Fabric of War: The lost history of the global wool trade

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Published

2019

Journal Title

Selvedge Magazine: the Fabric of Your Life

Version

Version of Record (VoR)

FABRIC OF WAR

The lost history of the global wool trade

Few in 2019 appreciate that the throwaway culture of textiles in which synthetics are so prominent, came into being partly as a result of contrived shortages caused by military demand for natural fibres.

Wool was of particular importance during a century of mass, cold-climate warfare. Select a sampling of military uniforms from the world's armies in August 1914 or September 1939 and each would very likely contain wool fibre from Australia and or New Zealand, then the most important producers of the kinds of wool coveted by the textile industries. Uniforms from the same countries dating to two years later would show Britain and her allies with the same fabric content, while her enemies and many neutrals eked out shrinking wool supplies with an array of (variably useful) substitute fibres. Between the 1850s and 1950s, the global wool trade would witness pulses of great demand during a series of wars in which nations jockeyed for access to wool while simultaneously searching for its elusive replacement. This textile politics was a key factor in the rise of synthetic fibres.

This is in many ways a lost history, or one seen only in parts. In the US, the decisive rise of synthetic fibres after WWII, along with an ongoing focus on the cotton industry and its impact, has eclipsed wool's varied roles in the national story: as a manufacturing mainstay, key domestic pastoral commodity, vital import commodity, and centerpiece of commercial links with Australasia. In the UK, and other nations with important textile manufacturing industries, memory of the wool industry is focused on the old industrial cities. By contrast, Australia and New Zealand understand their national stories through wool as a primary agricultural product, ignoring their part in textile production and consumption. New insights arise if the history of the wool industry is viewed transnationally and comprehensively, from land ownership and sheep pastoralism, to transport and marketing, to thread and textile production, and finally to the end users including various militaries and the complex politics that arise in wartime.

Wool as a precious fibre has a history stretching beyond the ancient Greeks and the Golden Fleece. Since the 14th century, England's Lord Chancellor (now the Lord Speaker), takes his seat on a ceremonial woolsack, symbolising the importance of wool to the country's economic and political stability. As long ago as the 16th century European nations regulated the export of wool fleece to prevent its use for military purposes by potential enemies. In Spain, the coveted merino sheep was a closely-held breed and until 1786 exporting a merino could incur the death penalty.

While home and workshop production of woollen yarns and textiles was common in most countries, full mechanisation of wool textile manufacturing only came about in the second quarter of the 19th century, both in Europe and the US. At the same time, British colonies in Australia and New Zealand opened vast new lands to sheep pastoralism; Australia's flocks would increase from some 33 thousand in 1810 to 72 million in 1900. In those same decades the US began its somewhat bumpy road to becoming a wool growing, as well as wool manufacturing, nation.

In the later 19th century, aided by new technologies (telegraphy, steamships, canal-building) and spurred by the enormous size of the Australasian wool clip, the epicenter of the world's wool market moved from London to Australia. The UK, US, Germany, Belgium, and, eventually, Japan all relied on Australasian wool for military textile production, domestic consumption, and global commercial aspirations. The Japanese woollen industry, in fact, had its origins in that nation's emergence from isolation in the mid 19th century. The government's decision to clothe its diplomats and its soldiers in western-style civil and military uniforms encouraged the establishment of western-style woollen mills to provide the necessary cloth.

Wool's physical qualities have always been critical to making extreme weather conditions tolerable to soldiers and sailors. And as the woollen industry expanded in the 19th century, so did the scale of many wars. Armies which had once numbered in the thousands of men began to count in the tens, then hundreds of ▸

Below; Private Sentinel, Battle of Malplaquet, 1709

Below; Private Soldier, Battle of Waterloo, 1815

Below; German Private Soldier, Battle of the Somme, 1916

Right; French Private Soldier, Battle of Verdun, 1916

thousands, then millions of combatants. For most countries with an active woollen textile industry, dependence on foreign sources of wool was a significant economic drain, especially in wartime. In Mark Twain's fable, *Following the Equator,* South African diamond magnate Cecil Rhodes got his start in tycoonery by cornering the wool market in Sydney, Australia after he found a fragment of a newspaper in a shark's stomach that told, days before the news could arrive by ship, of war breaking out in Europe, probably has a few real-life underpinnings. Fortunes in wartime were made not only by armaments makers but by textile manufacturers as well. Equally, however they were lost, by those who misjudged when the inflated, conflict-induced demand for wool would subside.

