## Empire of Cotton: A Global History. By Sven Beckert. 2014. Vintage, New York, NY. 615 pp.

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As the world's leading nonfood crop, cotton is long overdue for a comprehensive history. It has now received one. Beckert's book is not the last word on cotton, but it is a major work on the global history of this world-changing crop. Cotton now joins the small and select list of crops that have received serious, focused historical treatment: potatoes (Salaman 1948), sugar (Mazumdar 1998, Mintz 1985), chocolate (Coe and Coe 1996), maize (Blake 2015), soybeans (DuBois et al. 2008; Piper and Morse 1923), and a few others, including assorted works on coffee, tea, and spices. We still lack major up-to-date global histories of wheat, barley, and several other staples, to say nothing of such deserving microorganisms as *Lactobacillus* and *Saccharomyces*.

Beckert concentrates largely on the history of the cotton economy from the Industrial Revolution to the end of British cotton mercantilism. After spending an initial 28 pages on all cotton history prior to European manufacturing, and another eight bringing it up to 1700, he spends the rest of this long book detailing the history of cotton manufacturing and trade from then till 1963. His ending date is a firm one: in December of 1963, the Liverpool Cotton Exchange auctioned off the last of their furniture, bringing an end to England's cotton marketing (p. 428). A few pages bring us up to 2014, but without details.

The period from 1700 to 1963 is the period in which Europe and the United States dominated cotton marketing, spinning, weaving, and clothing manufacture. It is also the period of full dominance of what Beckert calls "war capitalism": first mercantile, then industrial, capitalism forced on the weak by the strong, via gunboats, armies, economic bludgeoning, and the old-fashioned whip and lash. It was the capitalism of high-seas piracy, armed invasion to secure markets or level a competitor, and above all of slavery. Slavery is as old as civilization, and its pathological rise in the seventeenth and eightenth centuries was due to sugar cultivation (see Mintz 1985), but it became most notorious in the cotton world of the United States South. Slavery also accompanied cotton in Brazil, and in the Ottoman Empire and Egypt. (Americans often fail to realize that the United States South was not the only slave economy.) Some countries produced cotton with free labor, notably India and China, but the conditions of production still involved poverty and oppression. Many writers during the peak of slavery argued that only plantations worked by enslaved labor could economically produce cotton, forgetting the Asian examples.

After the fall of slavery, however, cotton persisted. Beckert tells the story of the rise of shareholding and tenant farming in the American South. Equivalent less-than-benign systems developed elsewhere.

Meanwhile, a key part of the Industrial Revolution was the development in England of spinning and weaving machinery. This led to spectacular increases in productivity. Labor was only briefly and locally displaced, because the increases led to a correspondingly spectacular rise in the availability of clothing, which in turn led to dramatic decreases in price and thus increases in sales. The world became cotton-clad. Pent-up demand for clothing could be satisfied. Beckert does not need to emphasize the point that this improved conditions for a large percentage of humanity; that point is clear enough.



The world now has a huge clothing glut. Rwanda has just banned the dumping of used clothes as 'charity' there, to protect its merchants.

Conditions in the old-time cotton mills were, however, horrific. Children labored, often for twelve hours at a time or more, under appalling conditions. Mortality from tuberculosis, malnutrition, and workrelated injuries and illnesses would have led to rapid decline in urban populations without constant inmigration from the countryside. Eventually, textile mills became centers of labor organization.

While the vast majority of workers in the cotton economy suffered as badly as any workers in history, the industrialists, brokers, shippers, bankers, and lawyers did very well by themselves. Much of this book is a history of successful entrepreneurs, a surprising percentage of whom worked their way up from the shop floor. Early cotton trade was based heavily on personal trust, and thus concentrated in families and in minority religious communities (Jews, Armenians, Parsis, Jains, Syrian Christians, and others). The rise of corporations lowered transaction costs and routinized contracts, making personal trust less and less necessary over time.

Perhaps the most important point made by Beckert is the role of the state in all this. 'Free trade,' as he repeatedly points out, is only as free as national power makes it. The British state, especially, enforced labor discipline, contract, and legal infrastructures, protected merchants, fought wars to block rival economic powers, regulated the slave trade and then ended it, and otherwise created the legal, moral, and military order in which cotton manufacturers and traders lived and worked. The United States enforced slavery and then ended it; cotton planters were always disproportionately important in the national government.

In short: "The tremendous rapacity and unbalanced consequences of war capitalism left in its wake a great diversity: Some states were strengthened, while others were weakened.... On the one hand, slavery, land expropriations, militarized trade, and colonial expansion had opened up vast new territories... On the other hand, colonial expansion, the slave trade, and slavery itself undermined state capacity in other parts of the world and in so doing limited the likelihood that the newfangled machines, and with them industrial capitalism, would take root there" (p. 165).

As a history of world cotton trade and manufacture during those Euro-American centuries, this book is superb, and will remain a landmark. However, it is not the last word on cotton. Ethnobiologists will first note a lack of basic biology. Beckert does not even spell scientific names correctly; Gossypium arboreum is consistently misspelled arboretum. He does recognize the role of Sea Island cotton (p. 101), a cultivar of G. hirsutum, but does not point out the importance of its specific history; developed by the Arawak people of the West Indies, it was introduced to the Sea Islands of Georgia and South Carolina by planters who migrated north from those islands, and then bred further in the United States. It slowly but surely went worldwide, displacing the less productive and shorter-staple cottons of the rest of the world. This is what gave the United States such a major advantage in early cotton trade. Egypt too acquired superior cotton early, and remains heavily dependent on superior cotton to this day. Other countries have had to catch up, often slowly.

