

THE COTTON GIN'S IMPACT ON ANTEBELLUM AMERICA

By Anna Wynveen

Cotton's impact upon history is surprisingly significant. Europeans first encountered cotton in their trading missions to India, where they were impressed with the beauty and softness of Indian fabric. Cotton remained a luxury good in Europe until the United States began growing it in mass amounts in the nineteenth century; but the United States could not have become the "king of cotton" without the invention of one simple machine: the cotton gin. Invented by Eli Whitney, the cotton gin allowed for a full-scale cotton revolution, which had a profound impact on the history of antebellum America. In the South, the gin led to a boom in cotton growth that created a greater reliance on slave labor, which contrasted with the North's industrialization and anti-slavery sentiments. The economic divergence led to differing views on the subject of slavery, and these differing views helped to create tensions between these two regions, which threatened to split the country apart.

Eli Whitney, the inventor of the cotton gin, was born into a prosperous farming family in Worcester County, Massachusetts in 1765. He was blessed with mechanical skill, and "at an early age he showed a decided inclination and aptitude for mechanical pursuits and invention."¹ After graduating from Yale, in 1792, he was hired as a tutor in Savannah, South Carolina. On his way south, he became acquainted with the Greene family, who were returning to Savannah after spending summer vacation in the north.² On his journey he was also introduced to Phineas Miller, Esq. who was journeying with them. When they all reached Savannah, Whitney discovered that his teaching post had been accidentally filled by another, and was stranded without money or a teaching position.³ So Mrs. Greene invited Whitney to come and stay for a while at Mulberry Grove, her plantation outside of Savannah.

While Whitney was at Mulberry Grove, he overheard many conversations concerning agriculture and the problems with the Southern economy. After the American Revolution, the price of tobacco dropped drastically and Southerners were looking for another cash crop to boost their economy. Cotton was a promising prospect, but it was geographically limited and labor intensive. Black-seed cotton was preferred over green-seed, or upland cotton, because the seeds could be easily removed from the fibers by merely rolling the cotton through two rollers. In contrast, green-seed cotton was only usable after workers "had laboriously removed its tenaciously clinging seeds from the fiber."⁴ However, "black-seed, or sea island cotton, flourished only on islands off the coasts of Georgia and South Carolina and on certain low-lands adjacent to the coasts."⁵ Therefore, because of its ability to grow in a wide variety of climates, the invention of a method to more easily process green-seed cotton was the key to the creation of a widespread cotton economy.⁶ Visitors to the Greene household "expressed great regret that there was no means of

¹ William P. Blake, "Sketch of the Life of Eli Whitney, the Inventor of the Cotton Gin," *Papers of the New Haven Historical Society*, vol.5 (1894), 110.

² D. Olmstead, "Memoir of the Life of Eli Whitney, Esq. Inventor of the Cotton Gin," *The American Journal of Arts and Science*, 21 (January, 1832), 207.

³ Eugene Clyde Brooks, *The Story of Cotton and the Development of the Cotton States* (Chicago: Rand McNally & Company, 1911), 92.

⁴ David L. Cohn, *The Life and Times of King Cotton* (New York: Oxford University Press, 1956), 8.

⁵ Cohn, 8.

⁶ Cohn, 7-8.

cleaning the green-seed cotton, or separating it from its seed, since all the lands which were unsuitable for the cultivation of rice, would yield large crops of cotton.”⁷ Whitney saw the potential of green-seed cotton if it could be more easily cleaned, and being mechanically inclined, he immediately set to work creating the cotton gin.

Whitney developed the cotton gin in the basement of Mulberry Grove, with the blessings and financial support of Phineas Miller and Mrs. Greene. The basic model for the device came to him quickly. In a letter to Thomas Jefferson Whitney wrote, “Within about ten days after my first conception of the plan, I made a small, though imperfect model.”⁸ He worked steadily through the winter of 1792, and applied to the Secretary of State, Thomas Jefferson, for a patent on June 20, 1793.⁹ Whitney’s cotton gin was an incredibly simple machine:

