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## **The Petticoat Project: Research Through Replica Making in a Museum Environment**

**Anni Shepherd**

### **Abstract**

This article focuses on the creation of a partial replica of a shipwreck textile identified as a quilted women's petticoat from the eighteenth century. The textile is a part of the collection at the Maritime Museum of Finland, it is very fragile and cannot be displayed to the public in its current state. This article argues that creating a partial replica of the object was a useful process which has restored access to the object, aided current research of the object and facilitated new learning opportunities in a museum environment. The replication process of the discussed textile titled *The Petticoat Project* is examined within the current context of replica making in museums and academia and forms part of the author's ongoing PhD research.

## Introduction

This article discusses the partial replication process of the remnants of an eighteenth-century women's quilted silk petticoat (object SMM62001:127, Maritime Museum of Finland). It explores how the process of replicating can be used as a tool for research and learning in a museum environment. The replication project referred to in this article as The Petticoat Project took place between spring 2019 and summer 2021. From January 2019 to June 2020, I worked for the Maritime Museum of Finland as the Curator of Education.

The main goal of The Petticoat Project was to create a partial replica of a shipwreck textile using accurate materials and techniques whilst allowing for budgetary and time constraints. The term "replica" is used loosely because the result of the project was not intended to be a perfect copy of the extant object due to its original appearance being difficult to discern with certainty. The method of creating a replica was chosen to restore public access to the fragile and badly damaged object which can only be accessed under strict conservation limitations. By making a new version of the extant object, the construction process and the potential of its original appearance were understood in more detail. Due to the size of the extant object and the complexity of the quilted pattern adorning it, it was decided that a full-scale replica would be too time-consuming and expensive to attempt. Therefore, a partial replica displaying the construction process was confirmed to be the best option.

Once completed, the finished replica was handled and displayed without causing any damage to the extant object whilst broadening our understanding of its historical narrative. Another focus of this project was the facilitation of a learning experience in a museum environment - participants would be able to both learn and develop their heritage sewing skills as well as contribute to the Maritime Museum of Finland's knowledge about the extant object and how it was made.

The term "shipwreck textile" is used in reference to textile-based objects discovered from a shipwreck.<sup>1</sup> This refers to anything from socks, coats, sailcloth

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<sup>1</sup> Kathryn A. Jakes and John C. Mitchell, "The Recovery and Drying of Textiles from a Deep Ocean Historic Shipwreck," *Journal of the American Institute for Conservation*, Volume 31,

or other items of dress. Shipwreck textiles form a fascinating subcategory of dress history research and offer an opportunity for extensive interdisciplinary research, combining the fields of archaeology, dress history, maritime history, economic history and chemistry. Even in a global context, shipwreck textiles are rare and Finnish shipwreck textiles have not been the focus of any major research projects.

### Contextualization and object biography

Object SMM62001:127 is a part of the collection at the Maritime Museum of Finland, located at the Maritime Centre Vellamo, Kotka. In its current condition, the object is very uninteresting in appearance. It consists of a layer of brown wool, approximately 1m by 3.4m in size and 3mm thick. It has been discoloured by sea water and has small pieces of water-damaged silk sporadically attached to it (Figures 1 and 2). The object bears little resemblance to any item of clothing, apart from remnants of stitches and small holes demonstrating that a substantial quilted pattern would have originally covered the entire surface area of the object. Despite the ravages of time and centuries of exposure to seawater, the aforementioned points suggest that the object was once a (possibly unfinished) quilted women's petticoat. The dimensions indicate that the petticoat would have measured just under a metre in length from waist to hem. The lack of a waistband and no evidence of pleating in the remaining wool batting suggest that the petticoat was unfinished at the time of being transported.

In the eighteenth century, various styles of petticoats were often worn as partially or fully visible garments. This can cause confusion in terminology since the word "petticoat" is more commonly used in reference to a hidden garment worn under one or multiple layers of clothing. However, quilted petticoats were worn in various versatile ways, such as a utilitarian garment under another skirt to provide an unseen extra layer of warmth and volume or as a visible outer skirt exposing the decorative quilting of the garment for admiration. As shown in Figure 3, they were also worn under fashionable open-front garments.

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Issue 3, Taylor and Francis, 1992, pp. 343-353; Krista Vajanto, "Finnish Shipwreck Textiles from the thirteenth-eighteenth centuries AD," in *Monographs of the Archaeological Society of Finland 3: Focus on Archaeological Textiles, Multidisciplinary Approaches*, Sanna Lipkin and Krista Vajanto, Editors, Archaeological Society of Finland, Helsinki, Finland, 2014, pp. 116-131.

