

Replicating the Lydia Lawrence bonnet: an ‘experimental conservation’ approach to collections care and public engagement for the D.H. Lawrence Birthplace Museum.

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Heritage conservation frequently faces challenges of protecting the material stability of objects in poor conservation condition, particularly in an historic house setting. Often the best way to protect objects is to keep them in specific conditions in storage, but this inhibits the storytelling potential of a museum or historic house. This is true for the D.H Lawrence Birthplace Museum, where a key piece in the house museum’s collection cannot be displayed due to poor conservation condition. The object in question being a sun bonnet made by Lydia Lawrence, D.H. Lawrence’s mother. After seeking out conservation treatment and potential for replication at the University of Lincoln’s Conservation department, Lincoln Conservation took on the project. The University of Lincoln Undergraduate Opportunities Scheme (UROS) provided funding for the author to produce a replica of the bonnet, which allowed for exploration of the role of craft skills and replica making in conservation practise.

Keywords: Experimental Conservation, Textiles Conservation, D.H Lawrence, Textiles replication, Lydia Lawrence, 1800s sun bonnet

Introduction

The project was carried out with the support of the Undergraduate Research Opportunities Scheme (UROS), an application-based bursary giving students in their early careers the opportunity to undertake research alongside academics and peers.

The project entailed replicating an 1890s sun bonnet, made by Lydia Lawrence: the mother of author D.H. Lawrence and part of the D.H Lawrence Birthplace Museum. The original bonnet (see Fig. 1) is in poor conservation condition which prevents it being displayed by the museum.

Utilising a practice-based research methodology akin to ‘experimental archaeology’, this project sought to explore how replication craft can help conservators understand an object in a more intimate way. A prominent aim of the project was for the author to explore traditional craft methods as a technique of holistic investigation into an historic object, via the method of practical replication of an historic textile in poor conservation condition.



Figure 1 Lydia Lawrence Bonnet (Credit: Carolyn Melbourne, via: The Earth Museum) (Melbourne, 2020)

This was achieved by crafting two authentic replica bonnets, using predominantly period appropriate techniques, including the use of a hand-crank Singer sewing machine. This was blended with modern digital technologies, which included use of a reactive dye printing method, making the closest design match possible for the fabric, increasing visual authenticity alongside the authenticity of craft.

Reflective practice was carried out alongside the making processes. This was drawn on in producing blogs and social media posts to disseminate the research in progress, and in producing this paper.

Another goal of the project was through this process was to provide resources for the museum to better understand and highlight the lived experience of the mother of D.H Lawrence, through investigation and observation of her bonnet.

Project Background

The notable author, D.H. Lawrence, hailed from a modest terraced house on the outskirts of Nottingham. He was born around 1885, to coal miner father and skilled seamstress and forward-thinking Mother, Lydia.

To help support her family in this relatively deprived area of Nottingham, Mrs Lawrence sewed clothing which she reportedly displayed for sale in the parlor window facing onto the street at the family's home. (Melbourne, 2020)



Figure 2 The D.H Lawrence Museum parlor window, with replica bonnet digitally placed to show impact. (Credit: Laurie Rees)

The terrace where the family lived has, since 1976, been home to the D.H. Lawrence Birthplace Museum.

The house museum seeks to evoke a sense of the author's life and times through its direct and personal connection to the family.

The 'Lydia Lawrence bonnet' – a sun bonnet made of printed cotton in a "plain style" popular in the East Midlands throughout the 19th century, is believed to have been sold to a local woman by Lydia (Melbourne, 2020) and may have been one of the

textiles displayed in the parlor window, as shown in Figure 2, a digital recreation of the window display made in Procreate by the author.

Unfortunately, the bonnet is in a very poor condition and is far too fragile to be handled or form part of permanent display in the front sale parlor window. Consequently, the ability of the museum to tell Lydia's story is restricted, as the bonnet is an integral element in this storytelling. The museum sought replication to have a physical bonnet for handling and display purposes, (see 'Discussion').

Literature Review

The use of replicas as a tool to meet conservation requirements is a common scenario in the heritage field. Whether that involves making a physical replica, such as Iona's 'St Johns Cross.' (Foster and Jones, 2019) or a digital reconstruction.

Literature surrounding heritage replicas discusses the ethics and authenticity of replication and the potential analogue (as opposed to digital) reproduction holds for engagement and discussion surrounding objects, communities, and the heritage sector.

