King Cotton: A Tale of Empire, Industrial Espionage, and War

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What was the first thing you reached for when you got dressed this morning? It was probably made of cotton. And subsequent layers of clothing too – a good chance cotton was there somewhere.

Cotton is the most widely used natural fiber in clothing today. The cotton plant, *Gossypium*, is a shrub native to tropical and subtropical regions around the world. It is believed that the wild cotton plant migrated widely. The cotton seeds, protected by their tough leathery pods, or bolls, likely drifted on the high seas for millennia, taking root and creating new hybrid varieties in many different places around the world.

People in many regions seem to have discovered, independently and at about the same time, how to domesticate and use cotton. It was cultivated in the Indus Valley in Pakistan as early as 5,000 B.C. At about the same time, people in Egypt's Nile Valley were making and wearing cotton clothing. Well before the Christian era cotton textiles woven in India had spread to the Mediterranean and beyond. The Moors introduced the cultivation of cotton into Spain in the 9th Century A.D. Columbus discovered cotton apparel and yarn among the Arawak Indians in the Bahama Islands in 1492.

In Northern Europe, cotton became known as an imported fabric, but its origin was not initially understood. People knew it came from a plant, and observed its similarity to wool. John Mandeville wrote in 1350: "There grew there [India] a wonderful tree which bore tiny lambs on the endes of it branches. These branches were so pliable that they bent down to allow the lambs to feed when they are hungrie." This preposterous

notion is retained in the name for cotton in some European languages. For example, the word for cotton in German is *Baumwolle,* which translates as *tree wool.* (Wiki, Yafa 23)

In the Americas, the earliest cultivation of cotton so far discovered was in Mexico some 5,000 years ago. This species was *Gossypium hirsutum,* which today is by far the most widely planted variety in the world. More on this later.

In America, when you think of cotton culture, you immediately think of slavery. And for good reason, because the two are in fact inextricably entwined. But long before cotton was extensively cultivated here, Europe and America had exploited Africa for nearly three centuries, capturing and enslaving human beings for financial gain. The French, the Dutch, the Spanish, the Portuguese, the Danish, the Americans, the English – all were enthusiastic participants in this brutal business.

The English were perhaps the masters of the trade. John Hawkins was a British sea captain who decided to try the slave trade instead of pillaging Spanish galleons. He sailed in his ship the *Jesus* (of Luebeck), lent to him by Queen Elizabeth in exchange for a cut of his profits. One of his crew describes in his diary how they would approach their African victims, who would flee from them, "leaping and turning their tailes, that it was most strange to see and gave us great pleasure to behold them."

Slave ships could not make more than one or two trips per year, and therefore had to cram as many unfortunate captives as possible into their holds. Slave trading was illegal in 1807 when an American naval patrol vessel captured a slaver bound for Brazil. A clergyman happened to be aboard the naval vessel. Here is his description of conditions aboard the slave ship. "The slaves were all inclosed under grated hatchways between decks…They were stowed so close together there was no possibility of their

lying down…or changing their position…As they were shipped on account of different individuals, they were all branded…with the owner's marks."

When the naval crew boarded the ship, the slaves immediately sensed that they were among friends, and "immediately began to shout…They could not contain their delight; they endeavored to scramble upon their knees, stretching up to kiss our hands…Some however, hung down their heads in apparently hopeless dejection…and some, particularly children, seemed dying." In the holds "The heat…was so great and the odor so offensive that it was quite impossible to enter." (Cohn 30)

The slave trade was a high risk business. Rough seas could endanger crew and cargo. A rebellion might require the killing of the rebels, which would reduce profits. An epidemic might break out, which called for drastic action. A slave who was found with the telltale pimples of small pox would be thrown overboard. Whole cargoes of slaves might be afflicted with ophthalmia, causing blindness. In such a case, the entire cargo would be destroyed; hundreds of human beings – killed.

