FROM WOOL TO ACTION

(Reviving Traditional Practices for Sustainable Futures)

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Photographs were taken by me, otherwise it is stated.

The English translation of Rumi's poem (Ghazal No. 1197, p. 472) is by the author, based on the Persian edition edited by Badi' al-Zaman Foruzanfar (Molavi, 1995).

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ABSTRACT

This study investigates the potential of traditional practices to foster sustainable futures through the lens of wool-based art and design. Rooted in the theoretical frameworks of ecological sustainability and the preservation of cultural heritage, the study emphasizes the value of ancestral knowledge as a vital resource for contemporary creative practices. The research argues that traditional methods not only preserve identity and local knowledge but also offer sustainable alternatives to industrial production. The central aim is to examine the roles and responsibilities of artists and designers in promoting sustainability by re-establishing a meaningful relationship with nature. This is pursued through the intentional use of natural materials—specifically Finnish wool—and the revival of time-honored techniques such as felting.

The research adopts a qualitative methodology, drawing on arts-based research (ABR), art-based action research (ABAR), and autoethnographic approaches. These methodologies allow for an embodied, practice-led inquiry that bridges theory and lived experience. Two experimental projects form the core of the practical exploration: first, a collaborative bicycle-felting workshop designed to reintroduce traditional felting methods through communal making and public engagement; and second, a short stop-motion animation created entirely with wool, which narratively and materially reflects the themes of sustainability and connection to place. Notably, the collaborative bike felting project was recognized internationally by receiving an award in the Engage4BIO design competition in 2025, demonstrating the wider relevance and impact of such practices.

The findings suggest that reviving traditional craft techniques can lead to tangible and culturally grounded contributions to sustainability in art and design. These methods foster circularity, minimize waste, and strengthen community ties, offering viable models for environmentally responsible creative practice.The research advocates for a transformative approach that positions humans as co-inhabitants of the natural world instead of its dominators. By incorporating traditional ecological knowledge into modern design, the thesis promotes an ethical, place-based approach to sustainability—one that nurtures both the environment and the cultural contexts in which we live and create. From a wider perspective, shifting toward sustainable practices is viewed as a way to restore harmony between humans and nature, emphasizing the understanding that humanity is inherently a part of the natural world rather than separate from it.

Keywords: wool, sustainability, craft, tradition, nature, animation, sustainable futures

“Do not say what is the use of me alone being peaceful when everyone is fighting. You are not one, you are a thousand. Just Light your Lantern.”- Rumi (Molavi, 1995, p. 472).

1. INTRODUCTION

Background

The world is currently struggling with uncommon environmental challenges, and mankind often finds itself in a fight against nature, as if we are at war with the environment that sustains us “people need to take their place again as a part of nature’’ (Mang & Reed, 2012, p. 26). David Attenborough warns us of this disconnection, stating, “We moved from being a part of nature to being apart from nature” and urges us to “work with nature, not against it” (Attenborough, 2020). Nature has existed before mankind and will overcome our mistakes and continue to exist long after our disappearance. An example of nature prevailing over human errors is shown in the documentary "A Life on Our Planet," demonstrating nature's revival thirty years after the evacuation of the city following the Chernobyl disaster (Attenborough, 2020). However, the survival and well-being of future generations depend on how we choose to act in the limited time we have on this planet. Rumi’s words remind us of the profound impact each individual can have, by carrying the power to make a change.

It is essential to recognize that every action, no matter how small, has an impact. Our individual behaviors flow, like a butterfly effect, influencing the larger system of the Earth. I believe that any action that makes us think about our relationship with nature and reminds us that we are a part of nature and not apart from it and makes us think about our behavior with nature is valuable. Significant change begins with small steps, and it is essential for humanity to shift toward sustainable practices, minimizing our environmental footprint wherever possible. The battle against nature is one we must abandon, instead aligning ourselves with it. By reconnecting with nature and returning to sustainable practices and re-embracing the wisdom of our ancestors, we light our own lanterns, guiding ourselves and others back toward harmony with the Earth.

The motivation for conducting this study arises from my personal experiences of transitioning from a highly urbanized environment to the nature-immersed region of Lapland, Finland. Discovering the profound peace offered by a close connection to

nature inspired me to explore how creative practices could foster sustainable relationships with the environment.

This study is framed within the context of sustainable art and design, where artists and designers play a crucial role in reducing environmental impact (Thackara, 2005, p. 1; Chapman, 2005, p. 3) and encouraging others to rethink their connection with the environment. As sustainability becomes increasingly important in modern societies, the need for sustainable practices in art and design has grown critical, particularly as society faces environmental challenges and the consequences of unsustainable consumption patterns. Artists and designers are increasingly called upon to reflect these challenges in their work and to actively contribute to solutions by promoting sustainable behaviors and integrating eco-friendly practices. They hold a unique responsibility in shaping people's perceptions and driving behavior change (Manzini & Coad, 2015 p. 3), raising awareness about sustainability by emphasizing the connection between humans and nature.

One significant method for promoting sustainability is by exploring and revitalising old traditions, as “new knowledge is based on previous knowledge and experiences.” (Härkönen & Vuontisjärvi, 2017, p. 92) (Huhmarniemi & Jokela, 2020, p. 3). Revisiting traditional practices offers valuable insights for contemporary artists and designers, particularly in the context of ecological design and sustainable development as our ancestors used natural and sustainable materials and maintained a profound connection with the environment.

Traditional practices, developed over many years by generations, demonstrate a profound understanding of the environment and mindful consumption of local, renewable materials. Before industrialization and mass production, communities relied heavily on what was available nearby, practicing techniques that were inherently sustainable and waste-conscious (Fletcher, 2014, p. 165-167). These approaches were not only environmentally friendly but also rooted in cultural aspects and community values, resulting in creating a holistic relationship between people, materials, and places. According to Ingold (2013), craftsmanship and making are

closely linked to the environment where skills evolve in harmony with natural rhythms and materials (pp. 109-124). This view encourages designers to focus less on creating

products for consumption and more on connecting with history, materials, and processes.

By drawing inspiration from ancestral knowledge and approach, and incorporating sustainable materials into modern designs, contemporary artists and designers can create works that are both aesthetically and ethically valuable and inspire others to embrace eco-friendly practices and reconnect with nature. For example, the revival of wool felting, natural dyeing, or hand-weaving not only preserves cultural heritage but also promotes sustainability. Such practices can also encourage communities to reconnect with their roots, promoting local identities and sustainable behaviors. In this way, tradition is not merely a nostalgic reference, but a priceless resource for making sustainable futures.

In this study, I explore the concept of reconnecting with nature alongside sustainability. I use this exploration in a creative way to make a stop motion animation as a result. I think many of unsustainable behaviors have their origin in the perception that we consider ourselves separate from nature and we have forgotten the interconnectedness of the different parts of the world. Engaging in activities that help us reflect on our relationship with nature and recognize ourselves as a part of it can directly influence our behavior. Therefore, identifying and examining activities related to this theme will be a key component of this study.

Context

The word "Action " is chosen in the title of this thesis on purpose to reflect two interconnected ideas that inspired this research. On one hand, action signifies the necessity of doing, of taking initiative, rather than remaining in passive contemplation and daydreaming. In today's world, we're constantly bombarded with perfect images and stories that present an unrealistic standard of perfection in almost everything to us (Turkle, 2011, p.1). What I have observed a lot around me is the continual comparison of individuals and their status with today's perfect images, which ultimately causes passivity in individuals around me. To be specific, the images we are given of a perfect world are so far removed from what we actually experience in reality that they make us believe our small actions have little impact in achieving that vision. As a

result, we may develop a sense of helplessness, which discourages us from taking small steps toward change and leads us to remain passive. This passivity inspired me to explore innovative ways in which movement, creativity, and hands-on engagement can regain a sense of personal influence and belonging to this world within individuals (Gauntlett, 2011). The word Action, therefore, becomes a call to move—both physically and metaphorically—from thought into practice, from observing into doing, from stillness into creative motion, and represents the need for change.

On the other hand, "Action" is also a significant term in the field of film and cinema, the discipline in which I studied my bachelor's degree. In filmmaking, the word “Action” is declared just before the camera starts recording, marking the verge between the real world and the imagined one. This moment has always been magical to me: it is when reality gives way to the constructed world of narrative and imagination. In this study, I carry that same energy into my creative practice. By saying "Action," I begin building a new world—one that is tactile, crafted by hand, and rooted in sustainable materials. I gave life to woolen characters, setting them in motion within a world I designed, using stop-motion animation as a method of exploration. Through this experimental process, I hope to challenge the boundaries between materiality and narrative (Ingold, 2013, pp. 109-124), between sustainability and imagination.

This study is part of the Sustainable Art and Design master's program and explores how artists and designers can raise awareness about sustainability while encouraging a reconnection to nature and eco-friendly behaviors by focusing on wool as a sustainable material. The study includes both theoretical and practical components. The theoretical section examines the historical and cultural significance of wool, exploring how its use has evolved over time.The practical component of the study is done in collaboration with VillaInno: Renewal of the Wool Craft Tradition project (2023-2026). This project emphasizes collaboration among the fields of crafts, design, sheep farming, and tourism, aiming to revitalize the wool craft tradition while promoting innovation (University of Lapland, n.d.). The practical component consists of two experimental parts. The first part was a collaborative and experimental project aimed to reviving a traditional method of felt production and connecting traditional knowledge to contemporary design, which was carried out with students and relevant teachers in the summer of 2024 at a location of one of the stakeholders, Navetta Gallery. This project was later awarded in an international design competition on 26 March 2025

(Engage4BIO, 2025). Second part was a more personal experiment of creating a short animation by utilizing wool as the primary material and bringing themes of sustainability and cultural heritage to life through a visual narrative. This animation is designed for the VillaInno project in a form of reels video for their Instagram account and highlights the importance of sustainability in the context of art and design by using wool as the main material. Collaborations with the VillaInno project, visiting Navetta Gallery, and Kairan Tapuli farm were essential to the practical execution of the research, providing valuable experiential learning opportunities and supporting the revival of wool-based craftsmanship.

The primary aim of this research is to explore how artists and designers expand, interpret, and engage with the concept of sustainability through their creative practices, with a particular emphasis on the reconnection with nature. This study examines the ways in which the use of natural materials, such as wool, and the revival of traditional techniques contribute to a broader understanding of sustainability within the fields of art and design. Furthermore, the research investigates the depth and scope of artists' and designers' responsibilities within the concept of sustainability. The main research question guiding my study is: **What are the responsibilities of artists and designers in promoting sustainability through their creative work?** Specifically, I aim to explore **in what ways do natural materials and traditional methods contribute to contemporary approaches to sustainability?** By addressing these questions, the research seeks to provide a deeper understanding of the role and scope of responsibility of artists and designers in the contemporary sustainability context, and how their creative choices can contribute to redefining the relationship between humans and the natural world.

