

CHEAP SILK

A MORE-THAN-HUMAN HISTORY OF SERICULTURE IN SLOVENIA'S GORIŠKA REGION

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Abstract

This paper examines the historical development of sericulture in Slovenia's Goriška region through Jason Moore's theoretical framework of capitalism as world-ecology. Drawing on historical records from the 16th to early 20th centuries, it analyses how silk production functioned as a complex system of organizing human and extra-human natures for capital accumulation. The study focuses particularly on three interconnected categories of "Cheap Things": the undervalued labour (Cheap Work), the appropriation of silkworms and mulberry trees as non-human workers (Cheap Nature), and the unrecognized care work primarily performed by women (Cheap Care). Silkworms were given the highest care and human characteristics—they were referred to as "cavaliers" due to their gluttony and high maintenance, and were also held close to their chests during hatching. Today, sericulture's legacy lives on as a performative and discursive practice demonstrating how the capital puts nature to work even when the original industry is no longer present. The story of sericulture in Goriška region illuminates broader patterns in fashion production, encompassing everything from dislocated material production to appropriation of human and non-human work.

Keywords: *Sericulture; Non-human Labour; Capitalism; Capitalocene; Textile Production; Textile History*

INTRODUCTION

Sericulture, cultivation of silkworms to produce raw silk, represents a complex interweaving of human and non-human labour, requiring minimal investment yet demanding labour. Historically it relied on the appropriation of human and non-human work (directly silkworms and trees), rather than on exploitation through wage labour. This paper examines the history of silk production as a production network encompassing both human and more-than-human actors, exploring how capital puts nature to work (Moore, 2015). Focusing on Slovenia's Goriška region—a border region in the crosshairs between Italian and Slovenian cultures—I argue that this regional history illuminates broader patterns in fashion

production, from dislocated material production to appropriation of human and non-human work. Mulberry trees in Goriška reflect the region's economic structure and social interactions, where the Slovenian peasant population struggled economically. Silkworms were given the highest care and human characteristics—they were referred to as "cavaliers" due to their gluttony and high maintenance, and were also held close to their chests during hatching. Today, sericulture's legacy lives on as a performative, discursive practice in the form of storytelling—a type of simulation, to quote Baudrillard (1999). People's memories, dusty tools and remaining trees perform a curated version of local cultural heritage and landscape. I approach this legacy by researching how the capital still puts

nature to work even when the original industry is no longer present.

With this paper I argue that sericulture is an example of how capitalism organizes nature through both material and discursive practices. I approach this topic with Raj Patel and Jason Moore's theory of capitalism, particularly their concept of Cheap—understood as “a practice that mobilizes all kinds of work—human and animal, botanical and geological—with as little compensation as possible” (Patel & Moore, 2017, p. 19). I examine sericulture through three interconnected categories: Cheap Work (of landless farmers or coloni), Cheap Nature (silkworms and trees), and Cheap Care (predominantly women's labour). The provocative title of the paper “Cheap Silk” emphasises the true value of this material commodity, which carries prestigious connotations in fashion.

THEORETICAL FRAMEWORK

Moore's conception of capitalism as world-ecology, rather than merely an economic or social system, provides the foundational framework for this analysis. World-ecology represents “a method of bounding and bundling the human/extra-human/web of life relation—a manifold and multi-layered relation that encompasses everything from the micro-biome to the biosphere” (Moore, 2015, p. 19). This approach allows us to examine sericulture not just as an economic activity, but as a way of organizing nature that encompasses both material practices (cultivation, breeding) and discursive ones (categorizing trees as “beneficial” or “invasive”).

Moore refers to new geological era as Capitalocene (“Age of Capital”) rather than Anthropocene (“Age of Man”) (2015, p. 57), to emphasise the destructive role of capitalism. This framing emphasizes that environmental transformation stems not from abstract human activity but from specific capitalist practices of organizing nature for profit. In sericulture, this manifests in the deliberate modification of both landscapes (through mulberry cultivation) and organisms (through silkworm domestication).

