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Review Essay: *The Material Culture of Textiles: Towards Sustainability*

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- Bédat, Maxine (2021). *Unraveled*: *The Life and Death of a Garment*. Penguin, 312 pp. ISBN: 9780593085974.
- Postrel, Virginia (2020). *The Fabric of Civilization. How Textiles Made the World*. Basic Books, 304 pp. ISBN: 9781541617605.
- St. Clair, Kassia (2019). *The Golden Thread. How Fabric Changed History*. Liveright Publishing, 351 pp. ISBN: 9781631494802.

The last few years saw three strikingly similar books about the textile industry, unravelling the material conditions of the clothing we wear. It may seem some kind of serendipity, but I venture the hypothesis that the interest for textiles has more to do with the belated realization that the fashion industry is cracking at the seams, because it is socially and environmentally unsustainable. My specific new materialist perspective in this review essay consists in stressing the environmental grounding of the fashion system and the material conditions that would allow a sustainable practice.

For St. Clair, Postrel, and Bédat the urgency to take into serious consideration the very material conditions of fabric, emerge from the awareness that we live surrounded by cloth, from being wrapped in a blanket at birth, to being dressed in garments day and night, to the covers of our chairs and beds, the seat belts in our cars, the sails of our boats, and even the suits for travelling in outer space. Textiles are everywhere. Yet we – the daily users – seem to know very little about the raw materials or the processes of making fabrics, nor about the people making them. The authors aim to fill that gap

in our knowledge and curiosity, starting from the assumption that "textiles of all kinds are intrinsic to our lives and cultures" (St Clair, 291). All three authors point out that textiles have been fundamental to our culture, history, and industry. In fact, yarn and fabric have been so central that they are woven into language. As Barthes and many of the other poststructuralist cultural critics (like Kristeva and Derrida) already pointed out: text and textile derive from the same ancestor, Latin 'texere', to weave—Barthes wrote, "etymologically, the text is a tissue, a woven fabric" (1977, 159). Language and cloth have become interwoven; consider expressions like the warp and weft of civilization, or being part of the social fabric, or with sadder connotations, being torn apart from family or a life hanging by a thread. These and many other metaphors indicate that fabric is indeed the very stuff of human life.

On the materialist side, St. Clair, Postrel, and Bédat share their surprise and even dismay that people seem hardly aware of the enormous efforts that have gone into the inventions of making yarn and textiles out of plants, animal fleece or insects. As they show, the story of textiles is the story of human ingenuity. Just think how the invention of making yarn out of plant or wood pulp helped develop agriculture, how the binary code lies at the root of the technique of weaving and weaving machines, while the origin of chemistry lies in the colouring and finishing of cloth (Postrel, 3). Postrel even claims that for trade in textiles to happen, the technology of literacy (150) and the mastery of Hindu-Arabic numerals was necessary (158), as were the invention of double bookkeeping and a banking system based on cheques and credit in the fifteenth century (161).

To know the history as well as the technology of fabrics is all the more important because we now live in a time where 'fast fashion' has made clothes a throwaway item: "For the first time in human history, the vast majority of fabric being made has become disposable, something to be consumed and thrown away within weeks or months of being made", writes St. Clair (221). Not knowing the effort of what goes into making, or discarding, a garment, makes the owner careless. Such a flippant attitude is a far cry from the high esteem that our ancestors, or even our own grandparents or parents, held for cloth, which was highly valuable until the mid of the twentieth century.

As Postrel puts it: “We suffer textile amnesia because we enjoy textile abundance” (248). That amnesia comes at a cost, not only because it conceals essential components of our human heritage, as both St Clair and Postrel argue, but also because the overproduction and undervaluing of garments has led to a highly unsustainable industry as Bédat argues. Time to understand how textiles changed history and made the world, and follow a garment in its life and death, to quote the subtitles of the three books.

