

COMPARATIVE APPROACHES IN TEXTILE CONSERVATION: THE WHALLEY ABBEY VESTMENTS & ALTAR FRONTAL

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ABSTRACT – The Whalley Abbey vestments are known to be one of only two surviving sets of pre-Reformation High Mass vestments which were conserved in the UK in the 1980s and early 1990s. The Whalley Abbey altar frontal is associated with the vestments but was not considered for treatment until 2009 following its re-discovery during a collections survey. The author explains how and why there were differences in the conservation treatment of the textiles within the group. Analyzing the treatment of the Whalley Abbey vestments and comparing these approaches to the conservation of the Whalley Abbey altar frontal, some twenty years later, raised an important awareness of the developing demands of the viewer and the developing ethics of the textile conservator. The final treatment of the altar frontal sought to value all elements as significant parts of the altar frontal, thus preserving the evidence of its previous use as well as its future role as a displayed textile. At the same time the treatment also took into account the previous conservation work that was completed on the other vestments to maintain aesthetic continuity within the display.

ENFOQUES COMPARATIVOS EN LA CONSERVACIÓN DE TEJIDOS: LAS VESTIDURAS DE WHALLEY ABBEY Y EL ALTAR FRONTAL DE WHALLEY ABBEY: RESUMEN – Las vestiduras de Whalley Abbey son conocidas como algunos de los dos únicos juegos sobrevivientes de vestiduras de Misa Mayor de la pre-Reforma que se conservaron en el Reino Unido durante los años 1980 y comienzos de 1990. El altar frontal de Whalley Abbey está relacionado con las vestiduras pero su tratamiento recién fue considerado en 2009 luego de su redescubrimiento durante una inspección de las colecciones. El autor explica cómo y por qué había diferencias en el tratamiento de conservación de los tejidos dentro del grupo. Analizar el tratamiento de las vestiduras de Whalley Abbey y comparar estos enfoques con la conservación del altar frontal de Whalley Abbey, unos veinte años más tarde, creó conciencia de las demandas progresivas del espectador y la ética del conservador de tejidos. El tratamiento final del altar frontal procuró evaluar todos los elementos como partes significantes del altar frontal, y preservar así la evidencia de su uso anterior como también su futura función como tejido en exhibición. Al mismo tiempo, el tratamiento también consideró el trabajo de conservación previo que se realizó en otras vestiduras para mantener la continuidad estética en la exhibición.

1. INTRODUCTION

The Whalley Abbey altar frontal was conserved at the Textile Conservation Centre (TCC), formerly of the University of Southampton, UK as partial fulfillment of the author's MA studies. During the decision-making process of conserving the altar frontal, the dilemma of examining the past and envisioning the future, the theme of the 38th annual meeting of the American Institute for Conservation in Milwaukee, became an important platform for discussion. This paper will discuss the comparative conservation treatments of the Whalley Abbey vestments conserved between 1987 and 1992 and the Whalley Abbey altar frontal treated in 2009, concentrating on how and why there were differences in conservation treatments and the impact this had when the altar frontal was finally placed back on display.

2. WHALLEY ABBEY, THE VESTMENTS AND THE ALTAR FRONTAL

Whalley Abbey was a Cistercian monastery situated in Lancashire, England from 1296. Following the dissolution of this monastery (1537), a set of vestments dating from the first half of the 15th century was taken by Sir John Towneley (1473-1541) (Monnas 1994), a member of a Catholic recusant family, and brought to nearby Towneley Hall, Burnley, Lancashire. In 1903 Towneley Hall became a museum and art gallery and is presently owned by Burnley Borough Council.

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The vestments consist of two dalmatics, one chasuble, and one maniple and remained in the Towneley family until 1922, when they were sold at auction. One of the dalmatics, the chasuble, and the maniple were bought by Burnley Borough Council so they could remain at Towneley Hall. The other dalmatic was purchased by the Burrell Collection in Glasgow, UK. Embroidered panels known as orphreys and referred to as *Opus Anglicanum*¹ adorn the fronts and backs of the chasuble and dalmatics, depicting chronological scenes from the Life of the Virgin and the Infancy of Christ (Monnas 1994). These four pieces are referred to as the Whalley Abbey Vestments and are thought to be one of only two complete sets of Pre-Reformation English High Mass² vestments in existence (Monnas 1994). The Whalley Abbey altar frontal was also sold at the same auction and it too remained at Towneley Hall.