I have chosen a combination of arts-based research (ABR) and art-based action research (ABAR) and autoethnographic approach for this study which allows for exploration and reflection through creative practices. This approach enables me to engage deeply with the subject matter, using art to investigate the complexities of sustainable practices within the realms of art and design. By utilizing this methodology, I can explore the topic not only from a theoretical perspective but also through practical, hands-on engagement with materials, techniques, and artistic expressions that directly relate to sustainability in the creative process.

The methodology consists of several stages, including reflection, action, observation, and re-evaluation, which are essential components of action research. I will document insights, reflections, and outcomes that emerge from my personal experiences and interactions with participants in relevant collaborative activities. This documentation will serve as a valuable resource for understanding the dynamics of sustainable practices in art and design and it will add to the conversation about sustainability in creative areas.

Art Education, Sustainability, and the Role of Craft in Lapland

In the Arctic region of Finnish Lapland, art education serves as a vital method for promoting sustainability and preserving cultural heritage. The integration of traditional crafts into contemporary art practices has been instrumental in fostering cultural sustainability, enabling communities to maintain and revitalize their unique identities amidst globalizing forces. Härkönen et al. (2018) emphasize that engaging with handcraft traditions in contemporary art facilitates intergenerational dialogue and cultural revitalization, which are essential for sustainable development in the region (p. 1). Thus, craft-based art education becomes not only a method of knowledge transmission but also a practice of ecological adaptation.

Craft, in particular, plays a central role in this dynamic. It acts as both content and method in educational contexts, allowing students to explore sustainability through tactile, embodied learning. Working with wool, wood, natural dyes, or other local materials connects learners to the land and its history. It also fosters an appreciation of slowness, care, and precision—values that stand in contrast to the fast-paced, resource-intensive modes of industrial production. Craft is thus a form of resistance, a way to engage critically with consumer culture while cultivating sustainable habits and mindsets.

Moreover, craft-based learning supports intergenerational learning. In rural and Indigenous communities of Lapland, connection with knowledge holders is often involved in education, offering lived knowledge and cultural context that no textbook could convey. This approach reinforces the social sustainability of art education, ensuring that skills, stories, and values are passed on through meaningful human relationships.

Furthermore, the practice of art education in Lapland is deeply intertwined with environmental consciousness. By incorporating local materials and traditional techniques, educators and artists not only honor the ecological knowledge embedded in these practices but also promote sustainable use of resources. Kohtala et al. (2024) discuss how digital fabrication and sustainability intersect in Arctic art education, highlighting the importance of integrating traditional crafts with modern technologies to address environmental challenges (pp. 156–178). This fusion of craft and innovation offers learners a grounded yet forward-looking approach to ecological responsibility.

The role of art education extends beyond the preservation of cultural and environmental values; it also encompasses social and economic dimensions of sustainability. Through community-based art projects and participatory approaches, art education in Lapland empowers local populations, fosters social cohesion, and contributes to the local economy. Härkönen and Vuontisjärvi (2017) illustrate how Arctic art and design education can enhance cultural sustainability by engaging communities in creative processes that reflect their heritage and contemporary realities (pp. 86–105). In these projects, learners are not just recipients of knowledge—they become co-creators of meaning and cultural continuity.

In summary, art education in Lapland embodies a holistic approach to sustainability, intertwining cultural preservation, environmental responsibility, and community engagement. By valuing traditional crafts and integrating them into modern educational practices, Lapland sets a precedent for how art education can contribute to sustainable development in culturally rich and environmentally sensitive regions. It demonstrates that education does not need to choose between heritage and innovation—instead, it can bring them into productive dialogue for a more sustainable future.

2.THEORY

This chapter explores the significance of wool and felt as sustainable materials deeply rooted in traditional practices. The discussion then extends to the broader concept of craft, emphasizing its relevance in cultural sustainability and contemporary art and design. Furthermore, the chapter considers the responsibilities of artists and designers in advancing sustainability and finally introduces innovative sustainability approaches such as intersectional and emotion-centric strategies. These theoretical perspectives together build a comprehensive foundation for understanding how traditional practices and creative methods can foster sustainable futures.

Wool

Choosing wool as the sustainable material in this study is strong match with reconnecting with nature and unity with its components. “Wool is linked to the history of sheep and its relationship with human’’ (Breniquet, 2014, p. 53). It is one of the oldest fibers used by humans as a result of the interaction between humans and animals, and it is known as a vital material in human history. Findings showcase the economic importance of the wool trade in the past. Based on the historical and archeological evidence about the domestication of sheep, “Mesopotamia started to be the ‘Land of Wool’ at the beginning of the 2nd millennium BC.’’ (Breniquet,2014, P. 53).

Breniquet (2014) states in ancient era, wool had more uses than just making clothes. It was sometimes offered to the gods in religious ceremonies and also served as a form of currency in a basic ration system during the early 3rd millennium BC. Workers were paid not in money, but in essential goods like barley, oil, fabrics, and small amounts of wool. This wasn’t really a salary as we think of it today, but more like an allotment of supplies for their work. Wool acted like a "primitive" currency in Mesopotamia, serving several important functions. It was used to measure value, as a medium of exchange, to store wealth, and as a standard for transactions (P. 74).

Wool is known as a critical fiber in textiles for its unique characteristics. Farley et al. (2015) assert that “wool acts as a natural insulator, and it can keep the body warm or

cool as necessary'' (p. 68). This inherent ability to regulate temperature arises from the structure of wool fibers, which trap air and create insulation. The versatility of wool extends beyond mere thermal regulation; it is 'extremely durable' and can resist the hardness of daily use (Farley et al, 2015. p. 68).

As mentioned in my online sources such as (DesMarais, n.d.), the advantages of wool are explained in various ways in this paragraph; this provided me inspiration to use this for my further analysis. Wool offers multiple benefits including effective moisture management, as it can absorb moisture without feeling wet, keeping the wearer dry and comfortable even in damp conditions. It is a renewable resource, with sheep being shorn annually in a harmless manner, ensuring a continuous and sustainable supply. Furthermore, wool is biodegradable, allowing it to return to the earth naturally without causing environmental harm, unlike synthetic fibers that can take years to decompose. It also possesses natural antimicrobial properties, helping to reduce odor and promote better hygiene in clothing. Lastly, wool is highly breathable, efficiently drawing moisture away from the skin and adapting well to various climates without the need for complex fabric structures

These are only a part of the countless properties of wool which clearly shows the superiority of this natural material over other common textiles. Its natural resilience, warmth, and breathability not only increase its functionality but also make it an undivided part of cultural practices throughout history. These qualities can influence cultural practices surrounding the use of wool, positioning it as a preferred material across different societies.

Felt

The only textile that is clearly made from wool is felt, which requires no specific tools for its production (Breniquet, 2014, p. 69). Additionally, Laufer (1930, p. 1) emphasizes that "the art of making felt by rolling, beating, and pressing animal hair or wool into a compact mass of even consistency is assuredly older than the art of spinning and weaving," suggesting that felting predates other textile techniques in both practice and accessibility. This characteristic makes felt one of the earliest forms of fabric known to humanity. As noted by Barber (1991), felting emerged as the 'chief alternative' to weaving in ancient times, especially among the nomadic tribes of Central Asia, where

wool was available plentifully and the process required neither loom nor spinning tools. The method relied on moisture, heat, and friction to entangle the scales on wool fibers, creating a dense, interlocked material that was both durable and insulating (Barber, 1991, p. 215). This simplicity and effectiveness not only made felt ideal for creating tents, clothing, and household items, but also resulted in the persistence of wool across cultures and centuries.

Felt played a crucial role in nomadic lifestyles, and the process of “felt making is often a group activity in nomadic communities.’’ (Docherty & Emerson, 2004, p. 8). For centuries, this non-woven fabric has fulfilled crucial human needs, providing materials for rugs, hats, footwear, and most notably, for the construction of yurts, a traditional nomadic accommodation (Wool 4 Ewe, n.d.), providing warmth and shelter while also serving as a medium for artistic expression. “Felt allowed nomadic tribes to survive in harsh climates and to travel more simply.’’ (Lane, 2012, p. 9). The process of forming without the need for involving machinery or complex techniques made it an accessible and essential textile in many regions of the world. The flexibility and durability of felt made it an ideal material for constructing tents and yurts, and clothing. Moreover, the artistic aspect of felting allowed nomads to express their cultural identity and creativity. Through various patterns, colors, and designs, these communities were able to convey stories, traditions, and beliefs, moreover, increase the importance of felt in their cultural heritage.

Felt has significant cultural and artistic value, particularly in the past. Evidence indicates that felt was first created during the Bronze Age, with artifacts discovered in Siberian tombs preserved by the cold temperatures of the region, dating back to 600–200 B.C. (Docherty & Emerson, 2004, p. 8). These findings include not only functional items such as socks blankets and saddles but also decorative pieces that highlight the artistic value of felting (Silk Road Seattle, n.d.). One of the oldest felted decorative items is a swan figure. The swan artifact from the Pazyryk culture dates back to the 5th-4th century BC and is made from white felt and filled with reindeer wool (Silk Road Seattle, n.d.). “This swan symbolized the creation of the universe in Altaic beliefs and the three spheres of life, air, earth, and water.’’ (Lane, 2012, p. 9). Felt can be created using two main techniques: the wet method, which involves hot water and soap, or the dry method, which utilizes needles. Both processes alter the structure of the wool. As the fibers break apart and interlock, they form a thick, solid fabric (Atostogos kaime,

n.d.). Dry wool felting is perfect for crafting toys, jewelry, figurines, and dolls. Wet felting, on the other hand, excels in creating flat items such as wraps, scarves, clothing, and wall art (Atostogos kaime, n.d.). The wet felting process has rich history as Lane notes, “the technique of wet felting hasn't changed much over 2,000 years.” (2012, p. 6) This method involves the use of hot water, soap and friction on the wool fibers, which causes the entanglement of the wool structure.

As mentioned in my online source (Eugene Textile Center, n.d.), the evolution of felt is described in the following paragraph:

Historically, until the 1800s, the predominant felting technique was the wet technique. However, the advent of the Industrial Revolution transformed many traditional crafting processes like felt making by increasing the high demand for felt production at lower cost, faster way, and in large volume. In response to this demand, manufacturers began to explore alternative methods of felting that would expedite the entanglement of wool fibers. A significant innovation during this period was the invention of the needle punch felting machine, which was developed “around 1866 by the Bi-Water Company of Leeds.’’ “This type of machine uses a bed of needles to punch through a wool batt, forcing the wool to entangle.’’ (Eugene Textile Center, n.d.).

