UNSTITCHED NARRATIVES

CULTURAL AND ECOLOGICAL SIGNIFICANCE OF DESI OON IN RAJASTHAN AND HIMACHAL PRADESH

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Abstract

This paper explores the cultural and ecological significance of *Pattu*, a heritage unstitched textile from Rajasthan and Himachal Pradesh, India, emphasising its potential to contribute to a more sustainable future for the fashion industry. *Pattu*, crafted using *desi oon* and traditional practices, embodies traditional knowledge of sustainable textile production.

We discuss how *Pattu's* production supports biodiversity, soil health, and traditional livelihoods, highlighting the adaptability of pastoralist communities in the face of climate change. We argue that integrating local wool and traditional practices into contemporary fashion can offer valuable lessons in sustainability and resilience. By showcasing *Pattu* as a case study, the paper advocates for a shift towards ethical and eco-conscious practices in the fashion industry, emphasising the importance of cultural conservation and the value of traditional ecological knowledge in shaping a more sustainable future.

Keywords: Indigenous wool; cultural textiles; unstitched textiles; fashion and culture; heritage

INTRODUCTION: SHARED TEXTILE HERITAGE

Author 1 and Author 2, PhD researchers based in the UK and Canada, have come together to explore their shared heritage and the environmental importance of unstitched *desi oon* textiles from Rajasthan and Himachal Pradesh, India—specifically *pattu*. After more than a decade in India's craft-based textile industry, we recognised a significant academic gap concerning these textiles, which are deeply rooted in local biodiversity and cultural practices.

For us, these textiles represent more than just garments; they are cultural legacies that bring forth childhood memories, where the texture and feel of wool were intimately tied to their experiences

of community, land, and belonging. However, these traditional textiles are being replaced by synthetic, petrochemical-based fabrics that are cheaper, lighter, and more widely accessible. This shift threatens cultural heritage and poses environmental risks through microplastic pollution and the disintegration of community-based, land-centric textile practices. A key driver of this research is the recognition of desi oon's critical role in India's economy and biodiversity. The rise of synthetic textiles has significantly impacted India's indigenous wool industry, reflecting broader political and economic shifts that threaten local ecosystems and pastoral communities (Das & Iyengar, 2021). This paper traces the journey of pattus made of desi oon from its origins in the



Fig. 01

harsh landscapes of the Himalayas and Thar Desert to its transformation into textiles and beyond. *Pattus* stand out for its adaptability and cultural relevance. As unstitched garments, they can be customised for personal expression while preserving their traditional warmth and functionality. Historically, *pattus* have protected communities from the harsh desert heat of Rajasthan and the cold mountain climates of Himachal Pradesh, symbolising the interconnection between humans, animals, and the environment.

We view *desi oon* as an 'active material' (Ingold, 2013) that mediates relationships between humans, animals and the land, shaping cultural, environmental, and economic landscapes. We aim to contribute to a nuanced understanding of fashion's materiality and its entanglement with human and non-human actors. Our research builds on both personal and professional inquiries, as we revisit the textile traditions passed down within our families. These unstitched woollen garments, embedded in our familial and regional heritage, serve as a lens through which we explore the broader themes of materiality and sustainability.

MAPPING THE CHANGE

India's wool industry has a vast population of over 40,000 skilled pastoralists who herd and hand-spin wool (Iyengar, 2021), contributing to a rich heritage supported by a substantial population of 43 registered sheep breeds (Das, 2021; Iyengar, 2021). However, the industry has faced a marked decline in recent years, primarily due to the growing reliance on imported wool. This finer, softer wool with longer fibres has increasingly replaced the coarser desi oon, this is not just an economic setback; it has also disrupted local biodiversity, as pastoralist communities who have long played a key role in managing their ecosystems face increasing challenges in sustaining their ways of life. The sheep in these communities are not just livestock; they play an integral role in agriculture and ecology, fertilising the land, providing food through their milk and meat, and supplying durable materials for local production (Das & Iyengar, 2021). However, a sharp decline in the value of their wool over the past two decades has led to altered grazing practices and weakened ecosystems that these pastoral communities depend on (Das & Iyengar, 2021). In response, efforts to revitalize desi oon are gaining