The concept of Cheap on the other hand provides the analytical tools for understanding how the work of sericulture is organized and justified within capitalism. Patel and Moore underline that cheap should not be understood as low cost: but rather a strategy, a practice, a violence that mobilizes all

kinds of work—human and animal, botanical and geological—with little compensation as possible (2017, p. 22). Appropriation is the process where unpaid work, including labour, forestry, and agriculture, is turned cheap, transforming nature into a cheap commodity (Moore, 2015, 107-126). In sericulture the three interconnected categories of “cheap things” are: Cheap Work (labour of coloni in cultivating mulberry trees and silkworms, with minimal payment), Cheap Nature (appropriation of silkworms and trees as non-human workers, meaning not only their immediate labour but also their biological reproduction and genetic modification over time) and Cheap Care (performed mostly by women in the delicate and intimate care of silkworms). All three categories are very much connected and intertwined—life cycle of a silkworm is a involves all three: the agricultural labour of cultivating (Cheap Work), the biological work of the organism itself (Cheap Nature), and the intimate care required for its survival (Cheap Care). For greater transparency, I shall unpack each individually in the next chapters. I support my argument by drawing from historical sources and current discourses.

CHEAP WORK: REGIONAL CONTEXT AND LABOUR RELATIONS

The Goriška region is located in the west of Slovenia, stretching in the north between the Julian Alps, up to the Vipava Valley, sharing a lengthy borderline with Italy, most notably with the bordering towns of Nova Gorica/Gorizia. With its turbulent history, the region was affected by Italian territorial expansion in the twentieth century, subjected to a policy of Italianisation and, in its most violent form, annexed by Fascist Italy and later occupied by Nazi Germany. History of sericulture in Goriška region represents a compelling case study of capitalism as world-ecology, where geopolitical forces and human and non-human labor converged to create a system of resource extraction and labor exploitation. Sericulture spread from the Republic of Venice in the middle of the 16th century and flourished in the 18th century — a so-called “golden century of silk” in Goriška (Panariti, 1993, p. 17). The industry, where, in addition to raw silk and silk semi-products, silk fabrics were also produced (Bellina, 1993, p. 53). Jewish merchants from Gorizia, Gradisca, and Trieste played crucial roles alongside

government incentives, including the establishment of a state office and then a magistrate with a silk manufactory (Žontar, 1957, p. 17, 53¹). There was a clear class distinction and paradigm of Cheap Work in silk production: “only peasants and poor townspeople cultivated silkworms” (Žontar, 1957, p. 54). At times it was the source of an important supplemental income for the rural population, other times it was their basic annual income (Ipavec, 2008, p. 35). After the First World War, sericulture and the silk industry in Goriška became part of the Italian economy since the Slovenian territory was occupied (Rijavec et al., 2024, p. 167). The mulberry trees that grew in almost every home in Goriška should not be wrapped in romantic notions; rather, they are a reflection of region’s economic structure and social interactions, where the Slovenian peasant population was struggling economically. Landowners owned large number of mulberry trees on their lands, while coloni cultivated them and the silkworms. The Goriška region’s² population gradually abandoned silkworm cultivation due to silkworm disease, scarce practices of sericulture remained until the beginning of the 20th century due to high silk market prices (Ipavec, 2008, p. 15). Nevertheless, the abandonment of Italian silk production led to the decline of this industry in the wider region, as well as a rise in viticulture and the profitable export of cherries, that became more profitable and stable activities that coincided with the sericulture season. (Ipavec, 2008, p. 38). This historical trajectory demonstrates Moore’s theory: capitalism does not simply act upon nature but develops through nature. Meaning that the rise and fall of sericulture in Goriška exemplifies how capitalism

1 Anti-Semitic sentiments are also evident in historical works about sericulture in Goriška. The Jewish community in Gorizia was compelled to live in a ghetto and was despised by middle-class and noble merchants due to their entrepreneurship, as the Jews were apparently more successful in exploiting poor silk farmers than they were. In the meantime, Jewish silk traders asserted that they paid more for cocoons than did bourgeois merchants and that they provided loans and levies to assist silk growers during difficult times. (Žbontar 18-19). Silkworms were also referred as Jewish “worms” (Ipavec, 2008, p. 39).

