack on a different fort.

Three key events in 1863 show the role of the war in an inclusive economic history: General Grant's initiation of the Freedman's Bureau, the siege of Vicksburg, and the Battle of Gettysburg. But the economics of the Civil War became apparent in 1861. As in the 1830s, the interruption of foreign trade led to inflation. While silver accumulated in the United States in the 1830s, gold became scarce in the 1860s.

The California gold discoveries in 1849 not only set off a gold rush; they also shifted the dollar from a silver to a gold currency. Then war broke out between the states, and the cotton trade that had been central to interregional and international trade was disrupted. Without American cotton, the British cotton industry experienced a "cotton famine" and was forced to look around for alternate supplies. In the

North, the lack of cotton cloth exports led to a scarcity of gold revenue. The price of gold in American banknotes rose.

The United States could not preserve the link between its currency – greenbacks – and gold, and it abandoned the gold standard soon after it had joined it. The value of greenbacks in gold fell, and gold rose to a premium. But while banks only stayed off silver for months in 1837, the United States stayed off gold from 1861 to 1879.

Economic distress followed the abandonment of the gold standard. The United States needed to pay soldiers and buy wartime supplies, and the gold value of greenbacks continued to fall. History follows the progress of the war, but people – Black and white, Northern and Southern – suffered from a lack of imports and work far more than after the Bank panic of 1837. Part of the growing alienation of the North from the war and from the idea of slavery abolition must have come from the economic hardship of the war.

General Grant recalled that the idea of the Freedman’s Bureau came to him in late 1862 as he pressed into the South. As planters fled before the Union army, cotton agriculture was disrupted and thousands of Negroes appealed to the army for help. Grant explained in his memoir that, “orders of the government prohibited the expulsion of the negroes from the protection of the army, when they came in voluntarily. Humanity forbade allowing them to starve. . . . There was no special authority for feeding them unless they were employed as teamsters, cooks and pioneers with the army.” Grant appointed John Eaton, later to become Secretary of Education, to create and administer what would become the Freedman’s Bureau that employed the fugitives to harvest the abandoned cotton crops (Grant, 1885, I, 424–26).

Grant described to Eaton a range of useful tasks that the “contrabands” could perform; the men could help with construction of various sorts while the women could work in kitchens and hospitals. Eaton quoted Grant’s thinking at this point:

He then went on to say that when it had been made clear that the Negro, as an independent laborer . . . could do these things well, it would be very easy to put a musket in his hands and make a soldier of him, and if he fought well, eventually to put the ballot in his hands and make him a

citizen. . . . Never before in those early and bewildering days had I heard the problem of the future of the Negro attacked with such humanity combined with practical good sense. (Chernow, 2017, 228–30)

Over the next few years, many slaves escaped from their masters to Union army camps, forcing the issue of emancipation on Lincoln's administration to help him on his intellectual and political journey. Union officers, then Congress, and finally Lincoln decided to confiscate this human property belonging to the enemy and put it to work for the Union in the form of servants, teamsters, laborers, and eventually soldiers. The resulting additions to the Union force – 200,000 Black soldiers and sailors and added Black army laborers – may well have tipped the balance in favor of a Union victory (McPherson, 1995).

Grant's efforts grew into the Freedmen's Bureau, formally established on March 3, 1865, and intended to last for a year after the end of the Civil War. The Bureau was an important agency of early Reconstruction, assisting freedmen in the South. The bureau ran schools for freedmen during the war, but they had little impact because the schools were urban while the freedmen were rural. As Chernow explained, "This man who so recently balked at abolitionism now made a startling leap into America's future" (Chernow, 2017, 229).

Around the same time, Grant was trying to conquer Vicksburg, which occupied the first high ground on the Mississippi River below Memphis. Railroads went east to all points in the Confederacy and west to Louisiana. It was the only connection between the eastern and western parts of the Confederacy. But because Vicksburg occupied the high ground, conquering it was a difficult problem. Grant sent General Sherman to the south via a loop west of the Mississippi River, enabling him to find crossing points far south of Vicksburg for Grant to use. Grant went far from the river to conquer Jackson, the Mississippi state capital. He then faced Vicksburg from the landward side and besieged it in May 1863.

The siege of Vicksburg was the result of a long campaign with many shifts of plans as Grant took advantage of smaller breakthroughs. While the plan looks logical in retrospect, it seemed endless and roundabout to contemporaries. General Grant ordered his troops around with an

objective clearer in his mind than in any of his subordinates. Grant considered how to get his troops across the river south of Vicksburg over the winter of 1862; only as the waters receded in the spring of 1863 could he see a practical way to approach his objective. As he said in April, "When this was effected I felt a degree of relief scarcely ever equaled since. Vicksburg was not yet taken, it is true, nor were its defenders demoralized by any of our previous moves. . . . but I was now on dry ground on the same side of the river with the enemy" (Grant, 1885, I, 480).

It took another month of battles and reverses for Grant to approach Vicksburg. The Confederate defenders hoped for reinforcements to come from other parts of their army, but they never arrived. The Confederates finally capitulated to Grant on July 4, 1863, one day after Lee's defeat at Gettysburg. The two Union victories turned the war from a defense of the North to the defeat of the South. Grant's victory split the Confederacy in two, and he sent Sherman on his march to the sea to disrupt the eastern part.

Lee's approach to Gettysburg was straightforward, contrasting with Grant's circuitous approach to Vicksburg. Lee hoped for a traditional clash of armies typical of past wars. He got his wish and fought with the Union army for three days, finally accepting defeat and retreating back to Virginia. Gettysburg was the costliest of Civil War battles, with around 50,000 casualties on both sides. Lee's defeat and Grant's victory in July 1863 ultimately led to the Union victory two years later. Gettysburg now is remembered primarily for the memorial address Lincoln gave there in November during the dedication of the Union cemetery.

Lincoln famously began, "Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal." This is a refrain from the Declaration of Independence, but the meaning of "all men" had been changed by Lincoln's Emancipation Proclamation at the beginning of 1863. This reframing would be embodied in the Thirteenth Amendment soon after the war ended, albeit after a close vote in the House of Representatives. Lincoln concluded his short address, "We here highly resolve that this nation, under God, shall have a new birth of freedom – and that government of the people, by the people, for the

people, shall not perish from the earth.” He expanded the aims of the war from restoring the union to promoting equality to all men, whatever their color (Wills, 1992; Donald, 1995, 466).

Lincoln was assassinated shortly after the Civil War ended. One hundred and fifty years later, Harvard University President Drew Faust wrote about the human cost of the Civil War, ending with:

The nation was a survivor, too, transformed by its encounter with death, obligated by the sacrifices of the dead. The war’s staggering human cost demanded a new sense of national destiny, one designed to ensure that lives had been sacrificed for appropriately lofty ends. So much suffering had to have transcendent purpose, a ‘sacred significance’ as Frederick Douglass had insisted in the middle of the war. For him, such purpose was freedom, but this would prove an unrealized ideal in a nation unwilling to guarantee the equal citizenship on which true liberty must rest. Slavery had divided the nation, but assumptions of racial hierarchy would unite whites North and South in a century-long abandonment of the emancipationist legacy. (Faust, 2008, 268)