The first slaves were brought to America in the early 17th century by the Dutch. Slavery established itself most firmly in the South, though it was legal in parts of the North as well. The South's climate and expanses of fertile soil were conducive to the establishment of large plantations that could effectively use slaves to work their crops of tobacco, rice, and indigo. (Burton 55)

After the Revolution, prices of these crops, particularly tobacco, were depressed. Planters grew so much tobacco that at times they were forced to burn their crops in the field to keep prices up. Slave prices were falling too as tobacco planters needing to raise cash sold off slaves and switched to grain production. One of the reasons that

Washington, in 1799, provided in his will for the manumission of his slaves was that he believed they were unprofitable. As early as 1794 he had stated, "Were it not that I am principled against selling negroes, as you would cattle in a market, I would not in twelve months hence be possessed of a single one as a slave. I shall be happily mistaken if they are not found to be a very troublesome species of property ere many years have passed over our heads" (Cohn 6, slaveryinamerica 5, Burton 61)

With prices for its principal crops depressed, the South needed a new cash crop, and they began looking to the thriving mills of Great Britain. Little cotton cloth was imported into England until the 15th Century. But by the 17th Century the East India Company was bringing rare cotton fabrics from India, and a cotton manufacturing industry grew in England, thanks to some key inventions that led to the development of the factory system.

In 1733 John Kay invented the flying shuttle, which greatly increased the speed of weaving cotton yarn. This increased the demand for cotton yarn, a demand that was satisfied with the invention of the spinning jenny by James Hargreaves in 1764. (Burton 27) This machine allowed spinning of more than one yarn at a time. Richard Arkwright developed a spinning frame, an improved version of the spinning jenny in 1769, and in 1775 he patented an improved carding machine. In 1785 Edmund Cartwright invented the power loom. These inventions revolutionized cotton manufacturing.

Arkwright's spinning frame was particularly influential. The spinning frame made thin, strong cotton thread that was used for the warp, or long threads, in the weaving process. Arkwright formed a partnership with Jebediah Strutt and Samuel Need and

established a horse-powered mill in Nottingham. In 1771 Arkwright set up a water-powered mill in Cromford.

The mechanized equipment led to the development of the highly regimented and disciplined factory system. Cotton manufacture rapidly moved from the homes of hand workers to the miserable sweatshops churning out huge quantities of cotton goods twenty-four hours a day. Britain quickly discerned the necessity of keeping close guard on the equipment and production methods that had enabled it to attain domination of world cotton production. Laws expressly forbidding textile workers to travel to America were passed in 1774.

In 1782 Jebediah Strutt set up a mill of his own near the Slater farm in Derbyshire. Samuel Slater, one of the Slater children, was offered an apprenticeship by Mr. Strutt, and went to work in the mill at age fourteen. Eight years later he was appointed supervisor.

In 1787 Slater read in a Philadelphia newspaper of a bounty of one hundred pounds that had been paid to the designer of a cloth making machine in New York. He began to hatch a plan. In 1789 Slater disguised himself as a farmer, sewed his indenture papers into his clothes, and boarded a ship for New York. He was just twenty-two when he arrived, and not the first English textile worker to seek his fortune in America. He was, however, the first who carried in his head the detailed knowledge of Arkwright's machines. This, combined with his experience of managing a factory, made him a dangerous man – at least the British would have regarded him so. Slater ultimately teamed up with Moses Brown and set up a mill in Pawtucket, R.I., powered by the Blackstone River. Thus the American textile industry was born, out of what was perhaps

the first instance of what we would now call industrial espionage. [www.bbc.co.uk/legacies/immig_emig/England/derby]

But it was not to be the last. Nearly two decades later another instance of industrial espionage aided the growth of the American textile industry. Francis Cabot Lowell travelled to England in 1810 and was allowed to visit mills that were just beginning to use the new power looms. He managed to smuggle out notes and sketches and to commit to memory sufficient details of what he had seen. This enabled him to replicate the machine when he returned to Boston. Lowell and a mechanic made improvements to the loom and later formed the Boston Manufacturing Company with his brother-in-law and a friend. In 1814 they built the first mill in America capable of performing all the processes, from start to finish, to turn raw cotton into finished cloth. Lowell died in 1817 and four years later his company moved to a new site on the Merrimack River. The town was to be named Lowell in his honor, and it became the center of America's cotton industry. (Yafa 100-108)