[His] idea was to take a cylinder and mount it on a strong frame so that it could be turned by hand. On the cylinder were to be rows of nails or wires, called teeth. As the cylinder turned, these teeth were to pass through narrow openings in a curved plate which he first made of wire. When the cylinder turned, its short teeth would catch the cotton and drag it through the grating, tearing the lint from the seed and dropping it on the other side, soft and clean.¹⁰

Jefferson readily saw the benefits of this machine and wrote to Whitney that, “[a]s the State of Virginia, of which I am, carries on household manufactures of cotton to a great extent, as I also do myself, and one of our great embarrassments is the cleaning the cotton of the seeds, I feel a considerable interest in the success of your invention for family use.”¹¹ The patent for the cotton gin was issued on March 4, 1794, and word of the new invention spread quickly across the South. In a letter to Whitney dated October 26, 1794, Phineas Miller urged, “Do not let a deficiency of money, do not let any thing hinder the speedy construction of the Gins. The people of the country are almost running mad for them, and much can be said to justify their importunity.”¹²

Because of the immediate and great demand for the new machine, gin production could not keep up with the need of Southern cotton farmers. This, in combination with the simplicity of the machine itself, led to a number of bootleg copies of the gin, until “soon there were in operation ten time more bootlegs than patented gins. Bootleggers ... spread the rumor — at home and in cotton-importing Britain — that the Whitney gin ruined cotton fiber.”¹³ This led Whitney into a series of drawn-out copyright lawsuits, which left him without the money that he should have made from his invention. Nevertheless, Whitney is still credited as the originator of the cotton gin, and is recognized as one of the most influential men in American history.

The invention of the cotton gin made cotton production much more efficient. Prior to the gin, “in

⁷ Olmstead, 208.

⁸ F.L. Lewton, *Historical Notes on the Cotton Gin* (Washington: Government Printing Office, 1983), 551.

⁹ Blake, 113.

¹⁰ Brooks, 96.

¹¹ Blake, 114.

¹² Olmstead, 214.

¹³ Cohn, 13.

the winter months, during bad weather, and at nights, the slaves would bring the baskets of cotton from the barn, or from the attic of the planter's house, and the seed was picked by hand."¹⁴ This was an incredibly laborious process, as "usually a shoe full of lint was a good night's work for any one person"¹⁵ and because separating the seeds by hand was so inefficient, growing cotton was not an economically sound investment. Because separating the seed from the cotton lint was so difficult, it was more economical to raise flax and wool.¹⁶ As Whitney himself writes, the invention of the cotton gin made this process much faster: "it is turned by *hand*, and requires the strength of one man to keep it in constant motion. It is the stated task of one negro to clean 50 weight (50 pounds after it is separated from the seed), of the green seed cotton per day."¹⁷ This leap in efficiency meant that green-seed cotton became the new cash crop of the South.

At the same time that the gin solved the problem of cotton production, the barriers on westward expansion also disappeared. To pacify hostile Indians worried about white settlers encroaching on their land, Britain had signed the Proclamation of 1763. This Proclamation "forbade any new white settlements west of the Appalachians crest."¹⁸ When America became a sovereign nation, the British-signed document became nullified and this allowed settlers to pour over the Appalachian Mountains into uncultivated land. This, coupled with the Louisiana Purchase in 1803, nearly doubled America's land mass and freed up millions of acres of farmland that were perfect for the cultivation of green-seed cotton.

The efficiency of the gin, in combination with the sudden increase in available land, led to a full-scale cotton revolution. Cotton production skyrocketed and this in turn led to an equally dramatic increase in the number of slaves. Cotton became the premier American export; the *American Journal of Science and Arts*, states that "the whole domestic exports of the United States in 1825 were valued at 66,940,000 dollars, of which value, 36,846,000 was in cotton only."¹⁹ This means that over half of America's export at this time was cotton. Within several decades of the gin's introduction, the economy of the entire nation, not just the South, depended upon cotton. In 1790, the total production of raw cotton was 3,138 five-hundred-pound bales. This increased steadily and on the eve of the Civil War in 1860, 3,841,416 bales of cotton were produced.²⁰ According to Daniel Webster, "In 1791 the first parcel of cotton of the growth of the United States was exported, and amounted only to 19,200 pounds. It has gone on increasing rapidly, until the whole crop may now [in the 1850s], perhaps, in a season of great product and high prices, amount to a hundred millions of dollars."²¹ The invention of the cotton gin allowed farmers to grow, clean and export more cotton than ever before and make increasingly larger sums of money.