In the guidance leaflet 'New Futures for Replicas: Principles and Guidance for Museums and Heritage' (Foster, 2020) the authors discuss that "The production of replicas, including the practitioners involved and the technical and craft practices deployed, is important and often under-researched" in the heritage field, and how analogue replicas are often underappreciated as objects of significance in heritage spaces. These analogue replicas have potential to foster understanding of the original historic objects, to tell stories which stimulate interest in the history of place and be re-crafted "without the slightest damage to the originals." (Anon, 1867)

The act of reproduction often "involves 'direct' contact in some way with the original." (Foster, 2020) which allows for a "felt relationship" between people, place, and objects. For those involved in the production of replicas, creativity, and experimentation utilising evidence (direct observation or documentation) from the original historic object generates "authenticity and significance." (Foster, 2020)

The opportunity to provide a tactile, material curatorial experience for public engagement allows for tangible, felt linkage between the past and present which a digital replica cannot emulate.

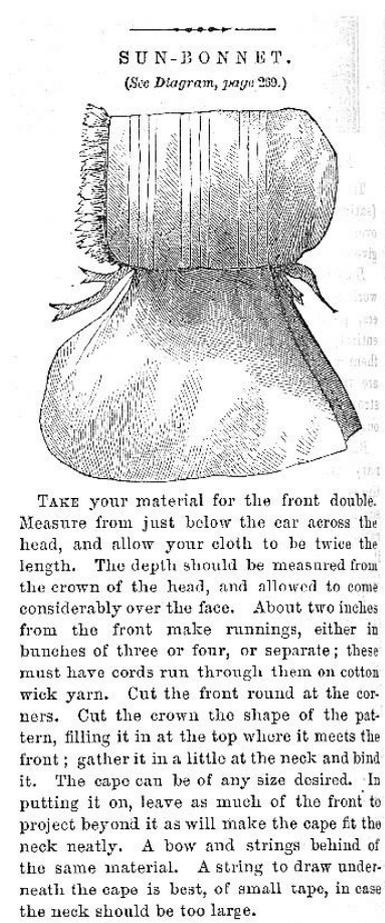
The guidance leaflet also discusses how “The story of the creation of replicas can be captured and shared for the benefit of present and future generations,” outlining how the ‘re-crafting’ process can foster future understanding of an object which may have otherwise degraded beyond comprehension. The leaflet encourages museum professionals to ask questions such as: Is the replication repeatable? Why is it being made? How accurate is the replica? Is its materiality comparable to the original? Etc. (Foster, 2020)

Another example of a conservator undertaking replication of a degraded textile is that of Kathryn (Kate) Gill, FIIC ACR, FHEA who replicated a 17th Century wool felted coat. Gill utilised traditional methods of felting wool yet used a modern machine to produce a replica made to resemble the jacket at a specific point in its history, fit for display and handling. (Gill, 2012)

In this study’s example of replication, the Lydia Lawrence bonnet aimed to raise the sense of authenticity in the D.H Lawrence Birthplace Museum by allowing them to display an integral part of the Lawrence family history in the very window it would have been displayed in the 1890s. Providing a “usable equivalent of an unusable object” and hopefully serving “the needs that an original in good condition would normally serve” (Barassi, 2007) Evoking sense of place in-situ at the historic site, while preserving the original safely behind closed doors.

From past literature, historic sewing methods were often passed from matriarchal figures to their daughters early in life, so ‘patterns’ of the time were often comprised of an etched drawing and brief paragraph describing the techniques, as seen in Figure 3, an example from Godey’s Ladys book, a keystone manual of the time for domestic living – including, sewing. The knowledge of the time was tacit and often not expressly explained via the modern means of a sewing pattern and direct instructions. It was expected that the reader already had the skills required.

Figure 3 Godeys Ladys book, e.g of bonnet guide of the period. (Godey's Lady's Book, 1830-1898) Sourced via: Celeste Sturgeon.



Methodology

The main methodology for the research was the making process itself. The decision was made to replicate the historic bonnet as part of the research project to enable the exploration of the original bonnet's construction without the need for physical intervention, risking damage. To achieve this, traditional craft skills were melded with modern digital techniques such as digital reactive ink printing and digital illustration software, Adobe Suite and Procreate.

The project began with identification of Lydia's sewing and construction methods through visual observation of the original bonnet, creating diagrams, and detailed measurements. This increased the technical understanding of the historic bonnet, to ensure authentic replication.