Still, the British cotton industry was preeminent for many years. The mechanization employed in the British mills drastically reduced the cost of production and stimulated consumer demand for cotton goods. The mills had a huge demand for cotton, and this had critical implications for the South. For now cotton could be the new cash crop the South was seeking.

But there was a catch. Before cotton can be spun into thread its seeds must be removed. To be acceptable to the British mills, the cotton had to be clean and free of seeds. Long staple cotton, *Gossypium barbadense*, has black fuzz-free seeds and fibers that are over two inches long, excellent for spinning into fine thread. The people of

ancient India developed a device with two rollers that could remove the seeds from long staple cotton. Joseph Eve invented a roller machine in 1788 that could do this job as well.

The problem was that long staple cotton is a fickle plant and requires abundant rainfall and consistent, warm temperatures to grow well. In America it would only grow well on the islands off the coast of Georgia – thus the name Sea Island cotton. It was impossible to grow enough of this type of cotton in this relatively small area to meet world demand.

G. hirsutum, on the other hand, could be grown in non-coastal upland areas and became known as Upland cotton. But the seeds of Upland cotton are a devil to remove. The roller gin that works fine on Sea Island cotton would not work at all on Upland cotton. It took one person an entire day to pull the seeds from a pound of cotton. The process was so labor intensive that there was no economical way to process Upland cotton in sufficient quantity to satisfy the demand of the British mills. (slaveryinamerica.com 2) Enter Eli Whitney.

Eli Whitney was born in 1765. It was obvious at an early age that he was mechanically inclined. As a boy during the Revolutionary War Whitney set up a forge to make nails, which were in great demand. After the war he manufactured hairpins, where he learned techniques of drawing out the steel to make the pins. Whitney graduated from Yale in 1792 and set off for South Carolina, where he was to be the tutor for the children of a Major Dupont. On the schooner trip he met the wealthy widow of the Revolutionary War general Nathaniel Greene, who was returning to her home, Mulberry Grove plantation, near Savannah. They struck up a friendship and Mrs. Greene invited him to visit at Mulberry Grove before going to South Carolina. He accepted her invitation.

Mulberry Grove's fifty slaves mainly cultivated fields of rice and corn and patches of pumpkins and watermelons. At night, slaves often sat in a circle lit by a torch and picked seeds from "vegetable wool" – cotton. Visitors to Mulberry Grove would discuss the potential of Upland cotton to be a huge cash crop, if only a way could be found to clean it efficiently. Whitney wrote to his father, "There were a number of very respectable gentlemen at Mrs. Greene's who all agreed that if a machine could be invented which would clean cotton with expedition, it would be a great thing both to the inventor and to the country. I involuntarily happened to be thinking on the subject and struck out a plan of a machine in my mind…In about ten days I made a little model for which I was offered a hundred guineas. I concluded to relinquish my school and turn my attention to perfecting the machine. I made one…which required the labor of one man to turn it and with which one man will clean ten times as much cotton as he can in any other way before known…This machine may be turned by water or with a horse…It makes the labor fifty times less, without throwing any class of People out of business." (Cohn 10)

Within a year Whitney's machine was being manufactured. The machine had a cylinder with wire teeth that snagged the cotton fiber and pulled it through a wire screen, leaving the seed behind. Here is where his hairpin manufacturing experience came in handy in making the wire teeth. A revolving brush going in the opposite direction then removed the lint from the cylinder. This basic design is still used in modern gins. Gin, by the way, is short for engine.