The Whalley Abbey altar frontal (also referred to as the Whalley Abbey Orphreys) was potentially used to cover the front of an altar during mass (fig. 1). The point of assemblage of the altar frontal is unclear, but it may have been put together during the 19th century due to the reassertion of Catholicism. The altar frontal consists of two side pillar orphreys of similar style depicting pairs of saints which could date from the late 14th to the early 15th century (Dean 1958; King 1963; King and Levey 1993; Monnas 1994). In the center of the altar frontal is an early Tudor cross orphrey showing the crucifixion, c. 1500 (King 1963; Johnstone 2002). The three orphreys have been mounted onto a late 18th to early 19th century crimson silk (Rothstein 1990) and have been edged with silver bobbin lace typical of the early 17th century (Earnshaw 1985; Dillmont n.d.). The orphreys are lined with blue linen which is very typical of *Opus Anglicanum*, suggesting their original use to decorate liturgical vestments. The textile was backed with a coarse, undyed linen fabric and tacked to a wooden board and placed in a glass frame.



Figure 1. The Whalley Abbey altar frontal before treatment. 2009.
Courtesy of the Textile Conservation Centre (TCC), UK.

Subsequent comparison of the Whalley Abbey textiles confirms there is no direct relationship between the vestments and the altar frontal. The orphreys on the vestments and the altar frontal are very different in style and quality. Despite these differences in style, the orphreys on the altar frontal still belong to the period before the dissolution of Whalley Abbey. The material evidence of the blue linen lining suggests the orphreys on the altar frontal could have belonged to the vestment collection at the Abbey or, perhaps, other neighboring Catholic dioceses being cleansed at the time of the Reformation.

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The Whalley Abbey vestments at Towneley Hall are currently on long-term display (figs. 2, 3) and were conserved by Jean Glover MBE and Eleanor Palmer at the North West Museums Service Conservation Department (NWMS) between 1987 and 1992. The NWMS was previously based at Griffin Lodge in Blackburn, Lancashire and provided conservation services to museums and art galleries throughout the North West of England. The second dalmatic in the Burrell Collection was last treated to go on long-term display in 1983 by Shelia Phipps, who worked in the conservation studios at the Burrell Collection. The altar frontal was not conserved with the rest of the vestments at Towneley Hall because it was considered less important. Advancements in digital photography allowed closer access to the embroideries on the altar frontal which revealed their detail and rarity, hence the significance of the altar frontal increased. The curator acknowledged the altar frontal was not stable enough to go back on display and was in need of conservation work. The Whalley Abbey altar frontal was conserved at the Textile Conservation Centre, University of Southampton, in 2009 by the author.



Figure 2 (left). The Whalley Abbey chasuble and maniple on long-term display, Towneley Hall. 2009. Figure 3 (right). The Whalley Abbey dalmatic on long-term display at Towneley Hall. 2009. Courtesy of the Towneley Hall Art Gallery and Museum, Burnley Borough Council, UK.

3. COMPARATIVE APPROACHES: THE CONSERVATION OF THE WHALLEY ABBEY VESTMENTS AND THE WHALLEY ABBEY ALTAR FRONTAL

Around twenty years had elapsed since the Whalley Abbey vestments were conserved and much has been learned in those years. Preserving textiles in the UK in the 1980s seemed to involve an aim for beauty and originality. For instance, cleaning textile objects helped to restore their original appearance and aesthetic appeal. Textiles requiring further stabilization such as the Whalley Abbey vestments were routinely subject to cleaning in order to achieve this aim. The vestments were separated into their component parts to allow cleaning and support. Comprehensive documentation and photography were used during the dismantling process to help with later reassembly (Glover 1992a; Glover 1992b). In the period of conserving the vestments the profession of

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textile conservation was still establishing itself and the growing profession was still reliant on the experience of pioneers, including Jean Glover. Glover established the Textile Conservation Department at the NWMS in 1968 after leaving her previous profession as a home economics teacher (Lochhead and Eastop 1993). During her professional life, Glover acknowledged the value that stains may have for historians, however, “in general it is preferable that textiles should be cleaned” (Glover 1986, 49). Perhaps it was Glover’s previous domestic science background that provided the platform for her contribution to establishing textile conservation as a profession in its own right.