Needle felting as we are familiar with today, is adapted from industrial felting and is a relatively new technique. It was created in the 1980s by David & Eleanor Stanwood resulting in their attempts to use a single needle to create 3D shapes sharing their “new-found technique with fellow artists.’’ (Eugene Textile Center, n.d.). “Needle felting has become extremely popular in the last several years; the number of needle felters has increased exponentially, one reason for this increase is the internet.’’ (Lane, 2012, p. 6).

Craft

The traditions of craft have a significant role in human history, shaping cultural identities and create a sustainable connection between people and their environment. Nowadays in contemporary art and design, study about craft techniques attracts special attention from enthusiasts and activists in this field as artists and designers are seeking the methods to integrate sustainability in their work. Craft practices due to

their reliance on natural materials, minimum waste and slow production process are inherently in line with environmental consciousness.

Härkönen et al. (2018, p. 2) argue that crafts are deeply connected with cultural sustainability and helps to conserve tradition skills while foster ‘new meaning’ and contemporary innovation. As the environmental impact of unsustainable behavior such as mass production become more apparent, the role of studying crafts, returning to the principle of our ancestors and trying to revive these methods in promoting sustainable behaviors and materials and in general make a change, becomes more prominent. For instance, choosing wool as a sustainable material can be widely studied in each of cultural, historical and environmental dimensions. Revival of past traditions including felting weaving and natural dying and efforts to innovate and revive these methods in the context of practical artistic studies can lead to creation of ‘new values’ and even solutions in some cases which is also in line with educational goals of university of Lapland (Härkönen & Vuontisjärvi, 2017, p. 91-92).

Renewal of interest in craft and traditions is relevant to reconnection with nature and subsequently, reconsideration our relationship with it and ultimately leads to reduction in environmental damage. It also aligns with broader sustainability goals by supporting local economies and enhancing cultural heritage. Jokla et al. (2015, as cited in Härkönen et al., 2018, p. 1) describe art as a renewing and strengthening element of culture and emphasize that the evolution of traditional crafts occurs while preserving their historical significance. Many of indigenous and rural communities have relied on nature and sustainable craft practices for centuries therefore, reviving these practices can help to maintain not only the environment but also cultural traditions which are at the risk of loss due to globalization (Härkönen et al., 2018).

One of the characteristic features of crafts is their reliance on traditional knowledge passed down through generations. These skills and knowledge of past generations are always a valuable source of study and research to deal with today’s industrial approaches. Stöckel (2018, p. 82) notes that craft-based art practices are gaining popularity both among independent artists and within community art projects. This revival is not only for preserving the past but also for finding new ways to integrate traditional crafts to contemporary design solutions. Needle felting, for example, is almost a new adaptation of traditional felting techniques that was developed for artistic

purposes in the 1980s (Eugene Textile Center, n.d.). While industrial needle felting machines were introduced to the world in the 19th century to speed up wool processing, nowadays artists use this slow process of needle felting with hands as a quiet, meditative practice that connects them to natural material and sustainability (Lane, 2012, p. 8). Revitalization of hand-felting techniques demonstrates how traditional crafts can evolve over time while representing their ecological and cultural values.

Craft-based art requires a close connection between the material and the artist and designer. This connection fosters a deeper understanding of natural resources which can lead to a change in perspective, a change in performance and ultimately, a change in the behavior of audience of that artist's or designer's work. Linko (1997, as cited in Stöckell, 2018, p. 86) argues that in the past craft were a necessity for survival but they have evolved over time and now they are in the form of self-expression and sustainability-driven artistry. Artists and designers can promote ecological awareness and encourage audience to appreciate the endurance and value of handmade objects by working with natural materials like wool in their raw and natural form. This hands-on approach is particularly relevant with the context of sustainable education and activism. Workshops with communities and participatory art projects that include craft techniques can bring up discussions about sustainability, inspire people to reconnect with traditional methods and nature and encourage to adopt more responsible consumption habits. Craft also aligns with the concept of 'slow design,' a movement that advocates for mindful, small-scale and 'place-specific' (Stöckell, 2018, p. 91). production which respects and highlights the features of the environment over industrial mass manufacturing.

Responsibilities of Artists and Designers in Advancing Sustainability

Art and design have always played a major role in shaping societies, influencing culture, and inspiring innovation as they have the power to influence perspectives, shape behaviors, and arouse conversations. By adopting sustainable practices into their processes and outputs, artists and designers have the opportunity to not only reduce their environmental footprint but also to inspire others to reconsider their own

relationship with the planet. Sustainability means the practice of meeting the needs of the present without compromising the ability of future generations to meet their own needs (United Nations Development Programme, 2015 as cited in Dai and Hwang,2023, P, 278). It's a concept that affects many areas of our lives; from the way we produce and consume goods to the way we design our cities and communities. In recent years, sustainability has become a central focus within the field of art and design, as creators look for ways to tackle environmental issues while making meaningful work.

As sustainability becomes more important and a defining concern in contemporary art and design, artists and designers have a significant role in promoting eco-friendly practices and developing innovation in material usage. Nowadays, artists and designers are increasingly exploring regenerative design principles that go beyond minimizing environmental harm and try to actively restore and improve ecosystems (Mang & Reed, 2012, p. 26). This approach seeks to regenerate natural and cultural systems through creative practice. By reviewing traditional techniques, activists in the field of art and design can inspire a shift towards responsible production and ethical material usage. They can raise awareness about ecological issues through their creative work by engaging audiences in meaningful conversations about environmental responsibility and the importance of preserving traditional knowledge. Harkonen & Vuontisjärvi (2017) highlight the importance of art and design in Arctic education to strengthening local identities and mention that Arctic artists and designers perform as cultural mediators and act as a bridge between traditional knowledge and contemporary practices (pp. 86-105). “Art is a powerful medium for preserving and transmitting cultural identity, fostering understanding among diverse Indigenous groups, and sharing narratives with broader society.’’ (Qureshi et al., 2025, 133).

Additionally, Huhmarniemi and Jokela (2020), argue that contemporary Arctic art, when rooted in local materials, knowledge, and cultural practices, serves as an important medium for sustaining and revitalizing indigenous and local identities (p. 3). Craft-based art, particularly when it utilizes biodegradable materials like wool, naturally aligns with this philosophy. Using wool in this project reflects both commitment to sustainability in terms of material and also an appreciation for tradition knowledge in contemporary practice.

It is essential to understand the concept of sustainability in the context of art and design. As the concept of sustainability has been evolved over time, it can be said the sustainability is a multifaceted challenge that requires holistic, systemic approaches as it includes all stages from production to consumers behavior in societies from local to global (Ceschin & Gaziulusoy, 2019, P. 5-10). It includes environmental, social, and economic dimensions, emphasizing the need for responsible resource use, fair social practices, economic viability, and cultural preservation. Art and design, as expressive and transformative mediums, hold immense potential to drive positive change towards sustainability. Therefore, sustainability in art and design goes beyond mere aesthetics or functionality; it involves addressing complex socio-technical systems and promoting positive societal change (Ceschin & Gaziulusoy, 2019, P. 157). Therefore, based on the purpose, sustainability in art and design brings various responsibilities to designers. Some of these responsibilities are shortly explained in the following paragraphs.

Environmental Responsibility

One of the approaches in which artists and designers can promote sustainability is through environmentally responsible practices. This includes careful material selection, reducing waste, and using sustainable production methods. Many traditional crafts offer valuable lessons in this matter, as they rely on renewable resources and often involve low-energy, low-waste processes. By prioritizing eco-friendly materials, artists can minimize their environmental impact Similarly, repurposing waste materials or working with upcycled resources can help reduce environmental harm. As Ceschin & Gaziulusoy (2019, pp. 12-21) highlight, adopting principles of green design and circular economy strategies can ensure that artistic and design practices align with sustainability goals. In this study, choosing wool as a natural material and one which is known for its durability, biodegradability, and minimal environmental impact compared to synthetic alternatives falls into this category.

Social Responsibility

Beyond environmental concerns, sustainability in art and design also comprises social equity and cultural sustainability. Design for social innovation enables artists to address systemic inequalities, support marginalized communities, and promote

diversity and representation. Through participatory design and community-based art projects, artists can engage with communities, amplify marginalized voices, and foster social connection, empathy and understanding and eventually empowering individuals to share their voices and engage in cultural dialogue (Ceschin & Gaziulusoy, 2019, P. 102-108).For example, collaborative craft projects often serve as platforms for cultural preservation and social empowerment. Traditional handicrafts, such as wool felting and weaving, have historically been passed down through generations and carrying significant cultural heritage. Supporting these practices helps protect indigenous knowledge and provides economic opportunities for local communities.

Economic Responsibility

Sustainability, in order to be effective in art and design, it also needs to be economically viable. Economic viability ensures that creative endeavors are financially feasible and ethically sound. This means that artists and designers should find ways to sustain their creative work financially while ensuring that their production methods remain ethical and environmentally responsible. If a sustainable project is not financially feasible, it may not be able to continue in the long run, limiting its impact. Artists can explore innovative revenue models, such as product-service systems and collaborative platforms (Ceschin & Gaziulusoy, 2019, P. 75), and slow design to generate income while minimizing waste and maximizing value creation.

Cultural Enrichment

Cultural enrichment through sustainability in art and design is a multifaceted concept that intersects with various aspects of sustainable design practices. Design for sustainability has shifted from insular and technocentric innovations to systemic and human-centric innovations over time (Ceschin & Gaziulusoy, 2019, P.151-154). Therefore, sustainability is not only a technical challenge but a profound cultural shift that influence how we conceive, create, and perceive art and design. The integration of sustainable principles combines creativity with a deeper sense of purpose. It prompts artists and designers to explore new materials, methods, and narratives that harmonize with nature and society. Through this lens, art and design become catalysts

for cultural reflection, innovation, and dialogue and eventually go beyond aesthetic boundaries to foster connections with diverse communities and ecosystems.

It is obvious that these responsibilities are not separate from each other but intertwined with each other. In conclusion, understanding sustainability in art and design requires a holistic approach that integrates environmental, social, economic, and cultural dimensions. By using the power of creativity and innovation and exploring the world of sustainability, artists and designers can become agents of positive change, inspiring awareness, empathy, and action towards more sustainable and fair future.

Innovative Sustainability Approaches in art and design

Artists and designers need to prioritize solving user problems and improving user experiences (Yang & Peng, 2023, p. 320). This process requires a deep understanding of how specific design choices influence interactions between users and products, services and art piece. For instance, intuitive interfaces can significantly improve usability, while aesthetically pleasing designs can create an emotional connection with users. Moreover, these interactions can have a lasting impact on promoting sustainable behaviors, such as encouraging users to choose eco-friendly options or engage in resource-conscious practices. For this purpose, artists and designers take Innovative approaches. Innovative sustainability strategies in art and design aim to minimize environmental impact, promote social equity, and achieve economic balance. These approaches apply sustainability principles in the creative process. This leads to art, design solutions, and cultural actions that support a more sustainable future. There are different methods for achieving sustainability in design, depending on the purpose and context. In the next paragraphs, I will discuss two of these methods that I find interesting and relevant to this study.