Whitney was bankrolled by Phineas Miller, who had married the wealthy Mrs. Greene. The firm of Whitney-Miller manufactured cotton gins and set up ginning operations, attempting to establish a monopoly on the process. For every five pounds of

raw cotton delivered to one of their gins, they would return one pound of clean cotton ready to be sold on the market. (Cohn 12) But the price they were charging was considered very high. When Whitney left Georgia to patent his invention and build a cotton gin factory in Connecticut, a group broke into the workshop at Mulberry Hall and stole the design. It was quite a simple machine, and easily duplicated. Whitney got his patent but it was widely ignored. By 1797 Whitney-Miller had thirty gins operating in Georgia, but their competitors had many more. (slaveryinamerica 3) Before long there were ten times more bootleg gins in operation than patented ones.

Whitney's invention gave the South its new cash crop. Upland cotton could now be cultivated everywhere in huge quantities to feed the appetite of the British mills. The cotton gin literally changed the course of history overnight. And it changed the lives of millions of people, for now slavery was once again profitable. The French traveler Chastellux had written, "They [slaveowners] are constantly talking of abolishing slavery, and of contriving some other means of cultivating their estates."

But that was before Whitney's invention. Indeed, in the 1820s there were more antislavery societies in the slave states than in the free states. By 1837 there was not one antislavery society in the South. (Cohn 82) Daniel Webster speculated on what had caused slavery to become a cherished institution in the South, when once it had appeared to be waning. He said, "I suppose this is owing to the rapid growth and sudden extension of the cotton plantations of the South. It was the cotton interest that gave a new desire to promote slavery, to spread it, and to use its labor." And of course behind all this was Whitney's invention.

On many large plantations the slave's life was desperate indeed. At times when the cotton crop required relatively little attention – in summer when no more weeding was required and toward winter prior to the start of plowing – the slaves would plant and harvest corn. By the middle of the 19th century most slaves worked ten acres of cotton and ten acres of corn. This meant a life of endless toil for field workers. (slaveryinamerica.org 7)

Solomon Northrup was a free black man living in New York state when he was kidnapped by slave traders. He spent a dozen years laboring for three different masters until he was rescued from a Louisiana plantation in 1853. He published a chronicle of his experiences that provides a riveting account of a brutal existence. Here is an excerpt:

"The hands are required to be in the cotton field as soon as it is light in the morning, and, with the exception of ten or fifteen minutes, which is given them at noon to swallow their allowance of cold bacon, they are not permitted to be a moment idle until it is too dark to see, and when the moon is full, they often times labor till the middle of the night…

"The day's work over in the field, the baskets are 'toted'…to the gin-house, where the cotton is weighed. No matter how fatigued and weary he may be – no matter how much he longs for sleep and rest – a slave never approaches the gin-house with his basket of cotton but with fear. If it falls short in weight – if he has not performed the full task appointed him, he knows that he must suffer. And if he has exceeded it by ten or twenty pound, in all probability his master will measure the next day's task accordingly. So, whether he has two little or too much, his approach to the gin-house is always with fear and trembling. Most frequently they have too little, and therefore it is they are not

anxious to leave the field. After weighing, follow the whippings; and then the baskets are carried to the cotton house…and their contents stored away like hay, all hands being sent in to tramp it down. (Yafa 155-156; slaveryinamerica.org 7)

The whips used by overseers were advertised as "fancy whips to be used on black backs" and were designed to inflict pain without causing too much injury to the slave's skin. Runaway slave John Brown described in his 1854 narrative:

"For every pound that is short of the task, the punishment is one stroke of the bull-whip…the 'licks' are always regulated to an extreme nicety, so as only to cut the flesh and draw blood. But this quite bad enough, and my readers will readily comprehend that with the fear of this punishment ever before us at Jepsey James', it was no wonder we did our utmost to make up our daily weight of cotton in the hamper." (slaveryinamerica.org 7)