2 It was present also in other parts of present day Slovenia, but due to favourable climate, it was prevalent in Goriška region (Rutar, 1997, p. 97).

continually seeks new ways to organize human and extra-human natures to secure itself.

CHEAP NATURE: THE NON-HUMAN LABOUR OF SILK

Silk is framed as a natural material, yet its methods raise conceptual questions alongside ethical concerns. The development of silk is a result of human and non-human activity, including millennia of animal domestication, meticulous tree cultivation, and discipline methods. It is crucial to comprehend not only that humans reshaped what are now known as silkworms, but also how much work animals put into the process of domestication and production of silk, which accelerated capitalistic processes of silk trade. This is achieved by approaching the topic of animal domestication using Moore’s theory of capitalism, which asks what nature does for capitalism rather than what capitalism does to nature (2015, p. 18). In a similar manner but from the biological science Sánchez-Villagra explores how domestication is an ongoing process rather than an invention or an event, and it is often conceptualised solely from a human perspective (2022). Furthermore, it ignores the active role of the domesticated — benefiting human proximity and interaction and is a reflection of the West European view of our place in nature that is not universal among humans (Sánchez-Villagra, 2022, p.2). “Traditionally, domestication has been seen as resulting from goal-driven human action, with narratives about selection for traits that differentiated wild and domestic forms. In reality, domestication of different species has involved different kinds of interactions” (Sánchez-Villagra, 2022, p. 4). The dichotomy between “wild” and “domesticated” is more difficult to apply to the subject of insect domestication, especially since worms or moths have connotations of undesirable rather than domesticated. After thousands of years, silkworms function completely in dependence on humans, they have difficulty flying, are visually impaired, and lack the camouflage colouring that would allow them to survive in the wild (Postrel, 2020, p. 27). Domestication and mutation of animals is only part of how Cheap Nature was appropriated for economic interest in sericulture.

Trees¹ used for feeding silkworms are also the result of human modification. Silk farmers created pruning techniques that increased leaf production and crossed two mulberry tree kinds to make the tree leafier (Postrel, 2020, p. 28). While mulberries could be tall trees; people cut them to a lower height so they could easily reach the leaves, since leaf picking was essential for feeding the silkworms stored indoors. Generally viewed as one of the most useful tree species in the world, mulberry tree combines high yields in leaves with soil conservation and amelioration of greenhouse gasses and the leaves have both traditional and modern applications in medicine (Altman & Farrell 2022). Planned planting of white mulberry (*Morus alba*²) for the needs of sericulture can be recorded in Tyrol as early as the beginning of the 15th century and west of the Soča river in the 17th century and “in the middle of the 19th century, there were around 2 million mulberry trees in Goririška and Gradisca area, which were used to feed silkworms” (Žontar 1957, p. 15, 87). Mulberries were often positioned at the edge of vineyards and also along houses, yards, and roads. The economic value of mulberries at that time can be seen in the memory of a silk grower from Goriška, recorded by Vesna Mia Ipavec (2008): “The people of Furlan were ready to pay a lot, like for a whole harvest of cherries, for mulberry leaves³” (p. 64). The trees were therefore valuable, and farmers even organized night watches to prevent theft. Planting and cultivating the mulberry trees were an essential component of sericulture, and this is evident also in the book of a historian, Josip Žontar who in 1957 published a study on sericulture in Slovene lands from the 16th century onwards. Supported mostly by primary sources in the form of historical documents from Vienna, a large part of the book is devoted to endeavours and many times failed attempts at organising the cultivation of mulberry