Eighteenth-century quilted petticoats were usually made from at least three layers of materials: a lining fabric (usually linen, though other materials could also be used), a wool wadding to provide the warmth, and an outer layer of fabric made from linen, wool or silk depending on the wearer's budget. The wool wadding was secured in place by a stitched geometrical pattern (most commonly, a diamond), a decorative artistic pattern (usually, but not always consisting of floral motifs) or a combination of both.<sup>2</sup>

Many quilted petticoats are preserved in European and North American museums, but like many eighteenth-century women's clothes, they have been altered over time and sometimes transformed into bed covers or re-made into petticoats or skirts of a more fashionable silhouette during the nineteenth century. Examples can be found online in various museum databases, including those of the Victoria & Albert Museum, London, The Metropolitan Museum of Art, New York, and the Rijksmuseum in the Netherlands. In Finland these garments are harder to find online but exist in museum collections at the Turku Museum Centre, Porvoo Museum, National Museum of Finland and the Hämeenlinna City Museum. The survival rate of these garments in various forms is a testament to their popularity across western society in the eighteenth century.

Although quilted petticoats are not uncommon in museum collections, object SMM62001:127 is unique because it is a material culture artefact recovered from a shipwreck, referred to as the largest shipwreck textile in Finnish museum collections.<sup>3</sup> It was recovered from the depths of the Baltic Sea in the 1960s from the shipwreck known as the Borstö 1, one of Finland's most famous shipwrecks. For several years, the wreck was known under the name St. Michel or Sankt Mikael in Finnish. This attribution dates to the 1980s when researcher Christian Ahlström thought he had discovered the identity of the wreck through archival research. By 2019, new research conducted by Maritime archaeologist Riikka Alvik and Emeritus Professor Yrjö Kaukiainen has disproved Ahlström's interpretation, so the wreck has been reverted to an unidentified status and is

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<sup>2</sup> Linda Baumgarten, "The Layered Look: Design in Eighteenth-Century Quilted Petticoats," *Dress: The Journal of the Costume Society of America*, United States, Volume 34, Issue 1, 2007, pp. 7-31; Linda Baumgarten, "The Layered Look: Revisited," *Ibid.*, Volume 47, Issue 2, 2021, pp. 181-198.

<sup>3</sup> Vajanto, *op cit.*, p. 116.

referred to by its location near the island of Borstö in the Finnish archipelago.<sup>4</sup> Research into the ship's identity is ongoing.

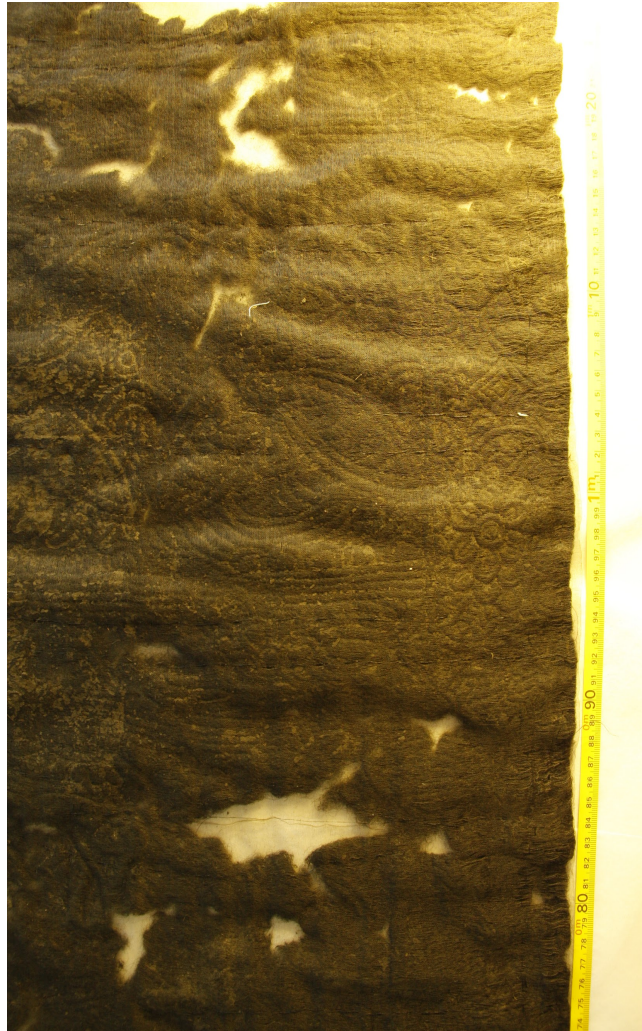


Figure 1:

Women's quilted silk petticoat on which the partial replica was based, the quilted pattern is visible due to strong lighting and patches of silk fabric in a light-brown colour can be seen on the left-hand side of the photograph, © Finnish Heritage Agency, Helsinki, Finland, SMM62001:127.

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<sup>4</sup> All shipwrecks are identified according to their location and are named by the nearest named island to the wreck. They are given a number as there are hundreds of wrecks along the Finnish coastline and many of them are found next to each other in the same location. The numbers are allocated in order of discovery, so Bortstö 1 is the first shipwreck to be discovered near Borstö. The research by Alvik and Kaukiainen is yet to be published but has been discussed by Kaukiainen in media interviews such as the Vox Turku video series on YouTube: <https://www.youtube.com/watch?v=FWzIA97AeZI>.