In contrast to the vestments, all the components were regarded as a single entity when considering the treatment of the altar frontal. It was accepted that the point of historical significance was when the altar frontal was put together. The wooden board was removed because of the potential by-products being produced by the wood which, if left in-situ, would encourage future deterioration of the textile fibers. This procedure allowed more information to be released about the altar frontal by revealing extended lengths of the orphreys and exposing the blue linen lining beneath them. The undyed linen backing attached to the reverse side of the altar frontal showed signs of previous use that was not reminiscent of an object on static display. Examining the photograph taken of the altar frontal in 1922 when it was sold at auction revealed the linen backing was not attached to the object, hence, it was only used to facilitate the framing process during the object’s transition into a museum piece. Therefore, the backing was removed as it was a relatively recent addition. Full documentation took place when the wooden board and linen backing were removed to help preserve this aspect of the object’s working life.

3.1 CLEANING

The altar frontal was not immersed for wet-cleaning or solvent cleaning in any way due to a greater understanding of the effects of the differential swelling and shrinkage rates of the various fibers, the brittle condition of the floss silks on the orphreys, and minimal staining which did not warrant such treatment. Surface cleaning and spot cleaning on a customized suction table, in small areas of the crimson silk using only de-ionized water, were the only procedures used to clean the altar frontal (Tonkin 2009) (fig. 4).



Figure 4. Spot cleaning the Whalley Abbey altar frontal on a customized suction table using only de-ionized water. 2009. Courtesy of the TCC, UK.

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On the other hand, cleaning was a major part of the treatment procedure of the vestments, apart from the dalmatic in the Burrell Collection which received very little treatment due perhaps to its better condition. With reference to the vestments at Towneley Hall, Glover and Palmer solved the problem of differential reactions to treatments by dismantling and thinking about each element separately (fig. 5).



Figure 5. The dismantling of the Whalley Abbey dalmatic during treatment at the North West Museums Service, Blackburn, Lancashire. 1987-1992. Courtesy of Lancashire Conservation Studios, Lancashire County Council, UK.

The various textile components that made up the vestments were separated according to their fiber type and type of staining, and they were cleaned and supported accordingly, before being reassembled. Developments in ethical considerations, such as the varying context and future role of the object, and more advanced techniques for supporting textiles and expanding interpretation have encouraged a more hands-off approach so the object retains much of its physical integrity (Clavir 1998). The emphasis on cleaning the textile to look newer or fresher has become less important, although this remains an added bonus if achieved after treatment. Eleanor Palmer reflected on what she would do differently if she were to treat the dalmatic at Towneley Hall again.

...I think, possibly, I would, really, just do more surface cleaning and vacuuming...The washing I'm not sure about; solvent-dry cleaning I'm not sure about now. I'm tending towards the hands off....that's my personal view. That's the way I would be going...such a lot of information can be gleaned from the original that...once you take away the dirt, then...you're taking away evidence, really... (Palmer 2008).

Apart from the ethical considerations, much more is known about the physical effects of cleaning textiles with metal threads. The inherent fragility of their manufacture, combined with the presence of the organic core and surrounding fabric make wet-cleaning a difficult process if not impossible (Garside 2002; Berkouwer 2002). Removing corrosion from the metal threads is rarely undertaken due to the risks of damaging the metal layer (Rogerson and Garside 2006) and the reoccurrence of corrosion causing further loss of metal. Ecclesiastical textiles are rarely wet-cleaned, although there are case studies which have overcome this dilemma (Matteini *et al* 1999).

3.2 DECISIONS TO CLEAN AND NOT TO CLEAN: ANALYSING THE METAL THREADS

No fiber analysis was completed on the vestments. However, analytical testing using scanning electron microscopy (SEM) and energy dispersive X-ray spectroscopy (EDS) was conducted on several samples from the altar frontal to make further observations that were not achievable using light microscopy techniques. SEM allowed a more detailed examination of regions of interest, including areas of corrosion, and EDS provided information on the composition of the metal components and corrosion products. The combined analytical techniques allowed the threads to be further characterized while reinforcing the reasons why wet-cleaning and solvent cleaning were not carried out.