The fabric was also closely examined and suspected to have originally been roller printed. This was reproduced using a digital reactive printing technique available at the

University of Lincoln, using a Mimaki Textile Jet TX2-1600 digital reactive dye textile printer with support from specialist technicians. (Mimaki, 2017) Trials of the pattern, as close in colour and style to the original, were made using Adobe Suite. The pattern was then printed onto a lightweight cotton calico fabric, matching as closely as possible the original used by Lawrence.

Trials of the bonnet were then made, using a hand-crank 1930s Singer sewing machine, to increase authenticity by using methods closer to the historic techniques. The methods were highly experimental in nature due to lack of useable historic instructions and the time constraints for in depth research required to find period appropriate, *useable* resources. An inherent requirement for the project was detailed observation of the original textile. for recreation of Lydia's sewing experience through replication of her *specific* bonnet, not others of the period

Results

The end goals and outputs of this research were predominantly physical in nature, i.e., the textile replica, and the creation of a usable 'How-to sewing guide' for use by

a layperson to create their own version of the bonnet. These were intended to aid in visitor engagement and effective museum storytelling while preserving the original, fragile object, and to foster public engagement in heritage conservation, the D.H Lawrence Birthplace Museum, and traditional craft practises.

Fabric printing and use of reactive printing

The fabric printing required a number of trials to perfect undertaken by the author, University of Lincoln (UoL) graduate of BA(Hons) Conservation of Cultural Heritage Pei Pei Lee and Lincoln Conservation's Senior Technician Celeste Sturgeon with the guidance of Polly Lancaster, a College of Arts Technician at UoL. Ultimately however, the use of digital reactive ink printing was successful, after multiple pattern size and colour trials were conducted.

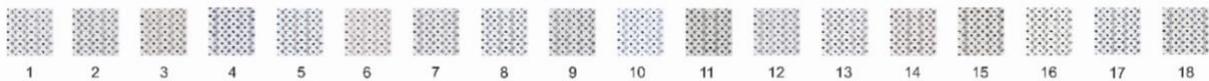


Figure 4 Trials for colour matching fabric (Credit: Pei Pei Lee)



Figure 4 Original degraded fabric comparison to replicated reactive dye printed fabric.

The colour matching in particular proved challenging, as the final printed colour on the textile was different to the colour appearing on the digital tablet when made on Procreate. To remedy this, multiple colour palettes were tested, as outlined in Fig. 3. The colour of the design was deemed most successful in Test 10 and the background colour most successful in Test 2 – therefore, these were combined to make the final fabric. Washing the fabric also proved difficult, though was successful when machine washed at 30°C with a conservation-grade detergent. At any temperature higher than 30°C and/or with a harsher detergent the ink ran.

Replication

In replicating the bonnet, a toile was first produced using plain fabric. This enabled sewing techniques to be practised, and the pattern to be perfected before using the printed replica fabric.

The trials were successful yet unrefined, as the author had to experiment using only observation of the degraded historic bonnet, as deconstruction or more thorough handling was not ethically viable due to its condition. Historic patterns for this style of bonnet are not as accessible as modern patterns, as knowledge of sewing was often assumed, so therefore the instructions were limited, and visual aids did not describe every step as modern patterns tend to. Craft knowledge was passed down from maternal figure to daughter, so therefore a base level sewing expertise was expected.

The process of making was complex, requiring intense focus throughout as well as detailed notes. The complexity was increased by the lack of patterns for this kind of plain style workwear of the time. The pattern required creation from scratch, only from visual observation of the original textile, which required gentle handling and could not be manipulated easily to view stitching methods. The techniques often needed to be inferred from the authors previous sewing knowledge.

After the sewing trial runs were successful and the making techniques were practised satisfactorily, as well as creating consistent notes to foster creation of the pattern guide, the making of the final replica was embarked upon, as shown in Figure 6, using the digitally reproduced fabric.

The resulting bonnet successfully replicated the original due to the two toile trials, the technical sewing skill of the author, as well as thorough observation of the original replica and measurements undertaken by the author and supervisor Celeste Sturgeon.