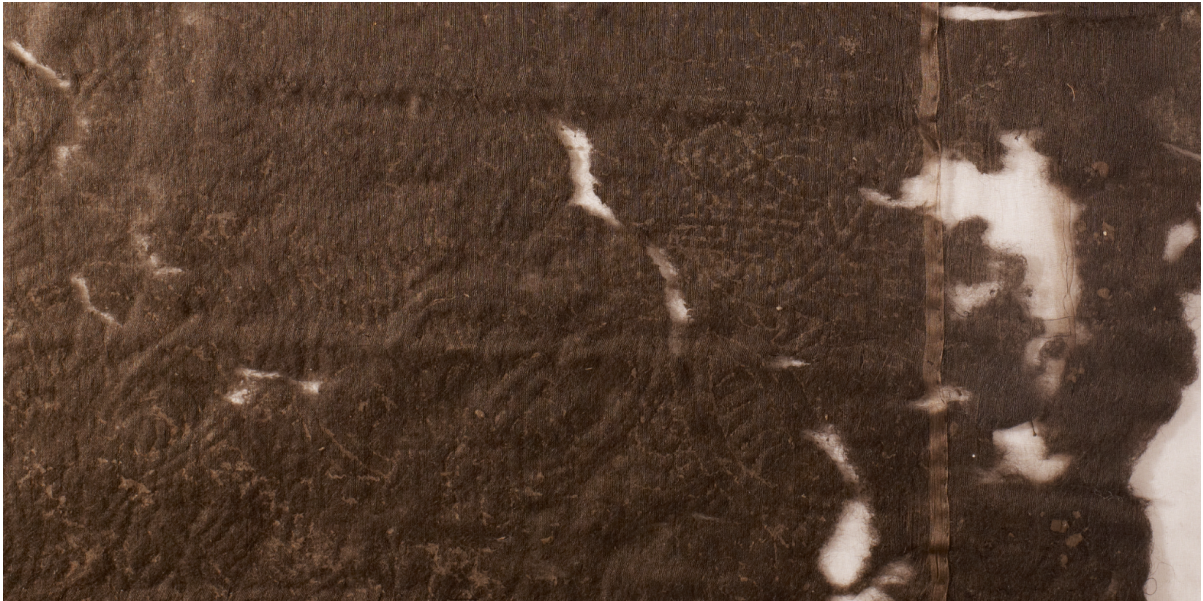


Figure 2:  
A detail of the quilted petticoat remains shown under a neutral light, © Finnish Heritage Agency, Helsinki, Finland.



Figure 3:

A quilted petticoat made from yellow silk, featuring a diamond pattern and an elaborate floral design. It is displayed together with a jacket-like garment, which may have been altered in the late nineteenth century. The ensemble has been dated to circa 1780, but the quilted petticoat may date from earlier in the eighteenth century, © National Museum of Finland, Helsinki, Finland, H28094:38.



Figure 4:

A decorative porcelain statuette of a woman and a lamb recovered from the Borstö 1 wreck. The statuette is in exceptionally good condition and was manufactured by the Meissen porcelain company in Germany in the 1740s. It is 16cm high and forms one part of a pair, © National Museum of Finland, Helsinki, Finland, SMM698:4.

What remains likely is that the ship was en route from central Europe, possibly Germany, to St Petersburg, Russia. Its cargo was a mixture of valuable items such as snuff boxes, watches, an intricately carved cariole carriage and dozens of immaculately preserved examples of Meissen porcelain. The riches of the Borstö 1 are well known and still have pride of place in the permanent exhibition at the Maritime Museum of Finland. The remnants of the quilted petticoat look less inspiring than the glittery golden snuff boxes, porcelain figures (see figure 4) and other marvellous things raised from the wreck in the 1960s and 1980s. It is

perhaps little wonder that it has not been studied in-depth nor is it featured in the large picture-heavy publication of the wreck's treasures.<sup>5</sup>

An artist's interpretation of the quilted pattern (Figure 5) was created for the 2012 exhibition *Lost at Sea, Rediscovered* and brief descriptions of the object feature in the book published alongside the exhibition.<sup>6</sup> Furthermore, the quilted petticoat was mentioned by Riitta Pylkkänen in her seminal work on eighteenth-century Finnish dress, *Säätyläisnaisten pukeutuminen Suomessa 1700-luvulla (Dress of Gentlewomen in Finland in the Eighteenth Century)* in a short paragraph about quilted petticoats in general.<sup>7</sup> A small photograph of the quilted petticoat is featured in Pylkkänen's book, but the physical object has deteriorated considerably in the past forty years and the pattern is no longer as visible as the book's illustration.

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<sup>5</sup> Anna Nurmio Lahdenmäki, *S:t Mikael 1747*, Fingrid Oyj, Jyväskylä, Finland, 2005.