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close partnership with civil society, academia, government agencies and the private sector is spearheading the 'cartographic representation of pastoralist routes across the country' to highlight the significance of these communities. These maps visualise data on changes in vegetation, land use, and the impact of climate change over the last 30 years, offering a comprehensive view of how development and conservation policies have affected pastoralist livelihoods (Centre for Pastoralism, 2021). Additionally, initiatives like the Desi Oon Hub, launched by Khamir and RangSutra in 2019 and now supported by 13 organisations (Aana Jaana, Avani, Cotton Rack, Dakhni Diaries, Earthen Tunes, Khamir, Kullvi Whims, Miyar Mufflers, Peoli, RangSutra, Shepherds of Himalaya, The Color Caravan, and URMUL), are pivotal in rebuilding desi oon value chains in harmony with regional ecosystems, significantly contributing to the wool revival in India (Centre for Pastoralism, 2022). The shift in India's wool industry reflects a broader tension between traditional, localised practices and the pressures of industrialisation. Desi oon production, shaped by the rhythms of the land and the needs of rural communities, is increasingly being challenged by crossbreeding programs and government initiatives aimed at imposing the industrial time scale. These initiatives promote a once-yearly shearing schedule suited for 'improved' sheep breeds, which results in unusably long desi oon, further marginalising local practices and threatening the sustainability of traditional wool economies (Hoover, 2018). In conclusion, the evolving dynamics within India's wool industry reveal a complex interplay between traditional livelihoods, biodiversity, and modernisation pressures. Revitalising and revaluing the desi oon economy offers a pathway that honours both cultural heritage and environmental resilience. This paper enriches the burgeoning literature on desi oon by providing a comprehensive examination of unstitched textiles from Rajasthan and Himachal Pradesh. Through narrative inquiry, this study explores the cultural significance of unstitched textiles and their potential to enhance sustainable practices and promote ecological and cultural sustainability within the global fashion industry.

METHODOLOGY

This research uses narrative interviews and observation, supplemented by a review of secondary sources such as reports from the Centre for Pastoralism. These reports provide a broader context on the indigenous breeds, detailing their presence and decline, ecological impacts, and economic significance within regional and national textile industries, and facilitate comparisons with narrative interview stories.

The narrative interviews were conducted in a semi-structured format to allow open-ended conversations that encourage participants to share personal stories and insights. Participants were selected using purposive and convenience sampling to include individuals with direct experience in *desi oon* production, ensuring a depth of perspective on the cultural and practical aspects of textile crafting. The first author conducted an online narrative interview with her father, who is from Himachal Pradesh and grew up directly involved in the family's desi oon production for domestic use. The insights from this interview offer a personal view into the traditional practices and lived experiences associated with *desi oon*.

The second author returned to her native village in Rajasthan to conduct a narrative interview with her grandmother, an active participant in agricultural activities and the caretaking of various livestock. Her grandmother also engages in hand-spinning during her free afternoons, a skill that is integral to her lifestyle. She shared profound insights on the significance of this craft in their daily lives, including how the spun yarn is passed on to weaving families for further processing. Additional interviews were conducted with five weaving families, including a retired 79-year-old weaver and a father-and-son duo who actively continue the craft. The son, aged 28, highlighted a resurgence of interest among younger generations, partly spurred by interactions with students from the National Institute of Fashion Technology, who engage with the community for craft documentation and collaborative design projects. The research also involved a visit to the URMUL Trust, a non-profit organization that supports livelihood activities related to wool and Pattu weaving in the Thar Desert.

STITCHING UNSTITCHED TEXTILE NARRATIVES

Each pastoralist community in India has their own

^{1.} *desi oon* is local/indigenous wool

^{2.} Pattu is a handspun, handwoven, unstitched textile found in both the Thar Desert in Rajasthan and the Himalayas in Himachal Pradesh, India.

set of 'storied textiles' (Das & Iyengar, 2021: 66). Das and Iyengar (2021) use this term to describe the deep cultural, historical, and practical significance of these textiles for the pastoralist communities that produce them. They are not merely functional items but are interwoven with the communities' way of life, identity, and traditions, embodying the legacy of pastoral knowledge and craftsmanship. Thus, the term 'storied' encapsulates both the tangible and intangible heritage embedded within these handcrafted wool products. Building on this, we discuss two such storied textiles - Pattu found in both Rajasthan and Himachal Pradesh, emphasising their connection to the land and cultural significance.