The unfortunate bi-product of this rapid increase in cotton production was the correspond-

¹⁴ Brooks, 44.

¹⁵ Brooks, 44.

¹⁶ Brooks, 93.

¹⁷ Lewton, 551.

¹⁸ Paul S. Boyer et al., *The Enduring Vision; A History of the American People* (Boston: Houghton Mifflin Company, 2002), 84.

¹⁹ Olmstead, 252.

²⁰ James A.B. Scherer, *Cotton as a World Power; A Study in the Economic Interpretation of History* (New York: Frederick A. Stokes Company, 1916), 420-421.

²¹ Daniel Webster, *Webster's Speeches* (Boston: Ginn & Company, 1897), 120.

ing increase in the demand for slavery. The fields would go untilled, the cotton would go unpicked, and the gins would be left motionless without the hands of slaves. The slave population in the United States in 1790 was 697,897 people. By 1860, the slave population was up to 3,957,760.²² These numbers show the incredible increase in the slave population after the invention of the cotton gin. However, in March, 1807, Congress prohibited the further importation of slaves into the United States after January 1, 1808,²³ meaning that after this date, the rise in slave population was due to births alone. This meant that, without cotton, there would be a huge surplus of slaves. At the same time, there was a shift in demographics. By 1820, slavery had largely disappeared in the Northern states,²⁴ yet many of these Northern slaves were not freed but rather sold into Southern slavery. Even border slave states showed a general decrease in the slave population, from 36.8 % in 1790 to 23.1% in 1860. These statistics show the draw of slaves to the cotton states, whose slave population in 1790 was 32.7% and jumped to 41.4% by 1860.²⁵ In many large cotton-producing regions of the South, over 50% of the population was enslaved.²⁶ The increase in cotton production and the rise of the slave population were clearly inter-related, as both rose steadily after the invention of the cotton gin.

The expansion of cotton production and the increase of slavery in the South led to greater economic and social disparity between the Northern and Southern states. The South was reluctant to industrialize: “England, Scotland, Ireland, France, Germany, and other European countries were soon calling for cotton. Every state in the United States was calling for cotton, and the Southern plantations were growing in importance. Why, Southerners asked, hinder this industry by trying to build factories?”²⁷ Moreover, rural Southerners were generally afraid of the evils of industrialization and urbanization. They looked to Europe and to the Northern states and saw cities filled with the disaffected poor, who they feared were susceptible to radical and revolutionary ideologies. This, coupled with the general belief that urbanization was unnecessary because of the strength of cotton production, created attitudes that were “opposed to city building and to the accumulation of wealth in strong commercial centers.”²⁸

However, the South began to have financial problems. Basing an economy on one industry leads to great instability. Instead of stimulating Southerners to reexamine the merits of industrialization, this economic downturn further cemented the South’s financial and cultural/psychological reliance upon slavery. “Agriculturally, industrially, and financially, the South was lagging behind the North. Even though the South was overwhelmingly agricultural – and the Southern leaders found this especially galling – the North exceeded in land values, conservation practices, crop productivity, and thriftiness.”²⁹ Southerners became more deeply entrenched in the notion of the necessity of slavery because they viewed slavery and cotton production as the only means of fixing their economy. They stressed maximum income and exhausted the soil thereby necessitating expansion. Because of this the South was continuously in debt

²² Boyer et al., 226.

²³ Cohn, 34.

²⁴ Boyer et al., 181.

²⁵ Scherer, 152.

²⁶ Boyer et al., 227.

²⁷ Brooks, 119.

²⁸ Brooks, 157.

²⁹ Cohn, 83.

because it always needed more capital for continued expansion,³⁰ and the only way to repay this debt was to plant more cotton to ensure maximum income.