<sup>6</sup> Eero Ehanti, "Lost at Sea," in *Lost at Sea, Rediscovered*, E. Ehanti, J. Aartomaa, I. Lounatvuori and E. Tirkkonen, Editors, Kotka, The Maritime Museum of Finland, Finland, 2012, p. 63.; Krista Vajanto, "Rococo skirt, silk stocking and printed cotton," in *Ibid.*, p. 136.

<sup>7</sup> Riitta Pylkkänen, *Säätyläisnaisten pukeutuminen 1700-luvun Suomessa [Dress of Gentlewomen in Finland in the Eighteenth Century]*, Helsinki, Suomen muinaismuistoyhdistys, 1982, p. 67.

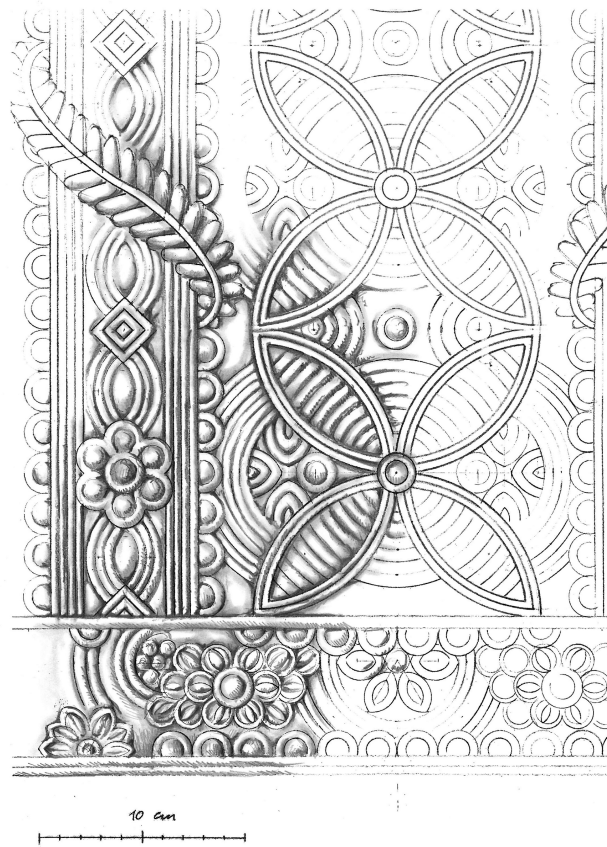


Figure 5:

An artist's interpretation of the quilted pattern on the shipwreck petticoat. The interpretation is based on high-quality images taken of the extant object in preparation for the 2012 exhibition *Lost at Sea* at the Maritime Museum of Finland, Artist Tiina Miettinen, © Finnish Heritage Agency, Helsinki, Finland.

Shipwreck textiles in a Finnish context have been studied by Krista Vajanto and are the subject of her article “Finnish shipwreck textiles from the thirteenth eighteenth centuries AD”. Vajanto also discusses the petticoat from the Borstö 1 wreck. Limited analysis of some of the fibres of the petticoat remnants was performed by Vajanto, and results indicate that the wool wadding is coarse sheep wool with open scales and contained “a bluish hue”.<sup>8</sup> This suggests that the wool may have been dyed with indigo or another alkaline dye.

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<sup>8</sup> Vajanto 2014, op cit., pp. 122, 127-128.

From a dress historian's perspective, it seems unlikely that an expensive dye like indigo would have been wasted on part of the petticoat that would not have affected its appearance. The silk used for quilted petticoats was usually so densely woven that the darker colour of the wool batting would never have been visible through the fabric. A possibility is that the wool used for the petticoat was left over from the manufacture of something else or that the sample studied has been contaminated by its proximity to other dyed objects and the long time the petticoat spent in the Baltic Sea. Analysis of the silk fabric has revealed traces of red and orange dyes, indicating the original garment may have been pink or red.<sup>9</sup> Remnants of the silk fabric are limited and thus far no further analysis of the fibres has been completed. Silk and wool socks have been excavated from the Bortstö 1 wreck and Vajanto has also examined SMM62001:12, one of the wool socks from the wreck. Analysis of the sock showed traces of light pink wool, like the petticoat. There is the possibility that the sock and the petticoat came into contact in the cargo hold of the ship and that some of the dye from the sock leaked into the petticoat. Without further analysis using High-Performance Liquid Chromatography testing, the composition of the dyes cannot be confirmed,<sup>10</sup> enabling various interpretations.

From a maritime archaeological perspective, more research is required to find out how the remnants of the petticoat can help in identifying the Borstö 1 wreck. It is possible to trace the materials or the style of the stitching pattern to a specific country, but it is unlikely that an exact maker of the garment will ever be discovered. Unfortunately, records of Borstö 1 from the excavations performed in the 1960s are very slim and it is not known where in the ship the petticoat was recovered from or how it had been originally transported. It is unclear whether it was lifted from the wreck in one piece or later reconstructed by the archaeologists involved in the salvage operations.