Intersectional Perspectives

Intersectional Perspectives in sustainable art and design represent a holistic and inclusive approach that acknowledges and addresses the interconnectedness of various social, cultural, environmental, and economic factors. This approach recognizes that issues such as climate change, social justice, and economic inequality

are not isolated but are deeply intertwined. It emphasizes the need to consider multiple perspectives, experiences, and identities in the creation and implementation of sustainable solutions.

Talgorn and Ullerup (2023) examine the significance of integrating different viewpoints and experiences—both human and nonhuman—in the area of ecological storytelling and sustainable design. They propose the concept of empathizing withthe planet by considering the perspectives, emotions, and experiences of various characters in planet. This includes not only humans but also animals, ecosystems, and natural elements. Their work emphasizes the interconnectedness of all living beings and the environment (pp. 23-46).

This approach indicates that understanding and having empathy with the experiences of nonhuman creatures can help humans to have a deeper appreciation for the planet and its ecosystems. This perspective challenges traditional anthropocentric views by highlighting the importance of considering the needs and well-being of nonhuman beings in design processes and decision-making (Talgorn & Ullerup, 2023, p. 45).

Another example is collaboration and networking. By partnering with a diverse range of stakeholders, artists and designers can being benefited by additional resources, knowledge, and support to increase the impact of their projects. “ These spaces can promote dialogues and exchanges, help groups reach a consensus, integrate the resources of multiple external parties, transmit information through various media, and match resources.’’(Dai & Hwang, 2023, P. 320).

Emotional-centric approach

Another innovative approach in the field of sustainable design is emotional perspective which actually leads to build and strength of emotional bond between the product user/audience in different levels. This approach was the result of examining consumer behavior in order to replace products that in many ways did not need to be replaced (Ceschin & Gaziulusoy, 2019, P.26). The aim of emotionally durable design aims to create products that make lasting emotional connections with audience, thereby reducing the need for frequent replacements and minimizing environmental impact will be resulted (Ji & Lin,2023, P. 211).

When audience sense strong emotional attachments to products, they are more likely to keep them for longer periods (Ji & Lin,2023, P. 211), thereby the frequency of replacements and extending the product lifecycle will be reduced. Extending the lifespan of a product means reducing resource consumption therefore this method aligns with the broader goal of sustainability. This insight underscores the potential of design to influence consumption patterns and promote sustainable behavior. Incorporation of emotional durability in the work of artists and designers can contribute to a more sustainable consumption culture.

By adopting strategies that prioritize emotional durability, artists and designers can contribute to a more sustainable future. For example, emphasizing on the enjoyment and functionality of products, can enhance/increase their appeal and encourage long-term use (Ji & Lin,2023, P. 216,217). Similarly, incorporating narrative elements and symbolic meanings can deepen consumers' emotional attachment to products, fostering a sense of connection and value that transcends mere functionality (Ji & Lin,2023, P. 218,220).

Animation, as a method of artistic research in this study, offers a unique path for exploring themes such as sustainability, material engagement, and cultural narrative. Stop-motion animation, in particular, allows for a tactile and embodied form of storytelling, where each frame is consciously constructed and materially grounded. The deliberate frame-by-frame process of stop-motion encourages slowness, attention to detail, and reflection — all essential values in the discourse on sustainability. When the material used for animation carries its own ecological and cultural weight, the narrative deepens further. The result is an interplay between material agency and human, creating what Marks (2000) calls “haptic visuality,” where the viewer not only sees but feels the material through the screen. “which emphasizes the meaning of the film through its materiality and the contact between the perceiver and the object to be reproduced. Vision itself can also be haptic, as if we were touching a film with our eyes.” (Marks, 2000). This research, by utilizing animation made of natural felted wool, invites the viewer into a sensory world that foregrounds tactility, cultural memory, and ecological ethics — an approach that aligns with both artistic intention and environmental consciousness.

3. METHODOLOGY

In this chapter, the theoretical framework that supports this research is presented. The chapter begins by outlining the methodologies of art-based research (ABR) and art-based action research (ABAR), which are the bases of the study's approach. It then discusses ethnographic and self-reflective methods to highlight how personal experience and material engagement contribute to knowledge production.

Research Methodology

This study uses a combination of arts-based research (ABR) and art-based action research (ABAR) and autoethnographic approach. I believe these are the most suitable approaches for my study because they align with my purpose to gain knowledge through art and also enable me to express my artistic journey during the process. These methods place creativity, subjectivity, and material engagement at the center of knowledge generation, which is highly aligned with the themes of sustainability and traditional practices in this study. To understand the foundation of this approach, it is important to consider the following: art-based research, art-based action research, and ethnographic approaches, which I have described further.

Art-based research and Art-based action research

Arts-based research and art-based action research approaches were selected to enhance both understanding and practice within the field of sustainable art and design. According to Leavy (2020), arts-based research is a methodological approach that allows creative practice to serve as both the method and the outcome of inquiry (p. 4). This choice is justified because the aim of this study is not only to explore theoretical aspects of sustainability but also to deepen comprehension through artistic engagement. Action research principles further support this by focusing on reflective practice and real-world impact (McNiff, 2016).

Arts-based research focuses on creative processes as a method of inquiry. It helps researchers investigate how artistic practices develop, what meanings they carry, and

how they can communicate ideas to audiences and build knowledge (Leavy, 2020, p. 3; 2018, p. 4). Arts-based research provides a way to explore topics and meanings that are difficult to express with words and communication alone (Barone & Eisner, 2012, p. 1; Jokela & Huhmarniemi, 2018, p. 9). This method allows for a profound exploration of the cultural and emotional dimensions which is important for the revival of wool craftsmanship in this study.

> ‘‘ABR practices are a set of methodological tools used by researchers across the disciplines during any or all phases of research, including data generation, analysis, interpretation, and representation. These emerging tools adapt the tenets of the creative arts in order to address research questions in holistic and engaged ways in which theory and practice are intertwined’’. (Levy,2020, p. 4).

Another important feature of ABR that makes it particularly suitable for this study which is also argued by (Levy, 2020) is its fundamental approach to the relationship between researchers and their subjects. Unlike traditional research methods, which often emphasize maintaining a professional distance and separating the researcher from the research components, ABR encourages a more integrated and personal connection (p. 3). This approach not only allows researchers to blend their experiences and insights with the artistic elements of their work but also invites audiences to engage with and reflect on those relationships in a meaningful way.

As the title suggests, Art-based action research is a more practical method that connects artistic research and it's the meeting point of art, action and art-based research .‘‘Art-based action research is a research strategy which guides the progress of research in the cycles of action research and uses art as a catalyst for development work’’ (Jokela & Huhmarniemi, 2018, p. 9). ‘‘Art can also be the subject of development or the tool for the research’s data collection and analysis’’ (Jokela & Huhmarniemi, 2018, p. 9). According to McNiff (2016). Action research is a process of evaluating and improving one’s own practice by critically reflecting on actions and interactions with others. It involves both action — referring to what is done — and research — referring to how one finds out about what is done — with the aim of enhancing the quality of personal and social practices. Rather than focusing on creating abstract theories, action research emphasizes generating personal theories of practice through real-world experiences. It is a collaborative and reflective approach, encouraging

practitioners to become reflective thinkers (Schön, 1983, as cited in McNiff, 2016), critical analyzers of their work (Brookfield, 2013, as cited in McNiff, 2016), and active agents of change (Arendt, 1958, as cited in McNiff, 2016). By studying and improving their own actions within a social context, practitioners strive to ensure that their contributions benefit not only themselves but also the communities they are part of (p.9).

ABAR is a participatory approach can involve communities, stakeholders, and researchers to gain ‘tacit knowledge’ and ‘experience’ from them which is not able to be conveyed through traditional research approaches (Jokela & Huhmarniemi, 2018, p. 9). This method is particularly relevant to sustainability-oriented projects, where creative processes can serve as tools for fostering ecological awareness, reviving traditional crafts, and encouraging responsible material usage. ‘‘Researchers aim to develop operational methods that allow stakeholders and local communities, or the society in general, to become increasingly more sustainable.’’ (Jokela & Huhmarniemi, 2018, p. 9).

Ethnography in Practice-Led Sustainability Research

‘‘THE TERM AUTOETHNOGRAPHY invokes the self (auto), culture (ethno), and writing (graphy). When we do autoethnography, we study and write culture from the perspective of the self. When we do autoethnography, we look inward-into our identities, thoughts, feelings and experiences-and outward-into our rela-tionships, communities, and cultures.’’ (Adams et al., 2015, p. 46)

Ethnography is a qualitative research method that is originally rooted in anthropology, which traditionally seeks to understand cultural aspects of a certain community through engagement over a long period. Researchers typically participate in the daily lives of the people they study, gathering insights through interviews and direct interactions. While traditional ethnographic research often includes interviews and interaction with others, contemporary ethnographic methods have evolved (Pink, 2015, pp. 3–5) and also include other methods like self-reflective, experience-based, and observational practices, where researchers consider their own experiences and biases. This approach is useful in the field of art and design.

In this study, ethnography is used not as a study of “others” but as a self-reflective and place-based experiment with material practices and natural environments. I experienced those relationships personally through crafting, watching others’ work during workshops, and reflecting on wool itself. As such, this research is closer to autoethnography, a method that emphasizes personal narrative and self-reflection as valid forms of knowledge in research(Adams et al., 2015, pp. 22–25).The research collecting data includes my own diary entries, sketches, photographs, videos and written reflections relies on direct observations of natural surroundings of Lapland, personal interactions, and creative experiments with wool in various physical, cultural, and seasonal contexts. This method aligns with new ethnographic approaches that focus on sensory experiences, material involvement, and self-reflection (Pink, 2015, pp. 25–29).

This type of ethnographic practice reflects a relational understanding of knowledge. It doesn't separate the researcher from the environment. In contrast, it focuses on the relationship between the researcher and their surroundings, such as the connection between the creator and the materials, the weather and feelings, and the hands and fibers. Tim Ingold (2011) calls this "being with" the world, where learning comes from direct engagement, movement, and interaction rather than simply thinking in abstract forms (p. 11). This concept is central to my practice, as much of what I learned about wool, tradition, and sustainability came from touching, shaping, felting, and observing.

Throughout the process, I maintained a detailed research diary, which included reflective writings, sketches, and emotional responses. I also documented the artistic process through photographs and videos. These self-generated data sources form the core of the research material and reflect my active role in both producing and analyzing knowledge. As a researcher-artist, I positioned myself within the research process rather than outside it. I interacted with the environment through walking, collecting, observing, and crafting. My reflections on these experiences, often documented through photography, sketching, writing, and wool-making, became primary research material. This approach aligns with the concept of embodied ethnography, where knowledge arises through physical hands-on interaction with materials and spaces (Ingold, 2013, p. 6). In this perspective, personal knowledge is not confined to silence or hidden within the subconscious; instead, it is actively expressed through material interactions and the movements of practice. Craftspeople, artisans, hunters, and

archaeologists convey what they know not through verbal explanation but through action—by tracing paths, following trails, and guiding others via stories and shared experiences that foster a kind of understanding rather than instruction (Ingold, 2013, pp. 109-110).