As Indian researchers abroad, our inquiry into unstitched textiles is also a personal exploration of the textiles that have been part of our familial heritage. Pattus from Rajasthan and Himachal Pradesh, found within our family collections, hold significant cultural and emotional value. This rediscovery of our textile legacies has not only informed our research but also allowed us to engage with these materials as living artefacts of identity, connecting us to our ancestral lands.

PATTU (RAJASTHAN)

Drawing on my (Author 2's) auto-ethnographic experience in Kapuria, Rajasthan, India, I have observed the intricate practice of hand spinning in rural communities, where elderly women spin finer-count wool yarn for everyday clothing on the Charkha (traditional spinning wheel). Around a century ago, Mahatma Gandhi introduced the charkha, empowering India to spin khadi (hand-spun, handwoven fabric), a symbol of independence and resistance to colonial rule (Iyengar, 2021). In these rural settings, men typically spin thicker yarn for cords and outdoor uses using drop spindles. These communities, composed of pastoralists, and farmers, rear livestock such as sheep, goats, camels, and cows, which play a central role in daily life. Livestock is crucial to the agro-economic system in arid and semi-arid regions, where animalhusbandry sustains the rural economy. Sheep, in particular, provide essential resources like meat, milk, and wool, supporting a semi-nomadic lifestyle and generating supplementary income at minimal cost.

The practice of hand-spinning wool during quiet afternoon hours not only meets personal and



Fig. 02

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ceremonial needs but also represents a sustainable production method. By using locally sourced wool, these communities reduce their environmental impact and support biodiversity. Grazing practices help maintain land health, replenish soil, and foster a balanced ecosystem. My grandmother's use of handspun wool and resourceful repurposing of materials reflects the community's deep connection to nature and sustainable living.

Although wool is often associated with winter, woollen textiles like *Pattu* protect against the desert's extreme temperature fluctuations, from freezing nights to scorching midday heat. Traditionally woven from desi wool, *Pattu* textiles, typically black and white, use fibres sourced from the local environment. Artisans exchange materials at every stage of production, forming a critical part of the local economy and cultural practices. The *Pattu* symbolizes strong ties between tradition and the environment, particularly in Western Rajasthan regions like Barmer, Jodhpur, and Jaisalmer (Parasrampuria, 2020).

Various types of unstitched Pattu textiles are produced in these communities. Once enough handspun yarn is collected, local weavers craft the Pattu in exchange for grain, reflecting the interdependence between humans, livestock, and the land. Surplus Pattu is sold to generate additional income, enhancing economic resilience. The Pattu is a multifunctional cloth used as a shawl, draped skirt, blanket, mat, or rain cover. Its tight weave ensures durability, providing warmth in desert winters while also serving as bedding or a floor covering. The term "Pattu" comes from "patti," meaning narrow-width fabric, traditionally woven on pit looms in two-foot-wide, nine-foot-long panels (Rustagi, 2021). These panels are skillfully joined by hand fagoting (Nath & Wacziarg, 1987), creating a large textile ideal for wrapping around the body (Bhandari, 2004). In resource-scarce communities, Pattu is versatile, offering protection from dust and cold as a wrap, head covering, or blanket (Jaitly, 1990).

The Meghwal community, known for its expertise in crafting *Pattu*, produces varieties such as *Kashida Pattu*, *Baradi*, *Bhojasari*, and *Hiravali Pattu*. Each type follows a specific sartorial code: *Baradi* (chequered *Pattu*) is worn by women, while young men prefer highly decorative styles, and older men opt for plain ones. Men often wrap themselves in large woollen blankets, folding them over their shoulders as the day warms, while women wear

woollen head coverings and skirts made from similar fabrics (Rustagi, 2021).

The use of indigenous wool strengthens the desert's resilient ecosystem due to its adaptability. This ecosystem connects artisans—spinners, weavers, dyers, and embroiderers—with farmers and herders, creating a cohesive value chain in harmony with the local environment. By promoting the local wool value chain, artisans gain control over natural raw materials, making craft production ecologically sound and sustainable. This practice reinforces the longevity of traditional weaving and textile crafts, preserving cultural heritage while supporting ecological sustainability. At the core of this system lies a web of interdependence that binds communities, economies, and nature, fostering both cultural and environmental resilience.