It has been firmly established by multiple costume and economic historians that the materials of a garment were more valuable than the cost of its labour.<sup>11</sup> This petticoat would have been expensive, mostly due to the high cost of the materials

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<sup>9</sup> Ibid., p. 122.

<sup>10</sup> Ibid., p. 127.

<sup>11</sup> Carolyn Dowdell, *The Fruits of Nimble Fingers: Garment Construction and the Working Lives of Eighteenth-Century English Needlewomen*, Master's Degree Thesis (unpublished), University of Alberta, Edmonton, Canada, 2010, pp. 27-30.

involved in making it. Unusually, both sides of this petticoat were made from silk, so even the lining, which no one would have seen, was a luxurious and expensive material. Small pearls seem to have decorated the garment which are now kept in a separate conservation container at the Maritime Museum. The current understanding is that they fell off the object during precious conservation treatments and could have been at the centre of the repeating floral motifs in the quilted pattern.

Object SMM62001:127 has a unique survival narrative because it has not been preserved in the common process of passing from private ownership to a museum and was fated instead to spend most of its existence underwater. As previously discussed, evidence indicates that the garment was probably being transported unfinished and would have been pleated to fit around the waist of its intended wearer had the merchant ship ever reached its destination. This narrative fits with the historical understanding of luxury garment construction in the eighteenth century – a petticoat of this quality and value would not have been purchased ready-made but would have been draped and pleated to fit its wearer by a local tailor or seamstress at its destination.<sup>12</sup> Considering this evidence, it is reasonable to surmise that the unfinished petticoat was intended for a very wealthy owner at the Russian Imperial court or that it belonged to a high-status passenger on the ship. However, no documentation or archaeological research supports this theory.

### **The Petticoat Project: research and re-interpretation through replication**

Object SMM62001:127 is unstable and extremely fragile. Every time it is accessed for research or documentation purposes the petticoat loses fibres despite being stabilised between layers of conservation-grade netting. The quilted petticoat is difficult to study under normal light and requires being placed on a brightly lit surface for the quilted patterns to be visible. It is accessible only to researchers and the consensus is that it will not be displayed to the general public in any future exhibition unlike some of the other objects raised from the same shipwreck. It can only be handled with great care and in its current state, it is hard for a layperson to understand what it is and what its intended use was. Based on

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<sup>12</sup> Baumgarten, op cit., 2021, p.198.

photographic evidence, the object has deteriorated significantly over the past decades, and it will continue to deteriorate further regardless of how carefully it is handled or stored.

Because of the limitations of the extant object, creating a partial replica was an excellent opportunity to restore access to it. Both museum visitors and the specialised research community will now understand what the object once was, what it may have looked like, how it was constructed and how it was intended to be used had it ever reached its intended wearer. Museums are still often seen as places where object-based examples of cultural heritage are preserved, but they can also act as repositories for the skills required to make such objects. The state of the original petticoat presented an opportunity to combine community-based participatory museum learning with research and the re-interpretation of a fascinating object connected to one of the most famous shipwrecks ever discovered in Finnish waters. In September 2019, I presented a paper about this project at the ICOM Kyoto 2019 conference titled “A Treasure from the Deep”, but since then both the physical project and the research associated with it have developed significantly.<sup>13</sup>

The goals of the Petticoat Project were as follows:

1. To create a partial reproduction of the petticoat in order to restore and facilitate further access to the object by using accurate materials and techniques as much as budget and time constraints allowed.
2. To contribute to ongoing research about the Borstö 1 wreck.
3. To offer participants the opportunity of sewing the reproduction using hand-sewing techniques that were part of a wider European cultural heritage context and to facilitate a hands-on learning experience in a

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<sup>13</sup> Anni Shepherd, “A Treasure from the Deep: The Replication and Re-interpretation of a Unique Shipwreck Textile and its Cultural Connections” (conference presentation), *The Museum as a Cultural Hub: The Future of Tradition. Proceedings of the ICOM Costume Committee Annual Meeting, Kyoto, Japan, 1-7 September 2019.*; Anni Shepherd, “A Quilted Mystery: The Contextualisation and Re-interpretation of a 1747 Shipwreck Find” (conference presentation), *The Association of Dress Historians: New Research in Dress History Conference, 7-13 June 2021.*

museum context as a part of the learning & public programmes offered at the Maritime Museum of Finland.

Replica making for research purposes in museums and academia is an increasingly common occurrence and emerging scholarly research on the topic has been plentiful.<sup>14</sup> Replicas are made for a variety of reasons including research purposes, display and costume-mounting purposes, as well as for the use of learning and interpretation teams. Dress historian and curator Hilary Davidson put forward an interesting theory of there being an “embodied turn” in dress history research,<sup>15</sup> which according to Davidson can be defined as:

“...a development that recognizes the processes of doing, making and remaking, and reconstructing as a fruitful methodology with quantifiable, academically valid results. This embodied turn also includes the making of garments and the multi-sensory experiences offered by replication projects.”<sup>16</sup>

This type of experimental process, which Davidson classifies as “experimental history”,<sup>17</sup> was chosen because it would yield the most interesting results from both a learning and research point of view for a project based on the remnants of the petticoat in the Maritime Museum collections.