In conclusion, ethnography in this research was not about studying others, but about engaging deeply with material, environment, and practice. By observing, making, reflecting, and sensing, the research process generated insights into how sustainability can be experienced through art and traditional materials. Ethnography thus becomes a way of learning by being present—a way of seeing the world not from a distance, but from within.

Data Collection

The data for this study was collected through a combination of personal, creative, and observational methods that are consistent with arts-based and autoethnographic research. My research diary served as a central data source, where I recorded personal reflections, emotional reactions, and conceptual insights throughout the process. I also created visual documentation, including photographs, sketches, video recordings, and notes from material experiments with wool. These materials were not only observational but also expressive, representing the internal dialogue between myself, the natural environment, and the traditional craft. This visual and tactile engagement with materials formed part of the data itself, particularly because it revealed embodied knowledge—sensory and intuitive understandings that are central to both artistic practice and sustainable design. I also documented moments from workshops and community interactions, especially during felting sessions, in which I participated as both facilitator and learner. These workshops were dynamic environments for co-creation and exchange. Informal conversations with other participants enriched the data by bringing in multiple perspectives.

The multi-modal nature of the data—textual, visual, material, and experiential—enabled a holistic understanding of the research context. It also allowed for the inclusion of embodied, affective, and tacit knowledge that may not be easily captured through conventional verbal methods (Barone & Eisner, 2012, p. 1).This process of data collection emphasizes my agency as both artist and researcher , where

subjectivity is acknowledged as a valid and productive part of knowledge creation. My position was not one of detached observation but of active engagement: I was embedded in the environment, emotionally involved in the material, and ethically attuned to the process.

In this way, the data gathered was not passively collected but actively created, shaped through personal experience, artistic experimentation, and relational encounters within the community. The data shows a research process that developed alongside my creative work. It responded to my own questions and involved collaboration with others.

Ethics

Ethical considerations were integral to the research process. As the primary data sources were my own reflections, creative works, and observational documentation, issues of participant privacy were minimal. However, for the public dissemination of images from the collaborative workshop, verbal consent was obtained from participants for any photographs shared externally. The research adhered to ethical guidelines for arts-based inquiry, emphasizing respect for collaborators, cultural sensitivity, and transparency (Leavy, 2020, p. 278).

Moreover, given the autoethnographic nature of the study, I consistently reflected on the ethical implications of representing my own experiences and creative journey. Autoethnography requires a careful balance between vulnerability and responsibility, as the researcher is both the observer and the subject (Adams et al., 2015, p. 10). I maintained this balance by setting clear boundaries on which aspects of my personal life and creative practice I would share, and by focusing on those that directly contributed to the research questions.

Additionally, this research was situated within the broader ethical framework of environmental responsibility, which is particularly relevant given the focus on sustainability and traditional materials. The choice to work with local and natural materials such as wool, and to reuse or recycle resources when possible, was not only a practical decision but also an ethical stance embedded in the research methodology.

Ultimately, ethics were not treated as a separate phase but as a continuous and embedded aspect of the research process. Every stage— from collecting personal reflections, to crafting artworks, to sharing documentation— was approached with an awareness of the ethical dimensions of visibility, authorship, representation, and responsibility in arts-based and qualitative research.

4. ARTISTIC WORK

In this chapter, the focus is on describing my familiarity with craft and Villainno project as well as the process of conducting two practical experiments undertaken as part of this research, outlining the steps taken, the methods employed, the decisions were taken, and the progression of each experiment. The first experiment involves exploring the technique of bicycle felting, and the second one focuses on creating a felt animation using stop motion technique.

My familiarity with handcrafts, wool, and VillaInno

I have always enjoyed learning crafts and traditional arts, and I always welcome the opportunity to work with new materials. I always feel an indescribable joy and peace when I create something with my hands. Writing this section made me try to remember what my first experience with crafting was. I still have the small clay figures I made in kindergarten, although I have no memory of making them, I find them pleasant to see and touch. My next craft memory goes back to elementary school art class when I learned how to make boxes out of paper and cardboard. As soon as I learned the first box, I began making more in various sizes, and I vividly remember the moment when my mom and I took all the boxes to an art store, and the shopkeeper bought them with a wide smile. That might have been the first time I experienced sense of independence though my crafts.

My first experience with yarn and knitting goes back about ten years ago when I was taking performing arts courses at an institution in Iran. One of my classmates, who was in charge of the store there, suggested that I can put some of the ring scarves and bracelets I made on my own in his store for sale. I did so and they sold quite well. I continued doing this every winter for three years until inflation caused a significant increase in the price of yarn, and it no longer made sense to keep going so I stopped making ring scarves, but I continued making bracelets, using materials like stone beads and wood.

Before the pandemic, I used to travel across Iran whenever it was possible. These trips were not just about moving from one spot to another for me, but a way to explore new cultures, people, and landscapes. I funded my travels by making and selling handmade bracelets, which became more than a source of income—they were expressions of creativity and a means of connection to people and nature. This lifestyle taught me a great deal about adaptability and the beauty of living simply and with purpose.

However, when the COVID-19 pandemic started, everything else stopped. Like many people, I had to stay indoors, and I started feeling insecure about the future. The freedom I once enjoyed turned into isolation, and over time, I lost my motivation to do anything. Despite the emotional and mental exhaustion from the pandemic, one good thing happened: I began watching many documentaries about environmental issues. These films showed me the serious ecological challenges the world faces and made me think more about the fragile relationship between humans and nature.

When I came to Finland to begin my master's studies, the first thing that caught my attention was the accessibility and presence of nature in everyday life. For thirty years, I had lived in an urban environment where nature was often something distant or scheduled, experienced only through occasional trips. But in Finland-Rovaniemi, nature is ever-present. I quickly realized that, for the first time in a long while, I was experiencing an unfamiliar sense of peace. This experience has reminded me again of the importance of nature-related activities for human beings.

The Villaino project was introduced to the first-year master's students in sustainable art and design during the fall semester of 2023 as an ongoing project. A project that pursues various wool-related goals in collaboration with different partners and seeks innovation and creativity in the use of wool. After a short while I realized that Villaino is not just a material-based project; it is a platform that bridges tradition and modernity, rural knowledge and contemporary design, individual expression and collective sustainability goals, and offers a meaningful way to merge personal reflection with practical action.

In November 2023, when I visited one of the project's partners (Elves Village -Tonttula) with other students and teachers, I had the chance to work with wool for the first time. I should mention that I had been looking for an opportunity to try needle felting for a

while—I had seen this technique a few times on Instagram's explore section, and it seemed very interesting. There, all the tools I needed were right in front of me. I quickly grabbed the materials and started shaping the wool into a heart shape. For a first attempt, the result was satisfying, but this was just the beginning. The second attempt was to create a small wool painting which I found even more satisfying. That night, when everyone was asleep, I had severe stomach pain that wouldn't let me rest. I decided to keep myself busy, so I grabbed the tools again and worked for a few hours, completely distracted from the pain. In fact, the technique was very relaxing, I realized that I am interested to know more about wool and felting technique, so I decided to work with this material more.

After deciding to focus on wool I tried to attend to workshops and activities related to wool held by Villaino and other students. participating in various wool-related activities has been very inspiring and helpful for me. These experiences vary from making woolen dolls from children's drawings (a project organized by one of my classmates, Najneen Nahar during fall semester of 2023) to making felt piece in large dimensions and trying to revive the old Mongolian tradition of making felt which I will explain in next section.(Experiment 1)

Visiting another partner of the project, Navetta Gallery, in December 2023 opened new doors in my mind and artistic practice. Meeting Lea Kaulanen, the owner of Navetta Gallery, was a particularly inspiring experience. Her commitment to using recycled and natural resources was reflected in every piece she had crafted. Her collection of woolen handicrafts, felted artworks, and characterful dolls made from reused materials represents stories of care, imagination, and environmental consciousness. I was deeply moved by how she gave second life to discarded materials and transformed them into expressive figures with personality and depth. This visit sparked an idea in my mind—to create woolen characters myself, not just as an artistic choice, but as a meaningful way to connect sustainability with storytelling.

The idea to explore the combination of visual art and wool emerged because I have passions in both fields. I have studied Bachelor of Cinema at Sooreh university In Iran where I carried out projects in the fields of photography and videography. During my studies in the master's program Sustainable Art and Design at the University of Lapland, I was able to gain first experiences in wool crafting. These experiences finally

convinced me that I should try to combine them with my background and step out of my comfort zone and experience something new and different.

Considering the idea of combining wool and visual art, I realized that the best way of this combination would be through animation, using the stop motion technique so that I can show the movement by capturing multiple photos of characters. Both crafting and stop-motion techniques have deep roots in my personal interests. It is fascinating how both fields require a lot of patience and time dedication; this common feature finally led to some restrictions in the process.

Deciding on the animation scenario was quite challenging. After meeting with Navetta Gallery, I initially thought about creating stories based on local tales related to the gallery. However, since I didn't feel a close connection to these stories, I shifted my focus to showing the process of making a wool product, from the early stages to the final outcome. At the same time, I was experiencing the needle felting technique whenever it was possible. The more I practiced creating different characters with wool, the more I realized how time-consuming the process was, and I had limited time to finish both this project and my thesis. Therefore, it wasn't practical to choose a large-scale project for my first animation experience. Given my limited experience in this area, I decided to progress the story in a way that wouldn't require designing many different scenes so I could manage my time.

In the end, I decided to create a short reel animation for the Villaino project, inspired by Lapland's wildlife and nature. Since Villaino is connected to Finland, recreating the Lapland landscape and highlighting its nature and wildlife using wool seemed interesting, especially with the Villaino title formation at the end. I wanted to draw attention to Villaino through this concept while also keeping the form and content of the work in line with the goal of the project.

Experiment 1

Bike-felting workshop

A dynamic and collaborative workshop was organized in the picturesque open-air area of the Navetta Gallery, located in Äkäslompolo, during the summer of 2024. This engaging event brought together a diverse group of researchers, local knowledge holders, and enthusiastic students from master's degree program of sustainable art and design in the University of Lapland. The workshop was part of the innovative Villainno project, which aims to renew the wool craft tradition in a local community engagement context to address contemporary challenges (University of Lapland, Faculty of Art and Design, n.d.).