Solomon Northrup recounted the precise schedule of punishments on his plantation: "The number of lashes is graduated according to the nature of the case. Twenty-five are deemed a mere brush, inflicted, for instance, when a dry leaf or piece of boll is found in the cotton, or when a branch is broken in the field; fifty is the ordinary penalty following all delinquencies of the next high grade; one hundred is called severe: it is the punishment inflicted for the serious offence of standing idle in the field…and five hundred, well laid on, besides the mangling of the dogs, perhaps, is certain to consign the poor, unpitied runaway to weeks of pain and agony." (slaveryinamerica.org 8)

So the South built its cotton empire on the bloodied backs of millions of slaves. But even though cotton production in the South increased dramatically – from 150,000 bales in 1815 to more than 4.5 million bales in 1859, the cotton economy was shaky and

insecure. The South remained a regressive, primitive region, with its slave-based agricultural economy.

To make matters worse, the intensive single-crop cultivation rapidly depleted the soil. This required that the cotton kingdom constantly expand into new lands. Costs of cultivating cotton under the plantation system were high because of the requirement for large investments in slaves. Cotton prices in the mid 1800s were not keeping pace with costs of production, especially in the Upper South, where the soil was worn out. There was a great expansion of cotton culture into the Gulf states. A report to the South Carolina legislature in 1843 concluded, "These lands [in the Gulf states] produce an average of 2,500 pounds per hand, while the lands in Carolina yield but 1,200 pounds." The population shift was staggering. In 1810 the combined population of Alabama and Mississippi was 40,000; in 1860 it was 1,660,000. (Cohn 89-90)

Slave prices were on the rise between 1845 and 1860. The reason: scarcity. Large planters, particularly in the more productive Gulf states, were able to grow their own slave populations and so were not too much affected by the rising prices. Small farmers, many of whom worked less productive lands, usually had no women or children among their small numbers of slaves. These struggling small farmers came to feel much abused and put upon. They agitated for action to reduce their costs – by reopening the slave trade. This became a burning issue for this group, another reason to feel mistreated by their Northern countrymen, who refused to see things their way. It didn't help that other costs were rising too. The merchants, bankers, wholesalers, insurers – all the middlemen – added to their costs. And all were Northerners. (Cohn 91-93)

The South was indeed extremely dependent on the North in many ways. The North was far more progressive, with an economy based on free labor constantly augmented by immigration from Europe. The North was outstripping the South industrially, economically, and agriculturally. The North was also far ahead in commerce, railroad building, population, and wealth.

The South essentially became a captive of its one-crop agricultural economy. Northern-owned ships would pick up cotton in Southern ports, carry it to Europe, return to New York with cargo or immigrants, return to the South with goods for sale, and pick up more cotton, starting the cycle again. It was Northern ship owners, middlemen, insurers, warehousemen, and bankers who captured most of the profit from this "Cotton Triangle."

Some people recognized the reality of the situation. The editor of *DeBow's Journal* wrote in 1857, "The doctrine that Cotton is King is taught in the South…That cotton *might* be King may be true, if Commerce could be made Queen. The total exports of the country were $340 million, of which the South supplied one-half…But the ships of the North convey our product to the North…New York City has become the great medium of Exchange for the country. (Cohn 86) The South would certainly be at a huge disadvantage in the event of any civil conflict. Some preached the need to break the South's dependence on the North. But there was no concerted movement to diversify the economy. Instead of taking positive action, nearly all planters and most ordinary citizens blamed the North for their problems. (Cohn 83)

Indeed, the South was bound to and bound by its cotton-slavery system. And there was a widespread belief that cotton gave the South a powerful weapon – powerful enough

to ensure its security. Senator Hammond of South Carolina in a speech delivered in the Senate in 1858 said, "Without firing a gun, without drawing a sword, should they make war on us we could bring the whole world to our feet. The South is perfectly competent to go on, one, two, or even three years without planting a seed of cotton. I believe that if she were to plant but half her cotton, for three years to come it would be an immense advantage to her…What would happen if no cotton were furnished for three years? I will not stop to depict what anyone can imagine, but this is certain: England would topple headlong and carry the whole civilized world with her save the South. No, you dare not make war on cotton. No power on earth dares to make war upon it. Cotton is king!" (Yafa 145; Cohn 99-100)

Hammond proved to be a poor prophet. Of course war did come. Tensions between North and South continued to build, and cotton and slavery were at the core of the troubles that grew steadily throughout the middle of the century. When war broke out between the North and South, Great Britain was dependent on the South for three-fourths of its supply of cotton. Britain's greatest industry was cotton manufacturing, and four million of its twenty-one million people made their living from it.