The SEM-EDS analysis revealed that there was silver, gold, and copper content in the make-up of the metal filaments. The analysis also highlighted the unusual triple wound joins which occur along the length of the metal threads used to embroider the cross orphrey (fig. 6). Significant tarnishing is noticeable in these areas, which suggests the construction of the triple wound join is causing increased oxidization of the alloy composition of the metal filaments, creating a layer of corrosion of similar thickness to the metal filament. The triple wound joins seem to be trapping extra moisture from the atmosphere between each layer of the filaments and when combined with oxygen is significantly increasing corrosion in these areas (Garside 2002) (fig. 7).

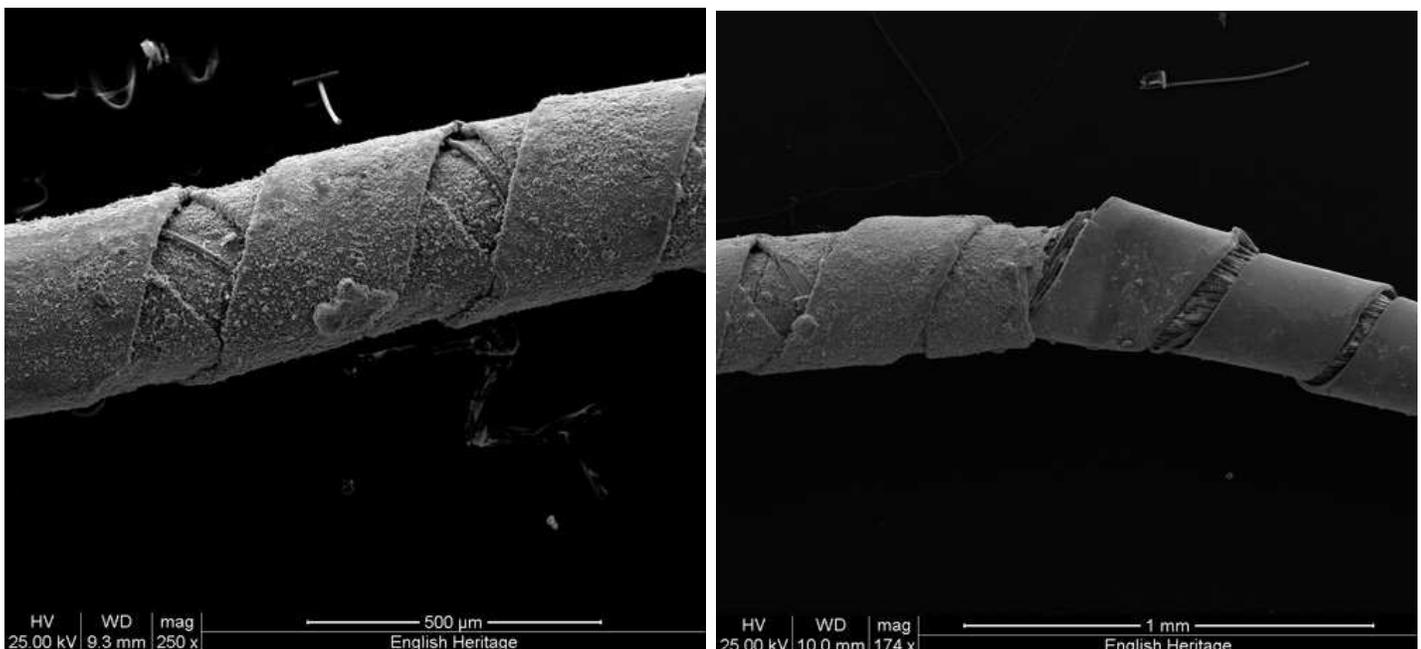


Figure 6 (left). Sample of the triple wound metal thread and enhanced corrosion taken from the background of the center cross orphrey on the altar frontal. Figure 7 (right). Sample of the triple wound metal thread where it joins the rest of the thread. The enhanced corrosion can be seen where the metal filament is triple wound in comparison to the better condition of the rest of the thread. The samples were examined on a scanning electron microscope, model: *FEI INSPECT F*. 2009.