The very beginning of fibres is explored by St. Clair, who forcefully argues that if only textiles had survived the weathering of time we may have spoken of The Textile Age rather than a Bronze or Iron Age. But because fabric tends to decay and disappear over time, archaeologists have to do with literally scraps of fibre or even just some pollen. Radiocarbon dating shows, however, that already in neolithic times threads were made from bast. Both St. Clair and Postrel take ample time to delve into the worldwide (pre)history of the incredibly complex process of making yarn out of fibres from flax (to make linen) and fleece (to make wool). Natural fibres can be divided in two categories: fibres from animal fleece, which have their base in protein: wool and silk. And fibres from plants, which have their base in cellulose: flax, bamboo, hemp, cotton, etc. They both stress the physical pain and hardship to extract fibres that are soft and flexible enough to spin it into yarn. Fibres are raw materials that can be converted into textile yarns. But a yarn is not yet a fabric, so people had to learn how to spin it into a filament that is strong and smooth enough to be further processed into fabric by weaving; a technique that goes back 24,000 years ago. Even the most simple weaving machine “challenges the mind”, writes Postrel (72), because it is “profoundly mathematical”. Like knitting, but that was a much more recent invention only a thousand years ago.

Linen and wool remained the predominant raw materials for a long time. China invented the sericulture, the production of silk, around 2600 B.C., maintaining a monopoly for more than 5,000 years (although fibres have been found in tombs over 8,500 years old; St. Clair, 63). St. Clair and Postrel both trace how textiles literally made civilizations powerful and wealthy. For example, St. Clair dedicates a full chapter to

the strong woollen sails that the Vikings were able to make, allowing them to sail the seas and conquer other countries. One sail took the women of a village over two years to make. The silk trade, and the famous silk roads, created the wealth of Chinese culture and cities: “silk was power” (73). All three authors stress the gendered nature of the technique of spinning, and Postrel emphasizes the time effort that went into producing yarn for fabrics: “cloth requires a huge amount of thread” (48). In an interesting table, she estimates just how long it would have taken to produce yarn for a garment, sheet, or sail in different era’s. For example it may have taken 114 days to make a Roman toga, and 82 days to make a queen sheet by using a spinning wheel. It just shows why women were continually at their spinning wheels to produce thread for fabric.

We may not know much today about the material conditions of producing yarn and weaving or knitting fabrics, much less do we know about the process of dyeing. Postrel dismisses any romantic idea that “preindustrial life was environmentally benign” (143). The process of dyeing was a mess, involving stinky ingredients; it smelled like urine, vomit, or rotting flesh. Today, this has become a chemical industry, from pesticides in growing cotton to bleaching, homogenizing, and dyeing the fabric: “Behind just one T-shirt made with conventional [ie. not organic, AS] cotton, there’s one third of a pound of chemicals; there’s three quarters of a pound in one pair of jeans.” (Bédat, 15). Making clothes from textiles has a “carbon-intensive energy grid” (35), while the pollution of both freshwater and air is quite a serious matter. It results for example in biologically dead rivers in Bangladesh (Bédat, 61) or toxic gases emitted by illegal waste fires in landfills in Kpone, Ghana (225).

Material conditions were – and continue to be – harsh and often heart-wrenching, for the poor people who were working in the fields or at the machines. All three authors expand on the link between the cotton industry and the exploitation of people, especially in the USA: “… slavery and cotton formed the warp and weft of America’s success.” (St. Clair, 173). But St. Clair also shows the age-old exploitation of the lower classes in the production of silk in China, whereas Bédat meticulously traces the contemporary exploitation of the, mostly female, garment industry workers in Asian countries, or for that matter of the workers in the packaging industry for Amazon in

the USA: forced labour, low pay, overwork, lack of regulations, and foreclosure on unionization are still with us today.

Cotton is connected to colonialism, the period in which it became the preferred fabric for Western Europe and the USA. The voracious consumption of cotton instigated the industrialization of production, as Bédat writes: “Cotton drove modern industrialization and inequality...” (xix). The invention of the spinning jenny formed the heart of the industrial revolution. It is actually quite upsetting to compare pictures of women and children working those machines in the nineteenth century in Europe and today in many Asian countries: the process of making fabrics and of CMT (cut, make, trim) has hardly changed in the last few centuries. It may have been scaled up by bigger machines, but it is still much the same procedure.