PATTU (HIMACHAL PRADESH)

As seen in the case of Pattu from Rajasthan, wool is a valuable material for understanding the essence of a place, it is a direct manifestation of the environment in which sheep live and offers a tangible connection to the environment. While sheep are typically shorn once a year in most production systems globally, the process occurs more frequently in the Himachal region, every 6 months or even 3 times annually, reflecting the area's distinct growing seasons (Hoover, 2018). months or even 3 times annually, reflecting the area's distinct growing seasons (Hoover, 2018). The following stories and terminologies are specific to my (Author 1's) father's family, who are from the Chirgaon subdistrict in the Shimla district of Himachal Pradesh. As dialects in Himachal Pradesh change across districts, the terms used here might vary in other regions. My father was a part of the desi oon cultural system at a young age, learning to spin and weave wool by observing his father. By the age of eight, he was helping his family with desi oon production for domestic use, taking on responsibilities such as caring for their 50-60 sheep and a few goats. These animals were raised both for wool and as a food source, with wool typically harvested in the summer months. Families living in higher altitudes often kept larger flocks and bartered wool for essential items like salt, rations, ginger, and chillies. Gaddis, also called transhumanist nomads (Axelby, 2007), annually traverse thousands of kilometres across the Himalayan ranges, moving livestock from the lower forests to the higher alpine pastures for summer

grazing encountering challenging conditions in the uninhabited high-altitude pastures. Their transhumant nomadism is based on the seasonal exploitation of different but complementary ecological and climatic zones, a 'vertical' migration that allows shepherds to be in tune with of variations in altitude, climate and geography (ibid). Pastoralism, an integral part of the desi oon ecosystem is built on a deep connection between the Gaddis' way of life and the cyclical patterns of nature, illustrating a sustainable interaction with their environment that supports both their cultural heritage and the regional ecology. The Gaddi pastoralists on their descend to the plains with their flocks, were welcomed by farmers who grew wheat. Farmers invited them to rest overnight, exchanging wool or livestock for the organic manure the sheep and goats provided. The pastoralists also carried rations with them for their return journey to the mountains.

Families living at higher altitudes often maintain larger flocks, bartering wool for essential items such as salt, rations, ginger, and chillies. Known as transhumant nomads, the Gaddis annually traverse thousands of kilometres across the Himalayan

ranges (Axelby, 2007). They move their livestock from the lower forests to the higher alpine pastures for summer grazing, facing the challenging conditions of uninhabited high-altitude pastures. This seasonal movement, or 'vertical migration,' allows them to exploit different but complementary ecological and climatic zones, aligning their herding practices with variations in altitude, climate, and geography (Axelby, 2007: 38). Pastoralism is a cornerstone of the *desi oon* ecosystem and is deeply embedded in the Gaddis' way of life. It mirrors the cyclical patterns of nature through their rotational grazing land use. Upon descending to the plains, Gaddi pastoralists are traditionally welcomed by farmers, who host them overnight in exchange for wool or livestock, which provide organic manure crucial for agricultural productivity. The pastoralists also carry rations for their return journey to the mountains, ensuring a sustainable cycle of resource exchange and mutual benefit.

My par-dadaji (paternal great-grandfather) along with other men in the family, used to spin wool (seen in figure 4), though her son, my dadaji (paternal grandfather) learned the craft of weaving







Fig. 03

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Fig. 04

more as a hobby from local weavers. These traditional practices gradually waned in the 1980s, as my family increasingly engaged in apple farming, which meant reduced grazing land for the livestock. This shift mirrored a broader trend within the community, where many families moved away from traditional wool crafts toward agricultural work and market-purchased clothing, altering their consumption habits.