The article “Reconstructing Textile Heritage puts forward the idea that by preserving historic textiles in 3D form the objects could not only survive but live on to inspire designers of the future.<sup>18</sup> This point of view can also be applied to hands-on replicas – extant garments from past centuries are all deteriorating and often can only be seen and handled by a very limited number of people. By creating replicas of some of them, physical versions of these garments can live on

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<sup>14</sup> For a general overview of methodologies currently used in material culture and textile research see: Serena Dyer, “State of the Field: Material Culture,” *History: The Journal of the Historical Association*, London, Volume 106, Issue 370, 2021, pp. 282–292.

<sup>15</sup> Hilary Davidson, “The Embodied Turn: Making and Remaking Dress as an Academic Practice,” *Fashion Theory*, Volume 23, Issue 3, 2019, pp. 329–362.

<sup>16</sup> *Ibid.*, p. 329.

<sup>17</sup> *Ibid.*, p. 330.

<sup>18</sup> S. Calvert, J. Power, H. Ryall and P. Bills, “Reconstructing textile heritage,” *Journal of Writing in Creative Practice*, Volume 7, Issue 3, 2014, pp. 41–425.

to be appreciated by generations of future scholars and makers – this idea was at the core of the Petticoat Project.

Another goal of the project was to facilitate learning through the experience of doing, often referred to as Experiential Learning (EL). Sewing circles lend themselves extremely well to informal information exchanges and are a very different teaching environment from lecture theatres or museum exhibition spaces. Handling heritage woven fabric gives sewers a new appreciation and deeper knowledge of why certain garments were made from certain materials and how those materials differ from the ones we use today. They can also lead to discussions on broader contexts such as eighteenth-century trade networks, slavery in the context of textile manufacturing, past and present fashion trends, indoor temperatures in past time periods and light levels, to name only a few. These activities are all forms of EL. David A. Kolb's work on EL theory<sup>19</sup> has been particularly influential in the field of experiential learning and has been widely discussed and evaluated over the years.<sup>20</sup> EL and its application in museums have been written about by several scholars,<sup>21</sup> and activities related to it can include, but are not limited to, object handling, interactive workshops and hands-on exhibits and exhibition spaces where visitors are encouraged to perform a physical action such as walking, crawling, and writing.

Through hands-on projects of creating replicas based on an existing object, museums can offer a new kind of experiential learning experience for adults. Replicating and re-interpreting historical textiles can also be experiential from the point of view of modern makers from various backgrounds. Direct involvement in the process can inspire people to make their own garments or other items

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<sup>19</sup> David A. Kolb, *Experiential Learning: Experience as the Source of Learning and Development*, Pearson, Indianapolis, Indiana, United States, 2014.

<sup>20</sup> See for example: Thomas Howard Morris, "Experiential Learning – a Systematic Review and Revision of Kolb's Model," *Interactive learning environments*, Volume 28, Issue 8, 2020, pp. 1064-1077.

<sup>21</sup> See for example: Satarupa Das, "Using Museum Exhibits: An Innovation in Experiential Learning," *College Teaching*, Volume 63, Issue 2, 2015, pp. 72-82; Karen Lovett, *Diverse Pedagogical Approaches to Experiential Learning: Multidisciplinary Case Studies, Reflections, and Strategies*, Springer International Publishing AG, Cham, Switzerland, 2020(2013), pp. 63-71; Barbara Piscitelli, and Louisa Penfold, "Child-Centered Practice in Museums: Experiential Learning through Creative Play at the Ipswich Art Gallery," *Curator: The Museum Journal*, New York, New York, Volume 58, Issue 3, 2015, 263-280.

based on the object being replicated. In the case of The Petticoat Project, both sewing volunteers and members of the public who have seen the decorative pattern of the original object commented on how it could be used as inspiration for interior design objects such as wallpaper, sofa cushions, curtains or dishware and were keen to obtain copies of its decorative quilted pattern for their own personal use.

Volunteers involved with sewing projects can learn and develop heritage sewing techniques, work with materials previously unfamiliar to them and discuss what it was like in prior time periods for seamstresses, tailors, quilters and mantua makers to make garments. These types of sensory experiences in a facilitated museum environment can help adult learners expand their knowledge and offer them new ways of understanding and interpreting the past. Analysing the learning outcomes of The Petticoat Project are beyond the scope of this paper, but form part of my PhD research and will be included in my future work.