Economic stability was impossible in the South because its agricultural based economy was so closely tied to the unstable cotton market. As a result, the region was rocked throughout the antebellum era by periods of high and low cotton prices. In 1835, for example, the price of cotton per pound was at a high of 16.5 cents, but by 1844, it dropped to an all time low of 5.6 cents.³¹ These fluctuating prices greatly impacted the Southern economy and strengthened its reliance upon slaves. Southerners theorized that if the South chose to abolish slavery in favor of free labor, the price of cotton would soar so high that importers of American cotton would have to look elsewhere for cheaper raw materials. In terms of cost control they believed that slavery was absolutely necessary for their economy. Farmers had so limited themselves by producing cash crops alone, that it seemed like there was no other alternative to cotton for the Southern economy. Therefore, the majority of Southerners believed that they had to continue growing cotton and fervently protect their right to own slaves.

While the South based its economy almost entirely on cotton, the North moved in an entirely different economic direction. The North experienced a large amount of industrialization in the antebellum period, though much of it was still based around cotton. New England was the birthplace of American industrialization and “cotton textiles led the way.”³² Americans were tired of shipping their home-grown cotton overseas to Britain and then buying it back from them as textiles. Many textile factories sprang up in New England and the surrounding areas, beginning with Samuel Slater’s cotton mill built in Pawtucket, Rhode Island.³³ This industrialization led to greater diversity in the Northern economy, which combined both industrial and agricultural production. The diversity of the Northern economy in turn led to greater stability.

Another key difference between the North and South was that while the South was coming to rely more and more on slavery, the Northern states had abolished the institution. In the Northern states, slavery was not a necessity like it was in the South. In the *History of Black Americans Vol. One*, it is argued that “the humanitarian zeal of the Revolutionary era, together with the non-slave-holder hatred of slave competition, and widespread acknowledgment that the economy did not need slavery, doomed Northern slavery to extinction.”³⁴ Slavery in the North ended by 1804, when “all the states from Pennsylvania north, except New Hampshire, had abolished slavery,”³⁵ mainly for the reason that “slave labor became less and less an absolute necessity.”³⁶ Moreover, “between 1815 and 1860, 5 million immigrants reached the United States,”³⁷ and with this came an increasing availability of free labor. Free labor, unlike slave labor, meant that people were both workers and consumers and therefore created a greater market for the goods produced in the North. Unlike the South, which based its economy on agriculture and slavery, the North

³⁰ Cohn, 41.

³¹ Brooks, 145.

³² Boyer, et al., 179.

³³ Brooks, 114.

³⁴ Philip S. Foner, *The History of Black Americans*, vol.1 (Westport Connecticut: Greenwood Press, 1975), 346.

³⁵ Boyer, et al., 115.

³⁶ Foner, vol.1, 345.

³⁷ Boyer, et al., 244.

abolished slavery and was beginning to build a solid industrial economy.

Throughout the antebellum era, the North and South experienced profound changes in their economic, political, social and cultural values which contributed to growing rift between the two regions on issues such as slavery and industrialization. To a significant extent, the geographic divisions over these issues can be traced back to the invention of the cotton gin. When the Constitution was drafted, both sides held similar attitudes about the institution of slavery. Daniel Webster described these views to the Senate on March 7, 1850, in his famous speech *The Constitution and the Union*. He stated that at the time of the writing of the Constitution:

[T]here was then no diversity of opinion between the North and South upon the subject of slavery. It will be found that both parts of the country held it equally an evil, a moral and political evil. It will not be found that, either at the North or at the South, there was much, though there was some, invective against slavery as inhuman and cruel. The great ground of objection to it was political; that it weakened the social fabric; that, taking the place of free labor, society became less strong and labor less productive; and therefore we find from all the eminent men of the time the clearest expression of their opinion that slavery is an evil.³⁸

Within a few generations of the ratification of the Constitution, both the Northern and the Southern views of slavery had changed. At the time the Constitution was written, Webster argued that neither region saw slavery as “inhuman and cruel,” but that a growing body of Northerners felt that it “weakened the social fabric.”³⁹ This was an argument made by abolitionists about “pine barrens” in the South. These Southern whites squatted on other people’s land, growing only their own subsistence and therefore making no real contribution to society. “Abolitionists cited the pine-barrens people as proof that slavery degraded whites.”⁴⁰ Webster argued that soon after the American Revolution, “a change began, at the North and the South, and a difference of opinion showed itself; the North growing much more warm and strong against slavery, and the South growing much more warm and strong in its support.”⁴¹ Webster attributes the antislavery sentiments in the North to “the sense of idealism and the emphasis on equality that were the products of the American Revolution ... leading to a revulsion against slavery that in turn resulted in abolition.”⁴² However, he attributes the new pro-slavery sentiment in the South to cotton. “It was the COTTON interest,” he said, “that gave a new desire to promote slavery, to spread it, and to use its labor. I again say that this change was produced by causes which must always produce like effects. The whole interest of the South became connected, more or less, with the extension of slavery.”⁴³

