#### STS.089 — Technology and Innovation in Africa

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## Lecture 5 - Textiles and Cotton (Qutn)

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#### Intro: Cotton & Cotton Textile Production

- What arguments were advanced by Chivalier and Dalziel?
  - Chivalier: social and economic history as history of technology
  - Dalziel: the incoming and locally originated (spinners, weaver, dyers, tailors, and embroiderers)
- What three aspects does Colleen E. Krieger's article focus on?
  - sources of evidences -what sorts of evidence does the author use?
  - dating
  - observations

### Africa and the History of Old World Cotton (Gossypium Herbaceum)

- Questions from readings
  - What were I.B. Hutchinson's speculations on the origins of cotton varieties?
    - \* In 1954: he speculated that the plant was indigenous to southern Africa but Arabs discovered it and took it back to Arabia for domestication.
    - \* in 1974, another speculation: there were two species, Gossypium arboretum and Gossypium herbaceum, domesticated from the same wild ancestor. Herbaceum domesticated in Arabia/Baluchistan from a wild ancestor –the knowledge then diffused from there into Africa.
  - What is the status of the research now and what do these speculations say about images of Africa?
    - \* The state of research –by non-Africans, of course –supports this, and that herbaceum was domesticated in 3,000 BC.
    - \* Scholars pick and choose from Hutchinson's two positions, even adding arrows on his maps to show "diffusion pathways" of the two cotton species entering sub-Saharan Africa via the southern Arabia and the Red Sea.
  - What does Kriger say to this?
    - \* "Diffusions are far too simplistic"
- Questions of sources: Nubia and Meroe
  - The earliest radio-carbon cotton dates from Nubia in the Nile Valley (there are lint-bearing seeds and cotton fiber dating back to 2600-2400 BCE, but no evidence of cotton textile use or manufacturing until much later)
  - Dates for Meroe: 280 BCE to 350-540 CE –many textile fragments; could have been logical made or imported, grown or wild. We just won't know. Kroger speculates that cotton was "grown, spun, and woven in North Africa in 300 BCE - 400 CE."
  - To most scholars, Africa is a continent where everything that is good is supposed to have come from outside: from the Levant or from Europe to North Africa because of its accessibility by land to the east, the seed of civilization was always thought to have then spread from there to West and Southern Africa. But this diffusionist speculation is now doubted.

- The rise and spread of Islam (6th 9th CE) was the lighting rod, it is said, for the spread of cotton from Nubia and Aksum (Ethiopia) to West Africa.
- Two centers of cotton production in West Africa, ca. 900-1500
  - Linguistic evidence: gathered the generic words for cotton in 126 West African languages from dictionaries, word lists, and botanical sources –showed that there were at least two distinct centers of early cotton production in West Africa, around the 10th century:
    - 1. Cluster of Niger-Gambia-Senegal watersheds and areas contiguous to the Sahel
    - 2. Around Lake Chad
  - Fit perfectly within the flight path of Watson's "routes of crop diffusion" during the Islamic period before 1500. In a sense, this highlights the role of human mobilities as a carrier of technology.

### Textile Manufacturing in West Africa

- Archaeology shows cotton manufacture in West Africa by at least the 11th century.
- Written accounts of travelers like the Andalusian al-Bakri (1068) gave us the first description of cotton manufacturing in West Africa; cloth was used as currency.
- It was made not from cotton crop grown in the fields but the "cotton tree," a perennial.
- Spinning was done entirely by hand.
- Cotton was one of many materials. Others were wood, silk, leather, grass, bark, palm leaf cloth. To make the kyenkyen cloth in Asante, for example, they would soak and pound the inner bark of a particular tree species.
- Treadle looms on the Ivory and upper Guinea coats
  - by the 16th-18th centuries, Cabo Verde islands manufacturers were famous.
  - African cotton and indigo was commercialized into plantations worked by enslaved Africans, which
    then exported cotton to the Gambia, Casamance, and Cacheu Rivers.
  - relied on enslaved Africans' indigenous knowledge and techniques to scale up from mere crop production to spinning, dyeing, and weaving.
- Indigo dyeing was popular, too, and techniques in dyeing continued to shift.

# Discussion: European Travelers Bear Witness to African technological innovations

- Cadamosto on the Gambia (1456): witnessed raw fiber, handspan thread, and handwoven textiles with locally grown cotton. Elites wore cotton clothes and commoners wore goatskin, which were either plain white or loom-patterned with stripes of blue or red yarns.
- Pacheco Pereira in Sierra Leone (1490s): cotton grown on the Cabo Verde islands using enslaved Africans—exchanged for animal skins, palm oil, and unusually colored shells.
- incoming trade and local textile industry: cloth imported, but also woven locally on a "vertical loom"
- exported to markets on Gold Coast, Gabon, Angol, Sao Tome, West Indies, and Brazil; striped cloth
  exchanged for gold on the Gold Coast, indigo-blue cloth exchanged for ivory and captured Africans in
  Gabon and Angola

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