Many replica sewing projects utilise the skills of professional or highly experienced garment makers. Examples of such projects include the Wedding Gown in a Weekend project in 2019, which was organised by Rebecca Olds and featured an international community of historical sewing experts coming together to recreate the eighteenth-century tartan wedding gown of Isabella MacTavish Fraser. The event was extensively blogged about by the participating seamstresses<sup>22</sup> and was part of an ongoing study by Olds, who has spent years researching the Isabella MacTavish Fraser dress as it is known.<sup>23</sup> In 2018, a team from Colonial Williamsburg made a quilted petticoat based on a traced or picked pattern from an extant garment, which had been destroyed by fire in 1906. The pattern was traced by a private individual and had been given to the Massachusetts Historical Society in the 1950s. The finished petticoat took two years from planning stages to completion and was displayed in the exhibition *Fashioning the New England Family*.<sup>24</sup>

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<sup>22</sup> See: *Atelier Nostalgia*: <https://ateliernostalgia.wordpress.com/2019/07/10/the-isabella-dress/>; *Black Tulip Sewing*: <https://blacktulipsewing.blogspot.com/2019/07/wedding-gown-in-weekend.html>; *American Duchess*: <http://blog.americanduchess.com/2019/09/the-isabella-mactavish-fraser-project.html>

<sup>23</sup> *Timesmith Dressmaker*: <https://www.timesmith-dressmaker.co.uk/isabella-mactavish-fraser-tartan-wedding-gown>

<sup>24</sup> *Silk Damask*: <http://www.silkdamask.org/2018/10/a-quilted-silk-petticoat-bridges-past.html>

The possibilities of reconstruction and replication have also been demonstrated by the multidisciplinary project *Refashioning the Renaissance: Popular Groups and the Material and Cultural Significance of Clothing* at Aalto University, Finland. The team led by Dr Paula Hohti have combined various techniques from textile analysis to the recreation of Renaissance-era materials in order to further the academic understanding of early modern clothing and accessories in Renaissance Italy. The project included co-operating with professional dressmakers at the School of Historical Dress to recreate a sixteenth-century men's doublet, as well as working with volunteer sewers in a citizen science project on knitted silk stockings.<sup>25</sup> However, for the *Petticoat Project* using professional sewers was never considered since one of the goals of the project was to facilitate a community learning opportunity as a part of the learning and public programmes offered at the Maritime Museum of Finland.

Community sewing projects have sprung up in various locations making it clear that hands-on experiential learning in museums can and should reach age groups above and beyond school curriculums and formal educational institutions. Examples of sewing projects utilising the skills and dedication of volunteer teams include the creation of a seventeenth-century crewel work jacket for the National Trust of Scotland<sup>26</sup> and the multiple projects undertaken by the Historic Needlework Group at Birmingham Museums.<sup>27</sup> In Finland a team of volunteers re-created a mediaeval altar cloth for the National Museum of Finland. According to blog posts written by participants, they were thrilled with both participating in the project and with the result.<sup>28</sup>

Volunteers for the *Petticoat Project* were recruited through social media from a sewing group page specialising in eighteenth and nineteenth-century historical sewing. It was important that potential volunteers had at least some sewing experience, as well as a basic understanding of historical dress. It was beneficial for the project to recruit volunteers from a group of people who were enthusiastic

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<sup>25</sup> The findings and results of the *Refashioning the Renaissance* project are currently scheduled for publication in 2023. More information about the project can be found at <https://refashioningrenaissance.eu/>

<sup>26</sup> The National Trust of Scotland Stories blog: <https://www.nts.org.uk/stories/stitching-the-past>

<sup>27</sup> The Birmingham Museums blog:

<https://www.birminghammuseums.org.uk/blog/posts/volunteers-create-new-unicorn-trail>.

<sup>28</sup> *Hibernaatiopesäke* blog: <https://hibernaatio.blogspot.com/2017/01/maskun-intarsia-olimuutakin-kuin.html>.

about history and who would be keen to work on a project for a museum. The response was positive and several members from the group signed up to help with the project. Most volunteers involved with the project had little experience with quilting and though some were familiar with quilted petticoats as objects, none of them had ever made one. Equally unfamiliar with the process, I was happy to learn from those more experienced in hand sewing than myself and many of the decisions relating to the progress of the project were made communally.

Establishing a sewing group requires someone who can facilitate the process and possesses the basic sewing skills necessary for the project but does not necessitate someone being a professional seamstress. Alternatively, an outside professional can be brought in if the institution can afford it and the museum representative involved with the group can be more of an intermediary and facilitator. Sewing groups can be set up on a limited budget and in the case of The Petticoat Project, the cost of the materials (including necessary items such as pins, needles, thumb tacks and strips of canvas and postage and packaging) came to just under 400€.

The silk fabric for the Petticoat Project was sourced from the Whitchurch Silk Mill in the United Kingdom, which specialises in weaving heritage fabrics for the use of museums as well as film and television productions. The mill uses machinery dating back to the early nineteenth century and produces high-quality historically appropriate fabrics. These fabrics are much more suitable in colour, weave and width for historical projects than their modern-day equivalents available for purchase in ordinary high street fabric stores in Finland. Due to time and budget constraints, a ready-made roll of wool wadding intended for quilt-making and several spools of silk thread were purchased from commercial retailers. The project was completed using materials that were historically appropriate in fibre composition, but still reasonable in price.