When war erupted in August 1914, the British Empire produced about a third of the world's total wool supply, and most of the wool was suitable for clothing and blankets, as opposed to carpets. This was far more than any other single country or alliance could boast, and gave Britain dominance in the trade. Both the Germans and British had stockpiled wool over the previous couple of years, though in 1914 no one foresaw that the war would last for years, and involve as many as 70 million combatants around the world. Still, the British government acted quickly to prevent wool, among other raw materials, from reaching the Central Powers, imposing an embargo on shipments of British and Dominion wool to the US in late 1914, and blockading German ports from early 1915.

Manufacturers in neutral nations worried about keeping their factories busy when access to wool was so heavily restricted by Britain. They juggled the needs of satisfying their domestic civilian customers, and meeting foreign demand—not only for combatant nations' military needs, but also from neutral countries which had formerly bought goods from the warring countries and now needed alternative sources of supply. To satisfy the British and ensure continued access to Australasian wool, the Textile Alliance, an association of American manufacturers organised in 1915, offered to over-see imports of wool to the US and ensure that buyers would not trans-ship them, or products made from them, to Britain's enemies.

In 1916 Britain's own wool requirements, and the demands of allies whose industries had been disrupted, became paramount. In October 1916 contracts for purchase of the entire clips, both crossbred wools and merinos, from Australia and New Zealand, were finalised. This involved complex and often contentious negotiations on prices and the details of sorting, packing, storing, and shipping. The wool auctions in Sydney and Melbourne ceased for the duration, and for the rest of the war Britain controlled most of the world's available supply of raw wool.

For Germany and Austria-Hungary, wool became alarmingly scarce as the war dragged on. A post-Armistice intelligence summary from the US Third Army, dated 20 November 1918 reported that in the regions of France invaded by the Germans, 'orders also required the taking of blankets, wool from the mattresses, and even shoddy cloth'. Other occupied regions suffered similarly. Confiscated wool, whether taken from storehouses or mattresses, was sent to Germany to be processed into yarn. The Germans and Austrians also used many substitutes, some in development before the war, including spun paper yarns, jute, and regenerated fibres from seaweed.

Conserving wool became a patriotic duty in all the combatant nations. Damaged and worn uniforms were either repaired and re-issued, or, if beyond repair, the wool from them was reclaimed as shoddy–the textile industry term since the early 1800s for wool fibre recycled or reclaimed from rags and clippings. The 'shoddy scandals' of the American Civil War, when northern textile manufacturers, trying to outfit a rapidly growing army, mixed shoddy with virgin wool in such quantity that the durability of the uniforms and blankets made from those goods was seriously compromised, has made 'shoddy' ever since a synonym for poor quality.

Even though for certain uses shoddy was perfectly acceptable, the Civil War aura of rags and profiteering clung to it. Even in Europe, some feared that through the use of shoddy the recycled uniforms of dead soldiers would be given to those who followed them into the trenches. ▸

Thom Atkinson's project *Inventories* illustrates the personal equipment carried by soldiers through the past 1000 years. From Waterloo to World War II, new technologies in weaponry, communications, and transportation changed warfare, and many of the objects and materials that equipped soldiers. But until the mid 20th century there was one constant - the need for wool- to clothe, warm, shelter, and comfort those engaged in combat. Each photograph represents an evolutionary stage, grounded by a historic battle. The soldier in the Napoloeonic Wars is perhaps not so different from the British Tommy in the trenches. Collectively however, the exponential growth in the number of soldiers from the 19th century, and the complicated politics and diplomacy surrounding wool, especially in the essentially cold climate wars of the 20th century, meant that war had an ever greater impact on the wool trade, at least until after the end of the 1950s Korean War. ••• **www.thomatkinson.com/inventories**