The primary goal of this project was to revive and reconstruct an ancient felting method and ‘’ supporting the use of wool in rural Finland’’ (Huhmarniemi & Hernandez Cervantes, 2024). Historically, felt played a crucial role as one of the main materials used by nomadic peoples for building yurts. In Mongolia, traditional felt making involved the assistance of animals such as horses (Otgonbaatar, 2024), which were used to compress the wool fibers. During the research phase of our project, we focused on reviving this traditional method and exploring how the integration of traditional craftsmanship and ancestral knowledge could offer responses to contemporary challenges. In our practical work, we utilized approximately seven to ten kilograms of raw wool, sourced from farms in Finland.

The first day was dedicated primarily to washing the raw wool. The washing process is not technically complex. The wool must be washed using hot water combined with liquid soap to remove the natural greases present in the fibers. Since we wanted to put delicate layers of wool on the canvas, degreasing step was crucial, as it allows the fibers to be separated more easily and laid out for our felting process. The wool washing phase can be repeated multiple times to achieve a very clean material if needed. During our project, we found that this is not necessary for us as the felting process itself involves the use of water and soap, which naturally helps to further clean the wool. We washed the wool only once, using the minimum amount of water possible. Excessive washing and water consumption were consciously avoided, as overuse of resources would not align with sustainable practices. Wherever possible,

we made decisions that supported the sustainability of the project, ensuring that at every step of the process, we remained mindful of environmental considerations and responsible resource use. For washing, we placed the wool into large plastic containers, added hot water and soap, and stirred gently and after that put the pieces on blanket letting them to dry (Figure 1). This process helped to remove impurities, dirt, and any residues naturally found in raw wool. The workshop took place during the summer, and the warm temperatures allowed the wool to dry quickly. By the following day, it was ready for the next steps. With the help of participants who had prior experience in felting, we began the process of creating felt using a bicycle.

Figure 1: The washing raw wool process, 2024

Figure 2: Using a carding brush to card wool, 2024

We spread a large plastic sheet on the ground and started separating the dried wool fibers into very thin, even layers by using our hands, rake, carding brush (Figure 2), and drum carder. Based on my experiment, using a drum carder proved to be one of the fastest and most efficient methods for carding wool. When small portions of wool are fed into the machine, even if the wool is unwashed, the resulting output is remarkably fine and consistent. However, carding unwashed wool with a drum carder requires considerable physical effort, as the natural grease of the wool that exists in the fibers makes them more resistant to separation. Therefore, greater force is needed

to process the material. Despite this challenge, the quality of the carded wool was highly rewarding. I used some of the raw wool available to card with the drum carder, and the processed wool later became very useful for creating elements for my animation project (Figure 3).

Figure 3: Using a drum carder for carding wool - *First picture from right is taken by Hanieh Ahmadi, 2024

The carded wool was laid out alternately in vertical and horizontal directions, building up approximately five to six thin layers (Figure 4). This cross-layering is crucial for the fibers to properly intertwine and create a strong, cohesive felt during the felting process. After arranging the wool, we poured a mixture of water and soap on it, ensuring it was evenly moistened. Then, by hand, we began pressing the layers, making sure that the piece was still even. Adding moisture at this stage helped facilitate the binding of the fibers. Following this, we rolled the moistened wool into a large, tight roll around a plastic pipe. A rope was threaded through the pipe, and the roll was attached to a bicycle. By pedaling, the pipe starts rolling and felt-making process begins. Using a bicycle replicated the traditional compression that animals once provided.

Figure 4: Cross-layering carded wool on plastic canvas, 2024

The process of rolling the felted wool using the bicycle was repeated three times, each session lasting approximately forty minutes to one hour. Before each rolling session, the wool roll was unwrapped, thoroughly re-wetted with a mixture of water and soap, kneaded by our hands and carefully inspected (Figure 5). Any areas where the fibers appeared uneven or thin were corrected manually to prevent holes or tears from forming in the final felt. The use of water and soap played a critical role in this stage. Moisture made it easier to smooth out the wool and facilitated the felting process, as the fibers intertwined more effectively when wet. The presence of soap foam also accelerated the binding of the fibers, contributing to a faster and stronger formation of the felt structure during the rolling and compression phase. The longer and more consistently the roll was rolling through biking, the denser and more compact the resulting felt became (Figure 6). The final result of the felted wool is approximately 150 * 100 cm.

Figure 5: kneading wool with hands, 2024.

Figure 6: Transformation of the thickness of the piece after biking

In addition to the main piece, a smaller felt piece was also created by the group using the same felting technique. For this second piece, a combination of washed and unwashed raw wool was used. We also used different colors of natural wool to create a simple pattern within the felt (Figure 7). The goal of the second piece was to explore how visual patterns could be formed using this traditional felting method. Due to time limitations, the final texture of the second piece was not as even as intended, as the felting process ideally requires repeated rolling and compression to achieve an even surface. Nevertheless, the resulting pattern created with the different colors was considered successful and visually rewarding. The results with a series of pictures documenting the process presented in The Relate North 2024: New Genre Arctic Art Education exhibition (Huhmarniemi & Cahoon, 2024).

Figure 7: Making a pattern through bicycle felting, 2024

Following the workshop, an idea was proposed to the project partner, Navetta Gallery, suggesting the creation of a shelter space using handmade felt using the same technique developed during the workshop. This concept received positive feedback and interest, but due to financial considerations, the idea did not come to fruition at the time of writing this thesis. According to this idea, a proposal was developed that explored the intersection of traditional handicrafts and their application in contemporary architectural practices. This proposal was later submitted to an international design competition and ultimately won an award for our group on 26 March 2025 (Engage4BIO, 2025). The workshop was documented in a video format by me and the content was share in the social media account as a collaborative reel (Video 1).

The bicycle-felting workshop opened my eyes to the social side of sustainability. Felting is a physically demanding and time-consuming task, and doing it in a group changed the dynamic completely. There was shared effort, rhythm, and collective satisfaction. I realized that sustainable practices can be joyful, communal, and emotionally nourishing. Manzini (2015) speaks about small, local actions as the building blocks of social innovation (p.180). I saw that truth unfold during the workshop. As we worked together, knowledge were exchanged, materials passed from hand to hand, and meaning was built—not just in the final felted pieces, but in the process itself. That moment confirmed to me that sustainability grows faster in shared, hands-on spaces as we are all involved in meaning-generating together.

Experiment 2

Animation

The second experience is a more personal experiment that originates from participating in the Villainno project. I tried to draw inspiration from observations made during the workshops, as well as from visiting various places connected to the project that we undertook together as a group, and the environment in which I have lived during my studies. Eventually, with the help of my wool-related developing skills in needle felting, I turned these inspirations into a short stop-motion animation. From my perspective, this project is a heartfelt appreciation of all the learning opportunities Villainno provided me during this time. I had no prior experience in needle felting, and technically the result is the outcome of efforts I learned through trial and error as well as learning from all the opportunities Villainno team provided for students.

Inspirations

It was a short video on Instagram that first caught my attention and introduced me to this technique of using wool for stop motion animation. By exploring different online resources and watching various tutorial videos, I gradually understood how the process works. I realized that in addition to wool, yarn, and specialized felting needles and felting foam pads, I would also need hot glue and pliers, along with steel wire for the basic materials. All these materials were provided by Villainno team for this project.

I began the trial-and-error process of creating the dolls after receiving the materials. When I first started making the dolls, I didn’t have a clear story for the animation in mind, as I was facing some challenges with developing a storyline. However, at some point, I decided to simply start working and allow myself to learn through the process, drawing inspiration from whatever would naturally happen along the way.

In the summer of 2024, together with the designers and researchers of the Villainno project, I visited a farm (Kairan Tapuli) along with several other participants (Video 2). At the farm, we became familiar with the different breeds of sheep, the ways they were cared for, and the harmonious and sustainable lifestyle shared between the farm owner and the animals. What captured my attention during this visit was the curious and playful personalities of the sheep, especially the newborns.

Although our visit lasted only about two to three hours, it didn't take long to feel a connection between us and the sheep. I tried to capture this feeling in one of the videos I recorded during our visit (Video 3).Since the strong bond that quickly formed between us and the sheep during the visit left a deep impression on me, I decided to have sheep character and incorporate a scene into the animation inspired by that feeling (Figure 8). I wanted to capture and convey the sense of connection we experienced.

Figure 8: Recreating a sensory experience in a frame.2024-2025

The color palette and color choices used in the project were, as much as possible, based on what I observed in my surroundings. For example, the color of the house in the animation was inspired by my observations during our farm visits and the commonly repeated color themes typical around the city of Rovaniemi (Figure 9). The reindeer also plays a very important role in Finnish culture, especially in Rovaniemi, where antler motifs and images of reindeer are seen throughout the city. Therefore, I decided to include a reindeer character in the story.

Figure 9: Choosing colors based on observation of surroundings 2024-2025

The Northern Lights are another defining feature of Finland's identity myths. ''Aurora borealis in Finnish 'revontulet', literally means 'fox fire', according to the legend, the arctic fox swipes the snow with its tail, the sparks fly into the sky causing the northern light.''(Kravtsov, 2018).This story had a particularly strong impact on me the first time I heard it. For this reason, I also chose to feature a fox character and the Northern Lights in the animation. The idea for depicting the interaction between the fox and the reindeer was inspired by a postcard I had seen. Since I wanted to express the balance and harmony between humans and animals that I had observed in Finland, I decided to incorporate this idea into the animation (Figure 10).

Figure 10: Drawing inspiration from a postal card, 2025

Process

The process of creating each doll began with building an initial skeleton. To make the skeletons movable and flexible, I used steel wire. I shaped and formed the wire using pliers. I found basic shapes online, sketched them on paper, and then, based on these sketches, I tried to recreate the wire skeletons by eye and approximate measurements. I created skeletons in different sizes (Figure 11). Forming and shaping the wire was quite difficult and challenging for me. However, over time, with repetition and practice, this step became easier and more manageable. After completing the basic skeleton, I wrapped a layer of yarn around the wire structure using hot glue to fix it to build the base for further needle felting (Figure 12). After this step, I needed to start attaching the wool to the yarn by using a felting needle. The first time I tried this; it was very time-consuming because the steel wire underneath made the attachment process more difficult. In my second attempt, after wrapping the skeleton with yarn, I used raw wool that I had carded myself during our bike felting workshop in Navetta Gallery using a carding machine (Figure 13).