This connectedness with slavery had profound impacts on Southern society. It led to many different ways of justifying the institution of slavery. Some Southerners championed the idea that slavery was humanitarian and argued that it transformed savage, ignorant, and inferior Africans into productive

³⁸ Webster, 114.

³⁹ Webster, 114.

⁴⁰ Boyer, et al., 231.

⁴¹ Webster, 119.

⁴² Foner, vol.1, 346.

⁴³ Webster, 120.

workers and Christians. Another justification for slavery was predicated on the belief that African physical characteristics were indicative of inferiority, and that it was the duty of a slave owner to take care of these lesser humans. A further justification came from United States Senator John C. Calhoun in 1850, who argued that slavery was not just a necessary evil, but actually a good thing. He argued that men who worked for wages were being exploited more than slaves, because in sickness or unemployment, the free laborer had no social security. Slaves however, were cared for by their masters from the moment they were born till the moment they died.⁴⁴

As Northern ideas about slavery shifted toward abolition, Southerners justified the institution of slavery by making it seem like a good thing for the enslaved African. The difference in opinion about slavery was caused in part by the different economic climates in North and South, and this factor combined with other social and cultural disparities to create a serious rift in the nation. The polarization of opinion about slavery was a significant contributing cause of the American Civil War. The emergence of widespread cotton growth and the increase of slavery in the South are both directly linked to the invention of the cotton gin. Eli Whitney's invention allowed for the agricultural expansion of cotton production in the South, which required a greater number of slaves. At the same time, the Northern economy was industrializing and Northerners had not only freed their own slaves, but a growing segment of the Northern population were dedicated to abolishing the "peculiar institution" altogether. Two very different economic climates in turn created two very different attitudes toward slavery and these attitudes helped to tear the nation apart.

⁴⁴ Philip S. Foner, *The History of Black Americans*, vol.2 (Westport Connecticut: Greenwood Press, 1983), 368-376.

BIBLIOGRAPHY

Blake, William P. "Sketch of the Life of Eli Whitney, the Inventor of the Cotton Gin," *Papers of the New Haven Historical Society*, vol.5 (1894): 109-131.

Boyer, Paul S., Clifford E. Clark, Jr., Sandra McNair Hawley, Joseph F. Kett, Neal Salisbury, Harvard Sitkoff, and Nancy Woloch. *The Enduring Vision; A History of the American People*. Boston: Houghton Mifflin Company, 2002.

Brooks, Eugene Clyde. *The Story of Cotton and the Development of the Cotton States*. Chicago: Rand McNally & Company, 1911.

Cohn, David L. *The Life and Times of King Cotton*. New York: Oxford University Press, 1956.

Foner, Philip S. *History of Black Americans. Vol.1*. Westport Connecticut: Greenwood Press, 1975.

———. *History of Black Americans. Vol.2*. Westport Connecticut: Greenwood Press, 1983.

Lewton, F.L. *Historical Notes on the Cotton Gin*. Washington: Government Printing Office, 1938.

Olmstead, D. "Memoir of the Life of Eli Whitney, Esq. Inventor of the Cotton Gin. *The American Journal of Science and Arts*. vol. 21 (January, 1832): 201-254

Scherer, James A.B. *Cotton as a World Power; A Study in the Economic Interpretation of History*. New York: Frederick A. Stokes Company, 1916.

Webster, Daniel. *Webster's Speeches; Reply to Hayne (delivered in the U.S. Senate, January 26, 1850) The Constitution and the Union (delivered in the U.S. Senate, March 7, 1850) with a sketch of the life of Daniel Webster*. Boston: Ginn & Company, 1897.