Below; US Infantryman (Doughboy), Arrival in France, 1917

Below; Sergeant, Battle of the Somme, 1916

To head off any need to use shoddy in military garments worn closest to the body (although it was used in blankets and overcoats), civilians were asked to reduce the amount of wool they consumed, either through substituting other materials or silhouette changes in their clothing. Recycled uniforms were used, but likely not for combat troops: the US Army repaired trainee's damaged uniforms and reissued them to new trainees, while the Indian Labour Corps in France was issued recycled and re-dyed British army uniforms.

In 1939, when war broke out again, Britain again commandeered its Dominions' wool. This precipitated anxieties in the US even stronger than those of the first war, given the threat of German U-boats to commercial shipping. By the time America entered this war in 1941, the nation already had two years of wool shortages under its belt. Although 20 sheep were needed to outfit a soldier for a year in 1918, that had become 26 by 1942. Dominion wool was eventually sent to the US, but even so, conservation, salvage, and wool reclamation again became patriotic duties. Even small savings were considered worthwhile: the US Army changed its uniform neckties to mohair from angora goats instead of sheep's wool. And once again the US turned to shoddy. It was reported that 'Experimentation and improved processing permit the use of up to 85% of reclaimed wool in new cloths, which, in quality and strength, compares favorably with virgin wool fabric'. Such a high percentage of shoddy, even with improved processing, is unlikely to have made sturdy cloth, and would very likely have been used only in civilian goods, unless the situation became dire indeed.

Wool's properties of warmth, and odour, water and fire resistance, made it difficult to imitate, but British control of so much of the world supply made it imperative for many nations to search for substitutes. Italy had tried in the late 1930s with 'Lanital' a milk-protein based regenerated fibre. European nations did not make use of casein fibre during the war, as milk was far more important as food.

Other substances such as milkweed fibre, chicken feathers, and the protein from peanuts and soybeans, were tested without much success. Although rayon was available, it was not yet a viable substitute for the military's wool. It still lost strength when wet, and had little insulating power, so was used primarily for linings, or mixed with other fibres in fabrics for outer garments, to eke out supplies of cotton and wool.

The first fully synthetic textile fibre was Nylon, a product of the DuPont Company. Released in 1939, on the cusp of WWII, it was used solely in hosiery before the war. DuPont had thrived on making gunpowder before exploring chemically synthesised textile fibres. Nylon would come to almost wholly replace silk for parachutes, and by late in WWII it was being used for the outer layer of military raincoats, but was not a satisfactory substitute for wool or cotton.

Buoyed by the success of Nylon sales, and the likelihood of wartime shortages of natural fibres, DuPont worked hard to synthesise other textiles from coal and fossil fuels, creating what was initially known as Fibre A. After the war this was marketed as a wool replacement called Orlon, but the long lead time in its development precluded its use in either WWII or the Korean War. Meanwhile, the world's militaries devoted much effort to using less wool as wool prices soared. The Korean War era American soldier, for example, wore winter uniforms of a wool and nylon mix, with a parka-style coat in a water-resistant blend, which had a separate liner made of a pile fabric to trap heat.

Would the world's textile industries be so focused today on regenerated cellulose and petrochemical polymer fibres if warfare had not magnified the problems of natural fibres? The availability of plant and animal fibres is not only subject to disruption by weather and disease, their long supply chains are also dependent on stable international relations, and profit margins are often buffeted by fluctuating prices. As Kassia St Clair's book *The Golden Thread* argues, textiles are often sidelined in historical accounts of social, economic and cultural change. A particular dimension to this, little explored by St Clair, is that wool is critical to understanding military strategy in the modern era, and that in turn, military uses of wool have shaped contemporary civilian society and our use of textiles.••• **Madelyn Shaw and Trish FitzSimons**

Lance Corporal, Parachute Brigade, Battle of Arnhem, 1944