Southern leaders almost universally believed that cotton gave them powerful leverage. They thought that they could use cotton to bring Britain into the war on their side, and that France, also a heavy importer of Southern cotton, would come in too. When the Union imposed a naval blockade of the Confederate coast in 1861, the Confederacy did not even try to move cotton through it. President Jefferson Davis actually welcomed the blockade and talked of it as a blessing in disguise. The Confederacy even adopted a

policy of burning cotton to prevent the Union from seizing it in contested territories and shipping it to Europe. (Cohn 121-125)

King Cotton diplomacy seemed to have great potential for success. But timing was not good for the South. At the outbreak of the war, Britain had large stocks of raw cotton and manufactured cotton goods. On top of that, the war itself reduced the demand for British cotton goods, plus British markets for cotton in India and China were overstocked. However, as the war progressed, the shortage of cotton did begin to take a major toll on Britain's cotton industry and mill workers. The *Saturday Review* in 1862 said, "The cotton famine is the saddest thing that has befallen this country for many a year…" (Cohn 131)

The British upper classes favored the South and would have been glad enough to see the Union go down to defeat, but the middle and lower classes, including the mill workers who were suffering from the cotton shortage, sympathized with the North. They regarded the war as a struggle to spread democracy, and after the Emancipation Proclamation they regarded it as a struggle for freedom itself. Henry Hotze, Confederate propagandist in London, wrote to the Confederate secretary of state, "they [the Lancashire mill workers] are actively inimical to us…The astonishing fortitude and patience with which they endure their miseries is mainly due to a consciousness that by any other course they would promote our interests…"

The workingmen of Manchester sent a letter to Lincoln urging him to persevere, to press on with the cause of freedom. Lincoln replied, "I know and deeply deplore the sufferings which the working-men at Manchester…are called to endure in this crisis…It has been often…represented that the attempt to overthrow this government, which was

built upon the foundation of human rights, and to substitute for it one which should rest exclusively on the basis of human slavery, was likely to obtain the favor of Europe…Through the action of our disloyal citizens, the workingmen of Europe have been subjected to severe trials, for the purpose of forcing their sanction to that attempt. Under the circumstances, I cannot but regard your decisive utterances upon the question as an instance of sublime Christian heroism which has not been surpassed in any age or in any country…" (Cohn 134-138)

The cotton embargo proved to be a fatal miscalculation for the South. It did not succeed in drawing England into the war, nor did it induce England to recognize the Confederacy. Ultimately England managed to secure other sources of cotton – from India, China, and even America, where a black market grew up with Northerners trading goods, including weapons, for illicit Southern cotton.

The South had staked its future on King Cotton. It had thought the kingdom to be unassailable. Like ancient Persia, the South became the victim of its own hubris. In *The Persians* the Greek playwright Aeschylus portrays the king's counselor giving this advice:

> Defeat is impossible. Defeat is unthinkable.
>
> We have always been the favorites of fate.
>
> Fortune has cupped us in her golden palms.
>
> It is only a matter of choosing our desire.
>
> Which fruit to pick from the nodding tree.

But the Persians were wrong. They were overconfident. They lost the decisive sea battle of Salamis to the Greeks in 480 B.C. As Stephen Yafa observes in his book *Cotton:*

The Biography of a Revoluntionary Fiber, "The South's nodding tree was a small gangly plant laden with white puffballs."

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