Clothing, Computers, and Consumerism

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One of the distinguishing features of *Homo Sapiens* from its predecessors is the development and use of tools in the pursuit of stable food and clothing sources. These tools built on each other to create the modern world we know today, but all originated as something much simpler. For example, the jacquard loom, which uses punch-cards to weave complex damask laces, both relied on the invention of the back-strap loom for its creation, and made possible all modern computer programming(Science and Technology.). The demand for finer and more complex fabrics runs parallel to the human demand for finer and more complex lives, and the pursuit of both drives much of human history. In ancient Egypt, the primary fiber sources were plants like Papyrus, halfa grasses, doum palm, and flax (Borojevic and Mountain 2013). These plants were native in North Africa, although their cultivation at scale required vast waterworks, and each plot of fiber could not be used for millet or other food-stuffs. Rougher fibers were used for cordage, shoes, baskets, while clothing was made out of the softest of these fibers. Usually flax, who's subtle luster, feel, and drape are still prized today. Then,

as now clothing and its decoration were a sign of wealth, and its creation one of the cornerstones of civilization and a primary economic motivator.

Before the invention of the spinning wheel (~1000 AD("The Spinning Wheel..." n.d.). All fibers, whether for a ships rope or a queens dress, were spun by hand. Drop-spindles, the most common type of spinning implement in the ancient world, have as many variations as there are cultures, but all share a few similarities. Each spindle has a shaft, its central axis normally 12" to 30" long, which is often plain and used both to begin the spinning motion and to store the already spun yarn so it can be added to. While the length of the spindle changes to suit the spinner and culture, the whorl changes to suit the yarn. The whorl (central disk) of the drop spindle is what perpetuates the spin, and determines the speed and length of the spin. Smaller whorled spindles also make finer yarns, and require more delicate decorations or inlays; often the fineness of a spindle was indicative of the economic status of its owner(Vogel, Buhrow, and Cornish 2016). Spindles and looms were passed down family lines, along with the knowledge of the trades involved; learning to spin was learning to be a part of the larger family unit and community. Spinning and weaving are social activities and when the community came together to process their fiber, they would sing and tell stories to pass the time, passing down their culture in the process. Spindles also changed shape according to the available fibers; animal fibers are generally shorter, and need faster spindles than plant fibers. By analyzing spinning and weaving technologies developed by a civilization, we can compare them both to other cultures, but also to modern day.

Common whorl diameters today range from 50mm to 90mm, and the average expected diameter of yarn produced by hand has greatly increased from the legendarily translucent yarns of *Dhaka* muslin (.04mm) (Sinha 2021) to lace weight yarns (~1.27mm). This increase in whorl and yarn size are correlated, and the Early Byzantine Spindle-whorl in the care of the British Museum ("Spindle-Whorl (?) | British Museum" n.d.) is only 28mm in diameter. The Byzantine spindle-whorl is an excellent example of functional art, carved some time between the 4^{th} and 7^{th} century, it has very defined decorative V's on top, and a smooth flat bottom. Clearly well-polished, this whorl was likely used daily to produce threads of flax to be woven into clothes of linen and sold or bartered. Like today, clothing and fashion in ancient Byzantium was used to indicate social status, and a fine spinner or weaver could bring their workshop success in the same way a fashion designer would today. With the invention of machines that increased the amount and quality of thread and fabric that could be made in a day, the rate at which fashions changed increased tremendously between the Byzantine empire and today.

Clothing and fashion are ways to make statements, and to send unspoken signals to other people. What we care about and where we come from are all reflected in the things we buy, wear, and display. Cultural motif's in fashion are likely older than can be officially recorded, due to the degrading nature of clothing objects, but it would be irresponsible to assume that richly decorated clothing was a luxury unknown to our ancestors. What would be unfathomable is the rate at which we consume clothing. While the very wealthy may have had spares of every type of clothing, the intensive process of clothes-making means that it is unlikely that a common person would have had a closet bursting at the

seams. In contrast, American clothing consumption has doubled in the past 15 year and on average one person throws away 10 pounds of clothes in a year (Greenwood n.d.). The development of "fast fashion" has allowed greater personal expression than ever before, but has come at a horrific human and ecological cost. Rather than a vehicle of economic mobility, the modern textile industry relies on unregulated machine manufacturing and workers rights violations to produce cheap and terrible clothing for immediate markets.

If an ancient spinner of Dhaka muslin were resurrected today to walk among the garment district, there would be little for them to recognize. Although great efficiencies have been brought by machine spinning and weaving, the impact of fast fashion and colonialism have destroyed so much of the traditions that made the ancient fashion districts wonders. Not all hope is lost however, interest in what is being called "slow fashion" is growing, and a return to thoughtfully purchased and carefully tailored clothing is reviving ancient practices ("Textile Hub Bangladesh..." n.d.). By supporting these movements and thinking carefully before each purchase, we can maximize the lifespan of our clothing, minimize the impact we have on our earth, and sustain ancient traditions.

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