Several traditional tools and techniques were used in wool processing. *Tumbna* was the method of separating wool fibres by hand to create long threads, a skill essential for producing strong fibres. Other key tools included the *chitki* (a bow used to beat the wool) and the *takli* (a spindle used to spin wool into yarn). The loom, which could be set up in various areas such as under the veranda, was used to weave *patti* (a narrow strip of woolen fabric). During the winter months, when

farming activities slowed, wool processing became a communal activity. Entire families would spin wool, often competing to see who could fill their takli the fastest, while working in rhythm with the changing seasons. Once the wool was spun and woven by my dadaji (paternal grandfather), the patti underwent a treatment process called mandna. In this process, the woven fabric is soaked in a mixture of chullu (apricot) remnants from the oil-making process and water. The wool was then kneaded using feet and the whole body's weight in a physically demanding task, which was carried out by my dadiji (paternal grandmother). After kneading, the fabric was stretched and hung to dry with weights at the bottom, resulting in a thick, waterproof, and windproof wool. The woven fabric was sent to tailors for stitching into garments (as seen in Figure 4). Patti fabric was narrow, less than half a meter wide, and was used to create dohru (blanket), which consisted of two pieces of patti joined together, measuring 2 by 5 meters. Pattu was another shawl-like garment worn for outdoor activities, with men and women wearing variations of it. Coarser wool from goats was used for makingbichona/fakule (carpets), while finer wool from young sheep was reserved for items like children's clothes, mufflers, and shawlsDespite the shift toward commercial farming, wool continues to provide a sustainable source of income in Himachal Pradesh, especially as the state wool federation has increased wool prices over the past years (Himachal Pradesh Wool Federation, 2021). In addition to its economic value, wool holdsspiritual significance in the region. The Gaddi pastoralists, for instance, believe their sheep and goats were created from the dirt that Lord Shiva removed from his body and that he gifted them with the clothes to help them endure the harsh winters. This belief, deeply embedded in local traditions, shows the sacred relationship between the pastoralists and their livestock (Centre for Pastoralism, 2016).

RESHAPING THE FUTURE OF UNSTITCHED TEXTILES

Heritage textiles such as *Pattu* offer a vital pathway for contemporary fashion to embrace sustainability and cultural conservation. They transcend their material form, serving as carriers of knowledge embedded in the ecological and cultural systems that have nurtured them for centuries. As the fashion industry shifts towards slow production, local materials, and ethical practices,

these unstitched textiles represent more than just a craft revival; they embody a crucial link between past, present, and future sustainable textile practices, thus supporting traditional livelihoods. This shift in the fashion industry is gaining momentum with initiatives like the Desi Oon collective, where collaborations, both local and international, reveal the potential of desi oon. A notable example is the partnership between Kullvi Whims and Zazi Vintage, which has successfully presented desi oon and its artisans to a global audience. Their collaborative products, jumpers, capes, and especially unstitched ponchos, are named after the artisans, bringing their stories and craftsmanship into global fashion dialogues through their feature in Vogue. Throughout their collaboration Zazi Vintage, highlighted the social, ecological, and spiritual significance of desi oon, sharing culturally rich narratives through social media. Similarly, a collaborative social enterprise model involving Rangsutra Foundation, Urmul Setu Sansthan, and the Centre for Pastoralism and artisans as co-founders, supports the value chain of desi oon in Bikaner, Rajasthan. This collaborative effort involves pastoral herders, spinners, and Pattu weavers in producing yardages for contemporaryapparel while preserving traditional craftsmanship. Their collection, Dhaani, inspired by pastoral hamlets, features naturally dyed, handwoven, handspun, and hand-embroidered desi oon jackets and overcoats. By using sustainable heritage techniques, this initiative not only supports pastoral and artisan livelihoods but also meets modern design demands, with partnerships like FabIndia, IKEA, and C&A amplifying their impact. Reflecting on the future of India's wool heritage, it becomes clear that appreciating local wool and textiles is more than a nostalgic exercise; it is crucial for fostering a deeper respect for the interconnected systems of life on Earth. The ecological knowledge embedded in these fibres and the cultures that produce them is deeply relational, situated, and intertwined with their environments. These ways of knowing are embodied through ritualised learning practices within communities (Fletcher et al., 2019) and provide essential insights into the natural world that modern, dualistic approaches often overlook. Moreover, local beliefs, histories, and cultural practices reveal how communities interact with and understand nature. (Leitão, 2022) These narratives lay the foundation for designing in and for a world where multiple

realities and ways of knowing coexist (ibid). In conclusion, the future of heritage textiles like *Pattu* lies in their potential to teach us to live sustainably and in harmony with the natural world.