An exposed area of the metal filament appeared to be in reasonable condition, implying that the corrosion layer was protecting the original metal filament to a certain extent (fig. 8). The analysis of the triple wound joins on the metal threads revealed an unusual ‘Z’ spun characteristic of the central metal filament when usually metal threads are ‘S’ spun. These areas showed a much lower content of gold and silver and high contents of corrosion products, for instance, silver sulfide. The less corroded areas showed an increased presence of gold and silver and a much lower presence of corrosion products. Hence, even if cleaning was possible, it is the inherent

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manufacture of the threads that have caused this severe corrosion, thus, there are no guarantees that the corrosion will not reoccur in the future. The analysis also revealed the vulnerability of the surface of the metal threads (fig. 9).

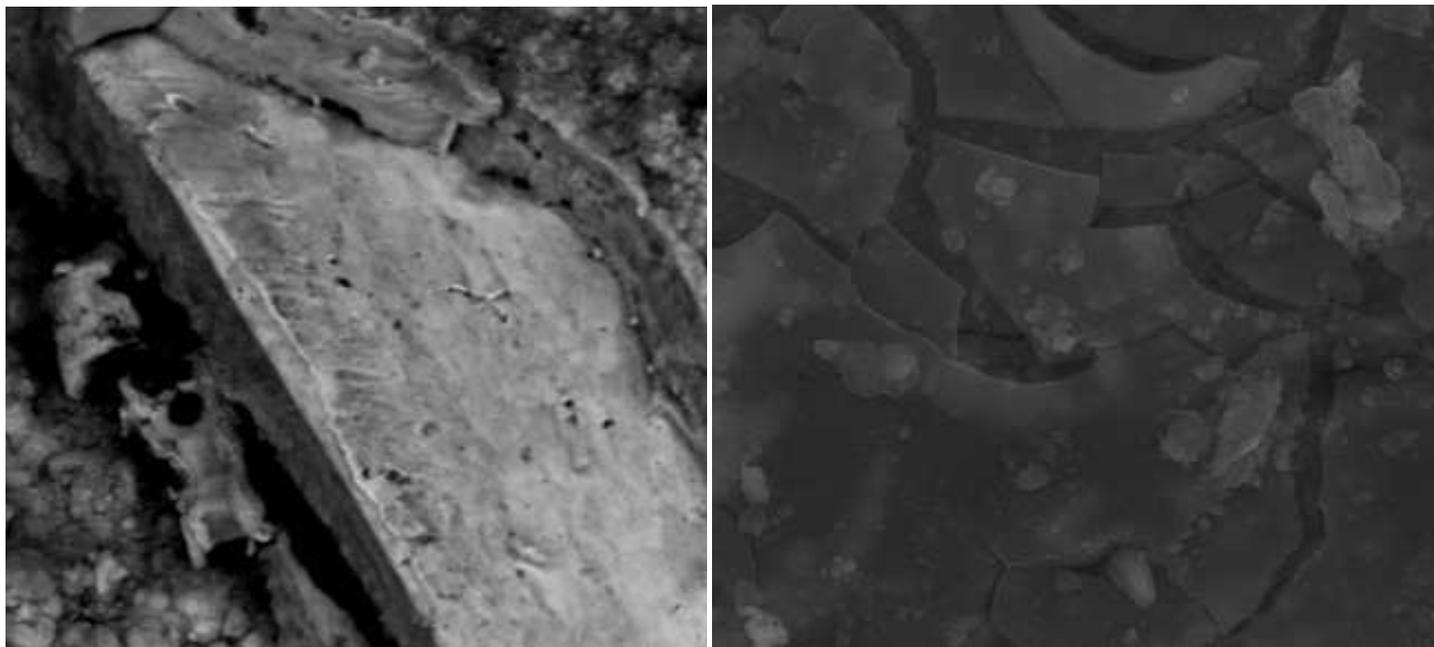


Figure 8 (left). Detail of triple wound metal thread in figures 5 and 6, showing an exposed area of the metal thread and the thickness of the corrosion layer. Figure 9 (right). Detail of the surface of the metal thread taken from the center cross orphrey from the Whalley Abbey altar frontal. The samples were examined on a scanning electron microscope, model: *FEI INSPECT F*. 2009.