A basic quilting frame was made for the project in-house at the Maritime Museum. This frame was not a replica of a nineteenth-century frame, since the demands of the project necessitated a lighter frame version, which could be easily taken apart, transported by public transport and re-assembled wherever necessary. As the primary carer of the quilting project, it was essential that the author could carry all the necessary supplies for it unaided whenever required.

To transfer the pattern onto the silk fabric a variety of techniques were tested including the extant technique of pouncing, but they proved unfit for the purpose of the project. In order to create a pattern that would stay on the fabric regardless of how many times it would be rolled up for storage or transportation, a modern alternative was used whereby the pattern was first printed out in real size on regular printer paper. Afterwards, holes were poked through the paper at short intervals, through which dots were drawn on the fabric using pencils. The dots were then connected to form the pattern. This process alone took multiple volunteers a total of twelve hours to complete, exemplifying the time-consuming nature of the project. After researching surviving examples of quilted petticoats online the decision was made to use a simple straight stitch for creating the entirety of the quilted pattern, as shown in Figure 5. All volunteers were requested to use stitches of 1 or 2mm in length and to keep them tidy and even to the best of their ability.

Multiple sewing events took place in both Kotka and Helsinki, but initial progress soon stalled as difficulties arose with scheduling suitable days for the sewing group to meet. Most volunteers had to fit participating in the sewing project with busy work schedules and the demands of everyday life. Travel was also an issue since participants lived in different cities. More often it was useful to meet at the National Museum in Helsinki since it could be easily reached by both private and public transportation from most parts of the country. As the National Museum and the Maritime Museum are a part of the same museum group, this was easily arranged, and a work room was provided for most of the sewing group meetings.

A fundamental part of the sewing project was telling participants about the background and context of the object we were replicating. Newcomers were always enthusiastic to enquire about where the petticoat was found, and they were often interested in the history of shipping and shipwrecks in Finnish waters. All volunteers were given the opportunity to look at high-definition photographs of the original petticoat but could not be granted access to the original object due to conservation restrictions. Volunteers were also offered the opportunity to attend a guided tour at either the Maritime Museum or the National Museum of Finland.

In February 2020, a special event was arranged where the volunteers showed up in eighteenth-century dresses and museum visitors were able to watch them sew and ask questions about the project. Visitors were taken on a shipwreck-themed tour of the Maritime Museum and learned about how the sewing project tied in

with the institution's collections. During this event, volunteers were provided access to small remnants of the silk fabric of the petticoat as well as some of the small pearls related to it, so they could see at least some pieces of the extant object. The Petticoat Project was also featured on national television in Finland on the YLE1 morning broadcast, which was seen by thousands of viewers.

As with most recent museum and community projects, the global COVID-19 pandemic significantly delayed the completion of The Petticoat Project. My post as the Curator of Education at the Maritime Museum of Finland ended in June 2020, but the project was left in my care until completion. The partial replica was finally completed in late spring, 2021. It has been left unfinished on purpose (Figure 6) so that museum visitors can gain a better understanding of the construction process and the different layers of the original petticoat.

The partial replica was put on display in the permanent exhibition at the Maritime Museum of Finland in June 2021 in a section focusing on shipwreck discoveries from Finnish waters. Objects from the *Borstö 1* have been on display at the museum for years and the partial replica of the quilted petticoat contributes further context and knowledge about the objects on board the ship, placing textiles back in their rightful place as important and valuable cargo in the eighteenth-century merchant ships. The replica is displayed together with a textual interpretation of the extant object explaining the background of the replication project alongside the names of the volunteers who worked on it.



Figure 6:  
A close-up of the replica showing stitches measuring approximately 2mm or slightly less in length, Photographed by Anni Shepherd, 2021.



Figure 7:  
The finished partial replica prior to display at the Maritime Museum of Finland displaying the stages of construction, from the drawn-on pattern to the finished quilting, as well as the shine and quality of the heritage-woven silk fabric, Photographed Anni Shepherd, 2021.

## Conclusion

The Petticoat Project has provided a new understanding of how a fragile shipwreck textile may have originally appeared. The project brought together volunteers from different parts of Finland who contributed a great deal of time, effort and skill to assist in creating a partial replica of a badly damaged extant object, which could not be displayed alongside other objects from the Borstö 1 shipwreck. By displaying the replica object, the narrative of the shipwreck is broadened, and museum visitors have the opportunity to gain a wider insight into the cargo carried by the Borstö 1.

The re-interpretation and replication of a unique museum object and important shipwreck textile have opened the door for similar projects and for further collaboration between the Maritime Museum of Finland and various groups of volunteers and researchers. By focusing on an under-researched object in the museum's collection further attention has been drawn to the study of shipwreck textiles in Finland and to the interdisciplinary ways in which they can be interpreted and researched as discussed in this article.

**Keywords:** shipwreck textiles, replica making, quilted petticoat, museum learning, eighteenth century

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