CAPTIONS

[Fig. 01] Author 2's Naani (maternal grandmother), Anchi Devi, stands before her 80-year-old handspun on *Charkha* (spinning wheel) and hand-embroidered Pattu, handwoven by a local weaver. Photo taken in circa 2015, shows her wearing a machine-made acrylic sweater, synthetic skirt, and chemically dyed cotton head scarf. Photo Credit: Choudhary, P.]

[Fig. 02] Two generations of weavers stand with various styles of handspun and handwoven *Pattu*. The lower image shows an elderly weaver who stopped weaving due to decreased demand and the unavailability of the right type of wool. The next two images show a reed made from local wood, adjustable for weave density. The final image shows warp on the ground, on the other side at a pit loom. Photo Credit: Choudhary, P.]

[Fig. 03] Author 2's Naani handspinning on her 80-year-old *Charkha* in the afternoon, sitting outside the gadhal (an open living room in desert areas). This was her daily practice. The next image shows abandoned *Charkhas*, now repurposed for cooking fuel due to the lack of demand for handspun wool. The final image shows the Marwari sheep breed, where crossbreeding has led to coarser, shorter fibers.Photo Credit: Choudhary, P.]

[Fig. 04] Author 1's *par-dadaji* (paternal great-grandfather) spinning wool using a takli (spindle) (circa 1980s), which was then made into a Nehru jacket worn by her dadaji (paternal grandfather) (circa 1990s). Photo Credit: Top and bottom: Chauhan, M.; Middle photo: Bara, B. (D'Source)]

REFERENCES

Axelby, R. (2007). 'It takes two hands to clap': How Gaddi shepherds in the Indian Himalayas negotiate access to grazing. Journal of Agrarian Change, 7(1), 35-75. https://doi.org/10.1111/j.1471-0366.2007.00139.x

Bhandari, V. (2004). Costumes, Textiles and Jewellery of India-traditions in Rajasthan. Delhi: Prakash. Centre for Pastoralism. (2022). Desi Oon - Hamara Apna: Assessment of the state of value chains for indigenous raw wool in India. Delhi: Published by Centre for Pastoralism.

Centre for Pastoralism (2022). Centre for Pastoralism Annual Report.

Das, S. (2021). A glimpse into the indigenous wool economies of India. Pastoral Times, April, p.4.

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Das, S., & Iyengar, S. (2021). Reviving indigenous wool craft of India. In Saad, Q. (Ed) Futuring Craft, Indian Ocean Triennial Australia IOTA 21 International Conference (pp. 64-90). Retrieved from https://indianoceancrafttriennial.com/wp-content/uploads/2021/12/IOTA21-conference-proceedings-3_compressed.pdf

Fletcher, K., St. Pierre, L., & Tham, M. (Eds.). (2019). Design and nature: a partnership. Routledge.

Himachal Pradesh Wool Federation. (2021). Annual Report. Shimla.

Hoover, J. (2018, September). Shepherds and Shawls: Making Place in the Western Himalayas. Paper presented at The Textile Society of America Symposium Proceedings. Retrieved from https://digitalcommons.unl.edu/tsaconf/1087 Iyengar, S., (2021). Reviving a Heritage in Peril: India's Endangered Traditions of Cotton and Wool! Journal of Heritage Management Volume 6, Issue 1, 25-39.

Ingold, T. (2013). Making: Anthropology, archaeology, art and architecture. Routledge.

Jaitly, J. (1990). The Craft Traditions of India. Delhi: Lustre Press pvt. ltd.

Leitão, R.M., (2022). From Needs to Desire: Pluriversal Design as a Desire-Based Design. Design and Culture, 14(3), pp.255–276. Retrieved from https://doi.org/10.1080/17547075.2022.2103949

Centre for Pastoralism. (2016). Living Lightly: Journeys with Pastoralists – Exhibition Report. Delhi: Sahjeevan and Foundation for Ecological Security (FES).

Nath, A., & Wacziarg, F. (1987). Arts and crafts of Rajasthan. Thames and Hudson.

Parasrampuria, S. (2020). Pattu weaving a Warm Web of Production. [Undergraduate thesis, National Institute of Design] https://files.persona.co/107436/GPDoc_BDes_TD_S1600109_Shreya_v1.pdf