Wet-cleaning or solvent cleaning would have, potentially, removed some of the surface of the metal filament which would have resulted in losing evidence and encouraged further corrosion to the exposed areas, hence hindering the long-term preservation of the orphreys. The images produced from the SEM-EDS analysis, when compared with each other, explain how the metal threads may deteriorate at different rates despite belonging to the same object and so the level of deterioration cannot be characterized at any one time.

In contrast to the decisions for not cleaning the altar frontal, many of the separate components of the vestments, including the cloth of gold, were wet-cleaned by immersion. The silver braids from the chasuble and maniple were further cleaned by using a non-aqueous organic solvent. “Silver Dip”, a tarnish remover, was used on some braiding which had been removed from the chasuble to help reduce the corrosion which had formed on the surface of the silver metal thread. According to the maniple report, silver braids were later painted with an acrylic lacquer to prevent further tarnishing. From a visitor’s perspective this procedure seems to have been successful as there is no visual evidence that the corrosion has re-occurred. The wet-cleaning and solvent cleaning stages of treatment and de-tarnishing of the metal threads and braids on the vestments at Towneley Hall were considered a revelation. Their improved appearance confirmed they were made from a more precious metal than previously anticipated, increasing their interpretation. This improvement in appearance was considered important and successful at the time of treatment. The development and more accessible use of analytical research in both practice and publications since the treatment of the vestments has allowed the textile conservator to become more informed concerning the short and long-term effects of treating textiles with metal threads.

3.3 LOCALIZED CONTACT HUMIDIFICATION

Localized contact humidification using blotting paper dampened with de-ionized water and “Sympatex”, a breathable membrane, as the barrier was conducted on the altar frontal to help reduce the bulk and tension caused by the crumpled blue linen lining beneath the orphreys. A polyethylene sheet and glass weights were used to help raise humidity levels to the areas being treated. The period of humidification was restricted to no longer than one hour to prevent water marks occurring on the crimson silk. Custom-made “Melinex” barriers were used to help protect the embroidered orphreys from moisture uptake when humidifying the blue linen lining as moisture absorption can adversely affect the flossy silks and metal threads (fig. 10). Most of the sharp creases were relaxed in the crimson silk, and the edges of the blue linen lining became less crumpled which enabled good support stitching. The humidification process was an intricate operation as a result of treating the altar frontal as a single entity.



Figure 10. Localized contact humidification of the blue linen lining behind the orphreys. 2009. Courtesy of the TCC, UK.

3.4 TO KEEP AND NOT TO KEEP: ORIGINAL STITCHING AND OLD REPAIRS

The original stitching and old repairs on the altar frontal were left in-situ and were not disturbed to facilitate treatment as they were not harming or causing unnecessary tension to the surrounding textile (fig. 11). The old repairs were also considered to be an integral part of the object’s history. On the other hand, repair threads were removed from the vestments, including the dalmatic in the Burrell Collection, and original stitching cut to help treat the vestments at Towneley Hall. The most obvious treatment on the dalmatic in the Burrell Collection are the cuts in the blue linen lining at the underarm and lower back hem areas where the lining was tight and causing distortion to the cloth of gold. Unpicking original threads from a textile to facilitate treatment may still be necessary under today’s ethics. For instance, the dalmatic in the Burrell Collection, if conserved today, may

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warrant some of the original stitching being released to reduce the tightness of the lining which caused the dalmatic to be distorted. Slashing the blue linen lining has permanently damaged the textile artifact and has left the underside of the cloth of gold unprotected in these areas. However, it was interesting to note when examining the dalmatic that more historical evidence has been preserved because of the limited treatment it received. The stitching and physical elements of the cloth of gold and other composite trims have been untouched allowing a more complete view of the construction of the dalmatic when it was last used.



Figure 11. Old repairs on the embroidered orphreys from the altar frontal. 2009. Courtesy of the TCC, UK.