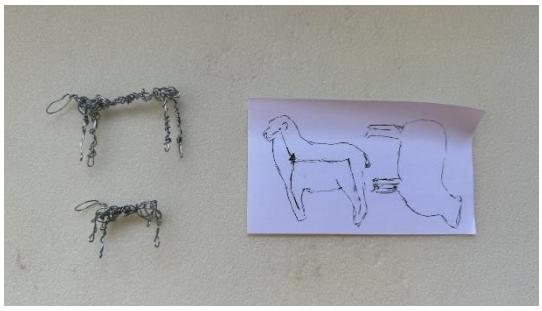

Figure 11: Using steel wire for the skeleton,2024

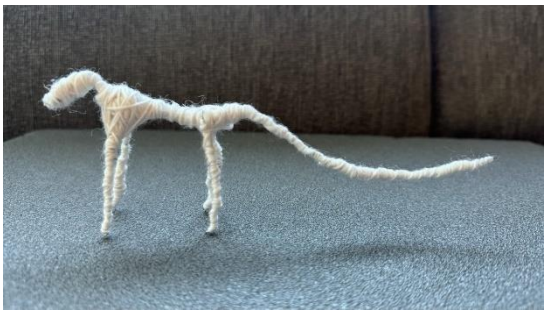

Figure 12: Wrapping yarn around the skeleton and fixing it by using hot glue, 2024

The advantage of using this material was that the wool had not been washed yet, so it still contained a lot of natural grease. This made it much easier to attach the wool layer to the yarn without much extra effort. After applying this base layer, it became much easier compared to my first attempt to add the wool onto the skeleton using the needle. Adding the wool and shaping the characters with a needle in the later stages only required patience, time, and a lot of careful attention (Figure 14). It was a very enjoyable experience, but also extremely time-consuming. (Video 4) visually demonstrates the steps of creating reindeer character in quick and concise version.

Figure 13: Applying carded raw wool on the yarn character, 2024

Figure 14: Final shape of reindeer, 2024

For making the character's clothing, I also used the needle felting technique (Figure 15). All the measurements were created by eye and based on relative scaling, without precise calculations. I simply draw the initial patterns on paper, transferred them onto a layer of foam, and then shaped the wool by needle felting directly around the forms. To create the character's hair, I wanted the hairstyle to remain stable and hold its shape. I started by pulling apart a small amount of black wool by hand and then carefully rolling it into thin strands. I repeated this process until the strands resembled hair. When I attached these strands to the character's head, I realized that they didn't hold their shape very well and were too delicate and fragile. To improve the strength and durability, I decided to add a small amount of hand moisturizer to give some grease-like texture back into the carded wool. Adding a little moisturizer gives the wool more grip and stability. This helped me successfully achieve a fine, delicate look for the hair on the character's head (Figure 16).

Figure 15: Making clothes for the character by needle felting 2024

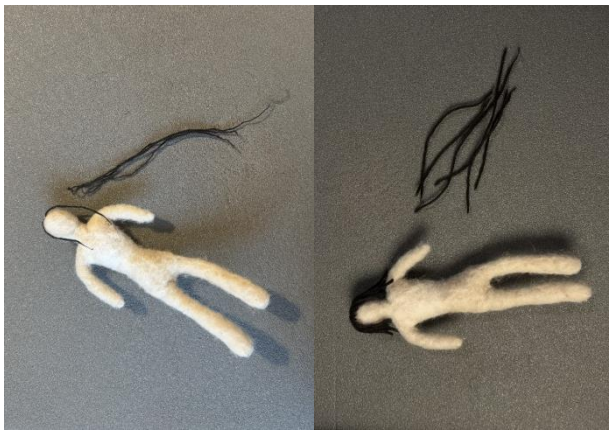

Figure 16: Before and after adding moisturizer to shape the hair, 2024

Regarding the materials used in the scene, I should mention that for the sky background, due to the limited time I had and the time-consuming nature of the needle felting process, I decided not to create the sky out of felt. Instead, I realized that I have a blanket, and its color perfectly matched the sky I had imagined. Although the material was not wool, its texture created the visual effect I needed for the background.Once all the characters and details I wanted to include in the scene were ready, I began setting up the scene. I chose a corner of my apartment and dedicated a table specifically for this project. I placed a layer of flat cardboard on the table, and the entire scene was arranged on top of it. The cardboard layer allowed me to easily move the entire setup if needed, especially for adjusting the lighting. To create the effect of hills and uneven ground, I used egg boxes under a large white woolen fabric. These egg boxes not only helped to shape the landscape but also served an important function: they provided support for the trees, allowing me to attach and stabilize them securely using wires through the cardboard and the fabric (Figure 17).

Figure 17: Arranging the scene on a cardboard and using an egg box to fix the trees, 2025

I captured the entire process using my mobile phone with an application named “Stop Motion.” For the lighting, I used everything I already had at home. I mainly used three LED lights, relying on their reflection off the walls to illuminate the scene. For the fire effect, I used a Christmas light strip, which I hide underneath the fire structure to create the appearance of a glowing fire (Figure 18).

Figure 18: Using a Christmas light strip to create the appearance of a glowing fire, 2025

I chose the Stop Motion application because I had previously heard, by chance, that it was very user-friendly and easy to work with. Therefore, while I was still building the house for the scene, I decided to give the application a trial run. I recorded the process of coloring the house as a stop-motion animation using this application and shared it on Instagram as a collaborative reel with Villainno (Video 5). This initial experience confirmed to me that the application was indeed easy to use as it helps the user to see previous frames with low opacity, and I decided to use it for creating the final animation project as well.

Since the lighting conditions I used were limited, and I created and produced this animation in an open area of my apartment, some frames differ slightly in color from others. This project was shot over several days and at different times of the day, and naturally, the light coming through the windows affected the overall color. Therefore, after exporting the final output from the Stop Motion application, I transferred it to the InShot application, which I was already quite familiar with, and tried to adjust the

frames with noticeable differences by adjusting their lighting settings, aiming to make the color tones as consistent as possible. Due to my time limitations, after color correction, I hand over the final output to a sound designer to manage this part. In the end, around 270 frames were used to create this animation, and it was shared on my Instagram account as a collaborative reel with Villainno Instagram account (Video 6).

5. ANALYSIS AND DISCUSSION

The data analysis in this study followed a qualitative, intuitive, and theme-oriented process, grounded in the principles of arts-based and autoethnographic research. Since the data was personal, creative, and sensory—including diary entries, sketches, photos, videos, and felt works—I approached the analysis in a reflective and interpretive way rather than using fixed coding frameworks. I engaged in repeated viewing, reading, and writing cycles, allowing themes to gradually emerge from within the material. This process was not only about categorizing information but also about deeply sensing and understanding what the artworks and experiences were trying to communicate. Through this open-ended and iterative engagement, I aimed to uncover the emotional, cultural, and material layers of meaning embedded in the artistic process. For analyzing the data, I first read through all my research diary entries, sketches, and visual materials from the artistic process. I highlighted key ideas, repeated words, emotions, and moments that felt important or meaningful to me. Then I grouped these notes into categories that had something in common. From this process, I started to notice several clear themes (Table 1).

Main theme	Sub-theme	Data Examples	Interpretation
Material connection	Sensory interaction with wool, Physical engagement	Touching raw wool, felting by hand, shaping textures	Shows how direct material interaction creates emotional and embodied knowledge (Ingold, 2013, pp. 6–8).
Tradition and Sustainability	Reviving traditional methods, Ecological awareness	Observations in workshops, diary notes on felting	Indicates how traditional craft can support sustainable design practices and reconnect us to cultural roots.
Self-reflection and Responsibility	Personal artistic growth, Role as an artist-researcher	Diary entries about senses and motivation	Highlights the transformative process of self-understanding through creative research (Adams et al., 2015).
Place-based Practices	Local environment	Sketches and photographs and videos on environment	Reveals how natural settings of Lapland affected creative output and understanding of local materials.
Community and learning	Peer observation, knowledge exchange	Notes from workshops and interaction with others	Demonstrates the social dimension of art-making and how shared learning strengthens practice.

Table 1: Thematic Analysis of research data

By looking at these themes, I could better understand how making art with wool helped me think about sustainability and traditional knowledge in a personal way. The themes also helped me see how artistic practice can become a form of research — not just showing results but helping me discover them. I will discuss the main themes in the following paragraphs.

Revisiting the Connection Between Humans and Nature

This research highlighted the emotional connection developed through hands-on engagement with natural materials, particularly wool. While working with wool in felting and animation, I sensed feelings of calmness and relaxation. Alongside the sense of calm, I first experienced when working with materials, which naturally drew me toward them, another source of joy was getting to know the farmers and individuals from whom we sourced the wool. This connection made me feel like a part of nature's cycle, because when the material comes from a familiar and traceable chain, I felt that I was contributing to a living, organic process. This supports Attenborough's (2020) view that our disconnection from nature is a key cause of current environmental issues. The findings reinforce Attenborough's call for a renewed partnership with nature, showing that working with materials can help restore that connection.

Similarly, Ingold's (2013) concept of "being with" the world, rather than acting upon it, aligns closely with the experiences recorded during the felting process. As Ingold describes, making is not a matter of imposing form onto passive matter but engaging in a mutual dialogue with material forces (2013, pp. 109–124). This study extends Ingold's ideas by demonstrating that even in a contemporary, artistic setting, traditional materials such as wool continue to offer opportunities for relational learning and ecological consciousness.

Reviving Traditional Practices for Contemporary Sustainability

The engagement with traditional felting techniques revealed their relevance not only as cultural heritage but also as practical methods for contemporary sustainable art and design. Härkönen et al (2018) argue that traditional knowledge offers invaluable resources for sustainable innovation. The findings of this study confirm and extend this

view by illustrating how ancestral methods can provide low-tech, locally adapted, and environmentally conscious alternatives to mass production practices.

This claim strongly aligns with my own experiences throughout the project. I had the opportunity to engage with traditional wool felting in two distinct contexts, one related to architecture and the other with media. These two examples—coming from completely different disciplines—demonstrate not only the versatility of the material but also how traditional techniques can inspire innovative uses that go far beyond their original context.

These experiences underline the idea that traditional knowledge is not limited to specific crafts but is inherently dynamic and full of untapped potential. The ability of wool, and felting in particular, to adapt to different conceptual frameworks and interdisciplinary environments suggests that the historical underestimation of such materials and techniques needs to be re-evaluated. In fact, their relevance in contemporary sustainable design practices may be far greater than previously acknowledged.

Expanding the Responsibilities of Artists and Designers

Through the artistic experiments in this research, I came to realize how broad and layered the responsibilities of artists and designers truly are when it comes to sustainability. These responsibilities are not limited to aesthetic or conceptual dimensions—they extend into environmental, social, economic, and cultural realms.

In terms of environmental responsibility, I consciously chose natural wool and reused materials whenever possible. The felting process was conducted using minimal water, and the production of the animation was intentionally kept low-tech, slow, and material-conscious. These choices were not just practical—they were ethical, reflecting a commitment to minimizing harm and honoring ecological cycles.

Social responsibility emerged through the collaborative nature of the work. The bicycle-felting workshop, in particular, became a space for knowledge-sharing and mutual learning. It was also a way to acknowledge and celebrate cultural traditions that have often been marginalized or forgotten. This sense of care and inclusivity, I believe, is essential in any sustainability-oriented creative practice.