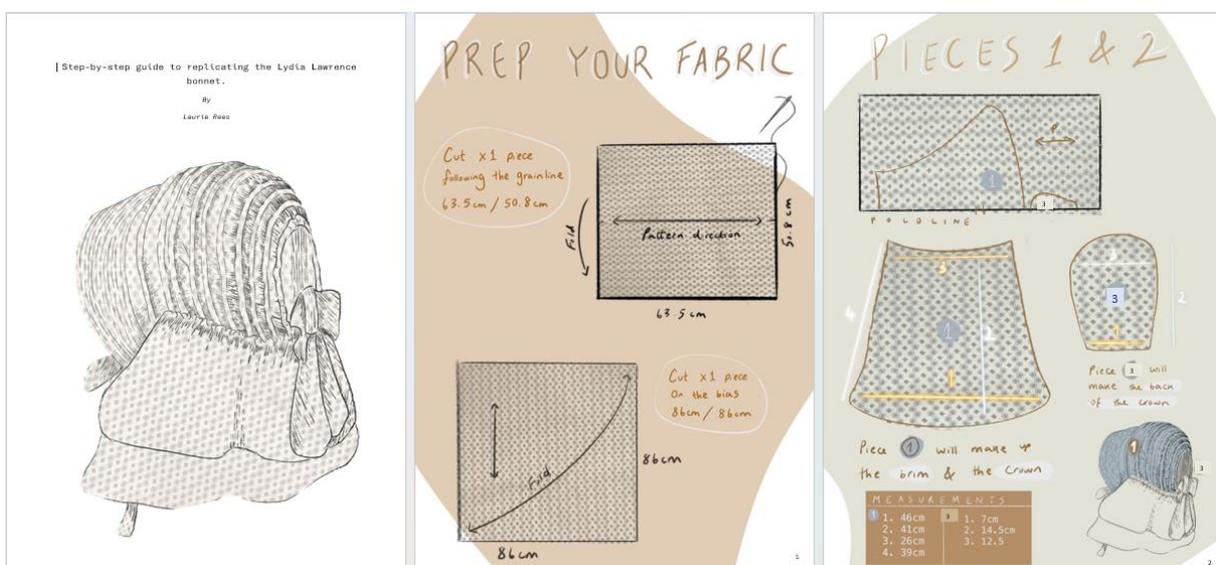


Figure 5 Example pages from author's 'How-to-sew' guide, made using digital software Procreate.



Figure 6 Finished replica, produced and photographed by author.



Figure 6 Original bonnet next to author's replica



Figure 6a Comparison from a side angle.

Discussion

Carrying out this UROS project has given me the opportunity to explore a side of conservation, craft, and heritage that I may not have been able to delve into during my BA(Hons) Conservation of Cultural Heritage degree at the University of Lincoln. I would recommend to any student to undertake research outside of their studies, to develop skills for both academic and professional development.

Working with two museum professionals undergoing further education and in senior conservation roles has aided in my confidence in the field. As a BA(Hons) student entering my third year, this project has helped inform my dissertation topic, providing a direct link to my undergraduate degree.

Furthermore, it has aided me in further developing my interest in textile conservation, as well as in craft as a tool to heighten our understanding of historic objects and object replication.

The project has opened opportunities for networking within the heritage sector by providing material for me to present at a specialist Textile Conservation Symposium in May 2024, as well as at the De Montford University (DMU) Making Historical Dress, “Learning from Making” workshop in March of the same year. This may aid in my future employment opportunities post-education and increase my confidence in presenting my work in a conference and panel setting.

Since completing the project, I have received overwhelmingly positive feedback from Carolyn Melbourne, the curator at the D.H Lawrence birthplace museum. She has stated that she is “Excited to incorporate them (the resources) and the replicas into the museums offering”. (Melbourne, 2024)

She stated that she feels that the replica bonnets will support the story of the museum, that having a bonnet in the museum’s parlor window will “tie directly into the narrative of Lawrence’s early home life.” She feels that the replicas will help with engagement in the museum for anyone “interested in textiles and heritage crafts”. (Melbourne, 2024)

She hopes to sell the How-To-Guide in the museum shop, so that visitors have a direct link to the museum and something to take away with them. She also hopes to run workshops using the paper resources so that visitors can make their own bonnet, strengthening the outreach of the museum’s storytelling.

Conclusion

Ultimately, the replica bonnets will be successful in allowing the D.H Lawrence Birthplace Museum to tell the story of Lydia Lawrence and her family more effectively via the ability to safely display and handle the replicated bonnet.

Based on previous literature discussed, replicas provide a tactile, intimate way of connecting to the past, by providing an opportunity to safely handle, observe and interact with the replica.

The results of the replicated bonnet show that through thorough observation of the original object and investigation of maker’s craft methods, that a successful and effective replica can be made even by someone who has limited experience in traditional crafting methods. However, it was also found that previous sewing skill is essential for a successful and authentic historic textile replica.

Overall, the practical, experimental nature of the research allowed for a successful heritage craft replica to be made to protect an object where interventive conservation was no longer an option but display and handling is desired.

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