trees. Numerous dead trees, whether in nurseries or on the land, were a result of the harsh continental climate or inaccurate estimates of the industry’s potential profit, which varied in success. Despite meticulous human interventions during the flourishing of sericulture and full abandonment of the mulberry trees, they live on in another context and transcend the time scale of human memory. The attempts to cut down the trees serve as a brief example of this: workers damaged their tools while attempting to cut down old mulberry trees, oblivious to the fact that they were covered in shells in several areas following World War I. The trees overgrown the metal; thus, this was not discovered until later (Ipavec, 2008, p. 111). Mulberry trees are by no means the most prevalent plant of sericulture that shapes the landscape of the Goriška region. Due to a silkworm disease in the 1860s, a new type of moth was introduced that required the leaves of another tree, *Ailanthus altissima*, or the Tree of Heaven (Ipavec, 2008, p. 117). This tree was actively propagated throughout Europe and North America in order to cultivate the *Sami cynthia* silkworm, but the cocoons were eventually shown to be unsuitable for mechanical silk extraction (Petauer, 1993, p. 684). Classified as an invasive non-native plant, it is defined as “a species, subspecies, or taxon of a lower category that is introduced to an area outside its (past or present) range of natural distribution, or an area that could be reached by natural dispersion without direct or indirect human influence” (Kus Veenvliet & Humar, 2011, p. 7). Tree of Heaven, a common non-native tree species in Goriška, has low energy value, making it unsuitable for firewood use, but can be helpful as technical wood under certain circumstances (Arnšek, 2009, p. 9). The concept of alien and invasive species is a social issue⁴; there is no such thing as a uniform terminology of biological invasions. Due to the complexity and interdisciplinary nature of the topic, it is not

3 Besides trees used for feeding the silkworms branches of chestnut trees were often used in the process of cocooning of the worms (Ipavec, 2008, p. 66).

4 White mulberry tree was transported to Europe in the 14th century and grows faster than black mulberry tree (*Morus nigra*) that was originally used to feed silkworms (Ipavec, 2009, p. 22-23).

5 The witness refers to the period after the First World War, when the local economy had not yet recovered and the inhabitants were no longer engaged in sericulture.

6 “Social scientists, accustomed to deliberations about the cultural connotations of terms like alien or non-native, accuse invasion biologists of being xenophobic (which is a legitimate concern within the narrow boundaries of their specialized debates), though biologists use the term in a very different context and usually without any cultural connotations. It is therefore important to carefully reflect on the different contexts when using terms such as non-native (or alien, exotic, foreign, etc.) in science or policy.” (Humair et al., 2014, p. 19).

possible to reach a uniform consensus regarding definitions of invasiveness (Humair et al., 2014, p. 17). What is defined as invasive is determined by the current human economic interest: since the trees are no longer being used for their original purpose (sericulture) and have no other beneficial usage, they are categorised as unwanted and viewed as too numerous in count. Due to its rapid reproduction, it displaces the nature acceptable by capitalism: such as cultivated food plants or “unspoiled natural” areas used for tourism, sport or leisure. Two kinds of trees: Mulberry tree and Tree of Heaven are both still present in the region are perceived differently. The categorization of species as “invasive” versus “heritage” reveals the inherently political nature of environmental classification systems, reflecting what Moore terms capitalism’s double internality where nature both constitutes and is constituted by capitalist relations (2015, 24). Tree of Heaven becomes problematic precisely when it ceases to serve capital’s productive needs in sericulture. Even more, the shifting categorization illuminates how capitalism continuously reorganizes and redefines nature through both material and discursive practices. Mulberry trees achieve “heritage” status through its historical connection to productive labour, while the Tree of Heaven is relegated to the category of “invasive” due to its resistance to current forms of capitalist appropriation. This process demonstrates how capitalism continues to put nature to work even after the decline of original activities, through the labour of maintaining particular aesthetic and cultural landscapes deemed economically valuable.

CHEAP CARE: ANTHROPOMORPHIC TREATMENT OF SILKWORMS AS INFANTS

Silkworms were treated as very delicate beings: they were kept in an inside space⁷, the owners thoroughly cleaned the premises in advance, and if necessary, the people heated the space with stoves (Ipavec, 2008, p. 16). The care practices surrounding silkworm cultivation reveal a complex intersection of animal domestication and gendered labour. Fresh leaves from mulberry trees were the main food of silkworms, initially finely chopped

7 Initially in the living spaces of the owners, at the end of 18 century in a separate small houses for silkworms (Ipavec, 2008, p. 30).