Also downplayed in Beckert's work is the extreme vulnerability of cotton to pests. Its extremely nourishing seeds make it a vast free lunch counter for pests that have evolved immunity to the poisons therein. (These poisons must be removed in cottonseed meal for animal and human food.) The boll weevil rates a mere mention (p. 344), the cotton bollworm—now the worst pest—not even a word. Yet the boll weevil devastated cotton production in the United States in the early 20<sup>th</sup> century, leading to mass migration of ruined white and black farmers to the cities. The scourge of this weevil was immortalized in a grim blues verse:

> I don't see no water, but I'm about to drown, I don't see no fire, but I'm a-burnin' down. (Anonymous, ca. 1920.)

Yucatan, where cotton is native, has weevilresistant varieties, but these were never found or followed up by cotton breeders. The boll weevil is now a minor problem, but the cotton bollworm (*Helicoverpa armigera*) is a major one. It is currently controlled by engineering *Bacillus thuringensis* genes into commercial cotton, but is acquiring resistance, just as it has evolved resistance to just about every pesticide that has been thrown at it. Moreover, resistance to 'Bt cotton' itself has become common in India, where loss of farmers' control over their seed stocks is a more direct and serious issue for many.

Cotton is also a notoriously greedy crop, impoverishing the land. In the United States, this led to the steady westward move of the cotton frontier, from the Carolinas to the mid-south and on to Texas, then Arizona, then California. Now, competition from the global south adds to global warming, which is making Arizona, California, and much of Texas too hot and dry for cotton. The drought of 2016 exacerbated a long-term process of replacing cotton with less thirsty and less fertilizer-intensive crops. As Beckert points out, cotton in the United States is now subsidized to the tune of over \$4,000,000,000 a year (p. 438), paid out to only 25,000 large farms (p. 429). Here and in several other countries, it is no longer economical to grow cotton, and the industry is saved due to the political power of the farmers. They contribute heavily to campaigns, and sometimes win government positions themselves, and thus keep the subsidies flowing.

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Pest control and fertilizer demands make cotton by far the most chemical-consuming crop in the world. In some years, it has consumed a third of agrochemicals worldwide. It is also a great consumer of water. It grows best with maximal sunshine and yet has an enormous water need. It therefore flourishes most in desert river valleys: the Nile, San Joaquin, Gila, Indus, Amu Darya. Beckert devotes only two sentences (p. 432) to the result: enormous diversions of water, poisoning of whole rivers by agrochemicals, drying of lakes and seas. The Amu Darya used to fill the Aral Sea; now it waters cotton fields, the Aral Sea is dry, and people along the lower Amu Darya lack water for washing and bathing and are dying from pesticide poisoning.

The unique biological properties of cotton are part of its story. The world would have been very different if cotton had been a different plant—less attractive to pests, less easy to raise in monocrop cultivation, less tied to desert rivers or hot, rainy climates.

Was cotton doomed to make the world into hell? Beckert sometimes toys with the alternative: production of cotton in mixed farming systems, grown by independent small farmers. This breaks up the monocrop conditions that maximize insect pests, allows use of farm wastes and legume rotations to maintain soil fertility, and uses labor efficiently. Beckert implies that it never works, but in fact it works perfectly well in China and India today, or could if better pest control were instituted. As Sucheta Mazumdar (1998) showed that sugar did not need to be produced on slave plantations, somewhat qualifying Sidney Mintz (1985), so Philip Huang's study of early 20<sup>th</sup> century cotton production in China (Huang 1985) could have informed Beckert of ways for free small-scale farmers to produce cotton. (Full disclosure: this is all in the family. Huang and I were Mazumdar's thesis supervisors.)

Various institutions, including the University of California, Riverside, where I work, developed integrated pest management systems for cotton that allowed drastic reductions in pesticides, and these systems are now used—though not widely enough.

Similarly, there was never any very good reason for horribly exploitative treatment of workers in the fields and mills. Only owners' greed prevented fair salaries and decent working conditions.

To a lack of detail on biology, Beckert adds an odd indifference to theory. He does not cite Marx on "primitive capital formation," though that idea seems to lie behind Beckert's "war capitalism." Also, the book is almost a textbook case for world-systems theory, but Beckert never mentions that body of enquiry. World-systems theory (Wallerstein 1976) stresses the role of core nations in underdeveloping peripheral ones and creating semiperipheral ("developing") ones. Cotton had a great deal to do with creating the world-system of the last three centuries. It enormously helped Germany, France, Britain, and the United States take control of the core. It led to forced de-development of India, as Gandhi famously pointed out. It led to the rise of Egypt into the semiperiphery, and helped India rebound to semiperipheral position. It played key roles in the bitter stories of Uzbekistan, Sudan, Brazil, and many other countries, tying them to the core nations in often highly disadvantageous ways. World-systems theory provides one way to talk about such stories in a comparative, systematic way. There are alternative theories, but at least some organized way of comparing, predicting, and understanding would seem necessary to analyzing a complex political-economic process like the development of the "empire of cotton."

Lacking these or other biological and theoretical insights, Beckert's book is not the basic theoretical game-changer that Salaman's *History and Social Influence of the Potato* and Mintz' *Sweetness and Power* were. We await a book that will truly make cotton central to understanding human-plant relationships. In the



meantime, Beckert's book is still a landmark, a grand history of one of the important business-and-industry complexes that made the modern world. In spite of its shortage of biological detail, it is an important read for ethnobotanists, showing the enormous ramifications of an important crop in an often harsh world.

A personal postnote: My father was raised on a tiny, remote cotton farm in east Texas. I visited the farm in my youth, and learned cotton from the ground up. The farm is now returning to the wild; cotton, once king, is now almost gone from east Texas. I found, in the local cemetery, the graves of the stalwart old-time farming couple who leased it when my widowed grandmother grew too old to manage it. *Sic transit.* 

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