The Golden Thread and The Fabric of Civilization both dedicate chapters to new developments in technology, starting with the invention of regenerated fibres like rayon and viscose in the beginning of the twentieth century. These are semi-synthetic fibres derived from plants, falling into two categories: cellulose and protein fibres (Fashionary Team, 2021, 16-17). Synthetic fibres are derived from chemicals, mostly from petroleum, of which the best known are nylon (invented in the 1930s) and polyester (invented in the 1950s). All three authors mention the incredible success of nylon stockings just before and after the second World War replacing expensive silk. Nylon was very profitable from the start, but other synthetics, like acrylic (known by its name Orlon), polyester (Dacron), and spandex (Lycra) “had to work harder initially to win over consumers.” (St. Clair, 209). Synthetic fibres “were first accepted for their utilitarian virtues” (208). It was marketing that convinced the consumers. Synthetic fabrics were cheap and convenient; housewives were targeted in advertising for the easy care—freeing them from the drudgery of ironing. All three authors agree that polyester coincided with the post-war boom in spending. Especially in the USA polyester became a sign of mass consumerism and the desire for modernity. It was followed by a downturn in the 1980s when polyester became a synonym for cheapness and unfashionability, followed by a recent revamping. Today, polyester is by far the most common fibre, far outselling cotton. Generally, synthetic fabrics command sixty per cent of the global fibre market.

While The Golden Thread and The Fabric of Civilization dedicate their last few chapters to new technological developments, such as space suits, sportswear, wearable technology, and new sustainable fibres, Unraveled focuses in its last chapters on issues of sustainability by following the end of a garment's life cycle. Fast fashion would not exist were it not for synthetic fabrics. But, as we hopefully all know by now, fast fashion system is socially and environmentally a disaster. Bédat is scathing: "The current system is destroying the planet, ignoring the losers, and creating precarious jobs with precarious futures." (116). She convincingly shows how hard it is to find reliable data; she recounts how time and again she came to a dead end in looking for data (46). The industry is so complicated with its many middlemen and subcontractors, that brands and business themselves do not have access to the data. This actually allows them to get away with a lot of greenwashing. The lack of transparency is one of the biggest problems in the fashion industry. Yet, her stories of the plight of workers in the factories of Bangladesh or Sri Lanka, or in the largest second-hand clothing market Kantamanto in Accra (Ghana) get the point of the exploitation of people and planet across. The fashion industry has taken, as she repeats throughout the book, the lead for a "race to the bottom".

Fashion is capitalism's child, Elizabeth Wilson famously wrote (1985: 13). These three books show how the textile and fashion industry have gained from neoliberalism, by creating a fast fashion system of extreme capitalism that does not care for people nor the planet but only for profit. All three authors are convinced that change lies in the hands of the consumers. They are critical of so-called 'sustainable fashion', aware as they are how much chemicals, and exploitation of people, go into producing yarn, fabric, and garments. Consumers should change their behaviour by stopping the throwaway mentality. This can only happen if consumers come to value their clothes. Unraveled ends with a hands-on, if not activist, chapter how to effectuate that change. If re-pair, re-wear, and re-cycle is the mantra, the ultimate change that consumers – we – can achieve is: not to buy new clothes.

The Golden Thread, The Fabric of Civilization and Unraveled are semi-academic books, well-researched and with footnotes, interlacing facts and figures with interviews, travels, and stories. The style is engaging, at times a bit anecdotal, but it

makes for an easy read. Although all three books have a global outlook, they remain embedded in North-American culture, for example with their focus on deregulation in neoliberal times, the lack of unionization for US workers, relentless consumerism, the waste disposal in landfills, and local examples of recent technological innovation. The strength and attraction of the books lies in the insight that fabric is foundational of our very society. Understanding the material conditions and production of textiles means not only to value our common history but also to change for a better world in the future: "Change textiles and you change the world", writes Postrell (218). If the fashion industry is to "draw down their carbon use, manage their chemicals, pay their workers a decent wage, and be representative and inclusive" (Bédat, 240), we as consumers need to learn to value and cherish our clothes. As St. Clair puts it: "The fabrics we choose and where we get them from still have butterfly-effect consequences on the lives of the people who make them and on the world around us." (2929). The strong message of these three books is to take the material culture of textiles seriously if we want to achieve a sustainable future for fashion.

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