like tobacco leaves, and eventually they consumed whole branches. The work of children in the family played an important role in this. Women, as bearers of care work in society and the family, also performed this type of work with silkworms: hatching, cleaning, and overseeing their growth. At the time when it seemed that the mulberry trees would start to sprout leaves, people warmed the silkworm eggs in their chest until they hatched (Ipavec, 2008, p. 68). Furthermore, women silk farmers were sometimes waking up every two hours at night to feed the worms (Ipavec, 2008, p. 70). Similar records can be found from the time of the Song dynasty (960-1279) from an elderly silk farmer. They tended the silkworms “as if they were new-born infants” (Postrel, 2020, p. 27). The demanding nature of the work, the caring work that often falls to women or older children, the schedule of caring and frequent feeding — all mentioned characteristics resemble domestic childcare work. This embodied practice of almost “mothering” silkworms reflects feminist approach to the concept of care — work that is simultaneously essential to production yet systematically devalued and gendered. The participation of women and children in these care rituals demonstrates how sericulture, like other forms of agricultural production, relied on the appropriation of domestic labour power outside formal wage relations.

Even their name indicates the anthropomorphism of these animals: under the influence of the Italian language and production, the local inhabitants called silkworms “cavaliers” and not with a Slovenian word (*sviloprejka*); they did not know this term, and it only became more known after the Second World War (Ipavec 2008, p. 17). In her research, Ipavec (2008) claims there are several possible explanations for this name: the name is said to come from the image of a silkworm before cocooning, when it begins to bow the front part of its body, which alludes to bowing, but actually the silkworm indicates the intention to cocoon (p.17). The term cavalier is also said to come from the need for worms for special living conditions (Panariti, 1993, p. 30).

CHEAP SILK: THE ABSENT FIBRE AND PERSISTING STORIES

The story of sericulture in Goriška region reflects the wider picture of the fashion industry: alienation from the production process and final product, physical distance from fashion and textile

production, and the transition from maker to consumer. Even when sericulture was a part of the mentioned region, silk itself was not present in the lives of the silk farmers. In the clothing culture of the 18th and 19th centuries, silk was present in the clothes of the women in the region - as bodices, but especially as shoulder scarves as well as headscarves, sometimes as silk clothes of inferior quality (Ipavec, 2008, p. 101). In the 20th century, women sometimes dressed in silk on Sundays and holidays. Perhaps the most widely distributed silk came "from the sky": sourced from Allied silk parachutes of white or yellow-green colour (Ipavec, 2008, p. 102)¹. Silk proves to be an absent fibre: absent as the final material in the times of the production in the Goriška region and absent today from the production as well as consumption. Its presence is often fluid in its presentation, when marketing falsely evokes the opulent texture of silk by using the name "satin".

In this article I seldomly mentioned silk as a fibre, as a textile product, as the final material goal, the product, the commodity that is traded on the market and worn by people. So, where is the fibre? The last organised shift towards the preservation of sericulture occurred after the Second World War, with the beginning of socialist Yugoslavia. In the post-war years, the new government organised post-war reconstruction, encouraging the existence of a textile industry with its own raw materials (Ipavec, 2008, p. 42). There was no far-reaching success in Goriška, and the number of mulberry trees also decreased. The last purchase is said to have taken place in the mid-60s, shortly before nylon shirts began to appear in Italy (Ipavec, 2008, p. 51). New synthetic materials replaced silk; farmers sought jobs in factories; farms cut down mulberry groves and opted instead for vineyards and orchards. This greatly changed the image of the cultural landscape (Ipavec, 2008, p. 51). In Slovenia, sericulture only appears as a boutique asset for tourist or educational purposes in a form of Baudrillard's simulation (1999). Sericulture persists only as a performative, discursive practice in the form of *the story*. The absence of economic objective is being filled with *the story* or more precisely: *the story* of the territory is becoming

8 Silk from allied parachutes was used by the partisans who founded a theatre during the war and used this material to sew costumes and set designs.

the economical goal as a discursive practice of contemporary tourism. The story sells, more than the commodity itself. The shift from production to simulation, sericulture's transformation from material practice to tourist narrative demonstrates how capitalism commodifies not just physical resources but cultural memory itself. Even more, the contemporary persistence of sericulture as purely narrative practice reveals how capitalism continues to put nature to work even in the absence of material production.

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