Economic responsibility also became part of my reflection. Collaborating with indigenous people and artists can improve their quality of life by offering both financial stability and emotional support (Qureshi et al., 2025, p. 121). By using locally sourced wool in both experiments, I was not only promoting a sustainable material but also highlighting its potential application in various fields. This, in turn, can support rural economies in places like Lapland and contribute to preserving local sheep species (Hernandez Cervantes, 2023). Knowing the fact that using local material can ultimately lead to preserve one species, highlights the importance of our small daily actions and decisions and again puts individuals in the right place of to connect with nature.

Cultural responsibility was perhaps the most emotional aspect for me. Reviving ancestral craft techniques and embedding local stories into my creative work gave a deeper meaning to the process. I felt bridging the past and the future through my hands. As Ceschin and Gaziulusoy (2019, p. 157) and Huhmarniemi & Jokela (2020, p. 3) argue, art and design can act as powerful mediators between tradition and innovation, nature and society, theory and action. My experience confirmed this view on a personal and practical level.

These insights have expanded my understanding of what it means to be a responsible artist or designer today. It's not just about creating meaningful work—it's about doing so with awareness, with care, and with a commitment to the systems, histories, and futures we are all a part of.

Contributions to Sustainable Art and Design

This research makes several significant contributions to the evolving field of sustainable art and design. Through a combination of traditional wool-based techniques, artistic experimentation, and reflexive, autoethnographic engagement, the study offers a situated yet transferable model for how artistic practices can serve as a medium for sustainability-oriented thinking and action.

At its core, the research supports the premise that traditional practices, when creatively revived, reinterpreted, and adapted, can provide meaningful solutions for sustainability. These solutions span not only environmental and material concerns, but also cultural continuity, emotional well-being, and social connection. In this sense,

sustainability is approached not solely as a technical or material challenge, but as a multidimensional and deeply human concern that involves values, memories, emotions, and identity.

The study contributes to the discourse on sustainable art and design in the following key ways:

• Demonstrating that hands-on engagement with traditional materials fosters emotional and embodied connections with nature:

Through hands-on interaction with wool, both participants and the researcher gained a deeper awareness and appreciation for the natural origins of the material. This experience fostered a personal connection to the land, the animals involved, and the production cycles, highlighting how the physical properties of materials can influence our environmental consciousness. By emphasizing the emotional and experiential aspects of sustainability, this type of embodied learning proves to be especially valuable in design education and sustainable practices.

• Affirming the ongoing relevance of traditional knowledge in addressing contemporary environmental challenges:

Rather than seeing tradition as static or outdates, this study introduce it as a living repository of ecological wisdom. Practices such as wool felting and hand-processing reflect centuries of co-adaptation between humans and their environments. These methods are inherently low-impact, often circular, and locally embedded—principles that align closely with modern sustainability goals. The research shows how revisiting these techniques not only preserves intangible cultural heritage, but also enables innovation grounded in place-specific knowledge systems.

• Proposing that creative reinterpretation of traditional methods can revitalize community engagement and ecological awareness:

By engaging in a reflective and artistic process that incorporated traditional techniques into contemporary design practices, the project created new spaces for dialogue, curiosity, and shared learning. This suggests that traditional crafts, when re-contextualized artistically, can serve as platforms for intergenerational exchange, social cohesion, and collective reimagining of more sustainable ways of living. Such

practices have the potential to foster local resilience while cultivating broader ecological sensitivity.

Furthermore, by adopting an arts-based, autoethnographic methodology, the research highlights the importance of personal experience, self-reflection, and narrative as valid sources of research knowledge within sustainability discourses. In contrast to more detached or quantitative forms of inquiry, this approach emphasizes the interior, emotional, and sensory dimensions of engaging with sustainability. It underscores the idea that transformative change often begins from within—through shifts in perception, feeling, and values that later manifest in behavior and practice.

In coclusion, result show how art and design—when informed by tradition, rooted in place, and expressed through personal engagement—can act as powerful tools for fostering sustainability. They also suggest that sustainable transformation is not only a matter of technologies or policies, but of culture, emotion, and relationality. By centering emotional connection, cultural memory, and creative agency, this research affirms that sustainable futures must be created not only with reason, but with heart, hand, and heritage.

Limitations and Future Research Directions

While the research provides meaningful insights into the use of wool as a sustainable material through an artistic and reflexive process, it is important to consider several limitations that shape the scope and interpretation of the findings. These limitations can pave the way for future research directions that can build on its foundation.

First and foremost, this research adopts an autoethnographic approach, which inherently emphasizes the personal, subjective, and experiential dimensions of the researcher’s engagement. While this approach provides depth and authenticity, it also restricts the generalizability of the findings. The insights presented are deeply rooted in my own experiences, interpretations, and reflections as both a researcher and practitioner. Therefore, the conclusions drawn should be understood as situated and particular rather than universal, and it does not lend themselves to statistical representativeness or large-scale extrapolation.

In addition, the scope of collaborative engagement in the project was relatively limited. While the workshops and artistic processes involved participants and moments of interaction, the number of contributors remained small, and the level of involvement varied. As a result, the findings may reflect a narrow range of perspectives and experiences. Future research might benefit from broader community involvement, perhaps through long-term participatory projects that engage diverse stakeholders, including artisans, local community members and educators,

Another important limitation concerns the geographical and cultural specificity of the research. The project was situated in Lapland and closely connected to the cultural, environmental, and social context of northern Finland. Elements such as climate, local traditions, access to materials, and perceptions of sustainability are influenced by this unique setting. While the Lapland context enriches the research and grounds it in place-based knowledge, it may also limit the applicability of the findings to other regions with different socio-cultural dynamics. Comparative studies across different geographical areas and cultural contexts could offer valuable insights into how perceptions and practices around sustainable materials vary.

Moreover, although this research focused on wool as a sustainable material, it did not systematically explore other natural fibers or environmentally responsible practices. The decision to focus exclusively on wool was intentional, given its local relevance and my own interest in traditional techniques. However, this choice also narrows the analytical lens. Future studies could broaden this scope by examining and comparing multiple natural materials and analyzing how their histories, applications, and cultural meanings differ across communities. This comparative approach would contribute to a more holistic understanding of sustainable craft practices and their contribution to contemporary sustainable approaches.

Another promising direction for future research involves a deeper investigation into the emotional, psychological, and sensory impacts of engaging with natural materials. While this study highlighted affective and sensory responses through reflective writing and artistic expression, it did not systematically measure or analyze these responses. Incorporating interdisciplinary methods from psychology or sensory ethnography could help to better understand how tactile experiences with natural

materials influence perceptions of sustainability, and connection to nature, finally result in change behavior.

The potential role of digital technologies in supporting or enhancing such narratives can also be considered. In an increasingly digital world, future research could explore how tools such as digital storytelling, immersive virtual environments (VR), augmented reality (AR), or digital archives might complement traditional methods in communicating sustainability narratives. These technologies may offer innovative ways to document, preserve, and disseminate sustainable knowledge while reaching broader audiences, especially younger generations. For instance, an interactive digital archive of wool-making practices or a VR experience simulating traditional felting could provide powerful tools for education and engagement in the context of sustainability.

In summary, while the present research offers valuable insights into the cultural and material dimensions of wool as a sustainable medium, there remains considerable scope for expanding this work. Future inquiries might deepen our understanding by embracing larger, more diverse populations, exploring additional materials and techniques, integrating interdisciplinary perspectives, and leveraging digital tools. Such directions not only promise to enrich the academic discourse but also have the potential to foster more inclusive, innovative, and impactful approaches to sustainability through art and design.

6. CONCLUSION

This study explored how traditional practices can contribute to sustainable futures through artistic engagement with natural materials, specifically focusing on wool. By combining arts-based action research with an autoethnographic approach, the research aimed to investigate the responsibilities of artists and designers in promoting sustainability, reconnecting with nature, and reviving ancestral knowledge within contemporary art and design practices.

The artistic component of the research consisted of two main experiments: a collaborative bicycle-felting workshop and the creation of a wool-based stop-motion animation. Through direct engagement with traditional felting techniques and the creative process of animation, the study revealed how tactile, hands-on interaction with natural materials fosters emotional connections to the environment. It also demonstrated how traditional craft methods, when creatively reinterpreted, can offer practical and cultural solutions for contemporary sustainability challenges.

The findings showed that traditional practices inherently embody sustainable values through their reliance on local, renewable resources and deep respect for natural cycles. Moreover, personal experience during the research process indicated that emotional engagement through material interaction plays a crucial role in deepening environmental consciousness, suggesting that sustainability must be addressed not only intellectually but also emotionally and bodily.

The research also emphasized the importance of material agency, highlighting that sustainable creation involves listening to and working with the inherent qualities of natural materials, rather than imposing human control over them. Furthermore, the collective aspect of the bicycle-felting project illustrated how communal creative practices can foster a shared sense of responsibility toward nature and cultural heritage.

Despite its contributions, the study has certain limitations. As an autoethnographic inquiry, the findings are rooted in personal experience and therefore may not be universally generalizable. The scope was also limited to the exploration of wool as a

material, without extending to broader comparisons across other traditional materials or techniques. Nevertheless, this limitation allowed for a focused and in-depth exploration of the relationships between material, tradition, and sustainability. Future research could expand upon these findings by exploring other traditional crafts and materials across diverse cultural contexts. Moreover, future research could expand by exploring more collaborative and cross-disciplinary practices that merge traditional craft with emerging technologies such as digital storytelling or interactive installations. Deeper engagement with local communities and artisans could also open new pathways for sustaining traditional knowledge, and long-term projects might better capture the evolving impact of craft-based sustainability practices. Additionally, further investigation could examine how emotional and sensory experiences with natural materials influence sustainable behaviors at a larger, community-wide scale. Exploring the integration of traditional methods with emerging digital tools could also provide interesting avenues for innovation in sustainable art and design.

In conclusion, this study demonstrates that reviving and reimagining traditional practices offers valuable pathways for promoting sustainability in art and design. By reconnecting emotionally and materially with nature, artists and designers can foster deeper ecological consciousness and contribute meaningfully to the creation of more harmonious futures.

Ultimately, this thesis demonstrates that reconnecting with nature through traditional craft practices and creative storytelling holds enormous potential for cultivating sustainable futures. It shows that significant change does not necessarily require grand-scale industrial shifts; rather, it can emerge through small, intentional actions that remind us of our place within, not above, the natural world.

As Rumi's verse reminds us: "Do not say what is the use of me alone being peaceful when everyone is fighting. You are not one, you are a thousand. Just light your Lantern." (Molavi, 1995, p. 472). Each creative action, each hand-felted fiber, each frame of animation — each is a lantern, lighting the way toward a more harmonious relationship between humans and the Earth.

AI Acknowledgement

AI technologies were used to improve the clarity of the language and readability of the thesis

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