3.5 SUPPORT

The Towneley Hall vestments were supported using similar stitching techniques to those used to support the altar frontal. The only differences were the types of threads and support fabrics used and these can change with technological development, different suppliers, and differences in preference. Hence, there were some common practices in treatments between the vestments and the altar frontal.

A thermoplastic adhesive was used to treat many elements on the vestments. Adhesive support was not a consideration within the decision-making process of treating the altar frontal, perhaps due to its better condition. Adhesive support seemed to be a common formula in treating many textiles in the 1980s and the choice of adhesive was very limited. Extensive testing would be encouraged nowadays using various types of adhesives that are currently available. The final selection of an adhesive would bear in mind the effects of the adhesion, drape, texture, and appearance. More choice in conservation materials and, again, more published articles relating to the treatment of case studies have widened the possibilities and knowledge of the conservator, making the decision to use adhesives a less formulaic one. Perhaps other ways may have been sought to support the weak areas on the vestments if they were conserved today.

3.6 MOUNTING

The altar frontal was mounted on 8mm thick “Cellite” fiber panel, a composite rigid aluminum honeycomb board; this was similar to the board used to mount the vestments (fig. 12). The color of the fabric used to cover the mount board reflected the cream colored fabric used on the mounts for the other vestments at Towneley Hall to maintain their association with one another and to provide aesthetic continuity.



Figure 12. The Whalley Abbey Altar Frontal after treatment. 2009. Courtesy of the TCC, UK.

4. THE EFFECTS OF THE DIFFERENT TREATMENTS ON THE VIEWING EXPERIENCE OF THE WHALLEY ABBEY TEXTILES AT TOWNELEY HALL

The areas of loss and weakness are more obvious on the altar frontal than they are on the vestments (fig. 13). The blue linen lining beneath the orphreys on the altar frontal is noticeable and no attempt has been made to neaten them or conceal them as this represents the original manufacture of the orphreys and provides signs of their previous history and use (fig. 14). These areas are perhaps the most striking difference when viewing the vestments and the altar frontal as final display objects. Areas of deterioration are less obvious on the vestments



Figure 13 (left). Detail showing areas of loss and weakness on the embroidered orphreys on the Whalley Abbey altar frontal after treatment. Figure 14 (right). Detail showing the blue linen lining beneath the embroidered orphreys on the Whalley Abbey altar frontal after treatment. 2009. Courtesy of the TCC, UK.

due to the conservation they have undergone, whereas the conservation on the altar frontal reveals previously hidden elements such as the extensions of the orphreys once the altar frontal was released from the wooden board. The effect of exposing these elements means that more stories are revealed about the object. For instance, the areas of loss in the orphreys and crimson silk illustrate the period when the altar frontal first became

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an exhibition piece and the crudeness with which textile artifacts were treated to accommodate these needs in the early 20th century. The blue linen lining explains to the viewer how these orphreys were constructed and the irregular seams and patterns of deterioration on the crimson silk provide an insight into the re-usable nature of ecclesiastical textiles. The acceptance of old repairs helps document the value of ecclesiastical textiles as they have been handed down over the centuries. The repairs also reiterate initial preservation techniques to recapture the essence of the biblical scenes. These multiple histories can be deciphered and submerged into the viewing experience when looking at the altar frontal, opening up interpretation, today and for the future, whereas these elements are somewhat concealed in the vestments.

5. CONCLUSIONS

The aims of improving the appearance and stabilizing the object were shared when thinking about the altar frontal and the treatment of the vestments, however the objectives were different. Aesthetic considerations were far more important for the vestments at Towneley Hall than they were for the altar frontal, illustrating previous conservation requirements which aimed to make a textile as attractive as possible while on display (Finch 1985).

Despite the understandable differences in the conservation approaches of the Whalley Abbey textiles, all the stages of conservation work were and are considered successful. However, the outcomes from the treatment on the altar frontal when compared to the vestments at Towneley Hall clearly indicate developments which have occurred within the ethics of textile conservation. The conservation of the vestments seemed to follow a more formulaic methodology which was consistent in treating many textiles at that time, whereas the conservation of the altar frontal addressed the present and future context of the textile artifact as well as the object itself. The considerations surrounding the conservation of the altar frontal revealed more information about the textile, including its ecclesiastical importance as an altar frontal, which was most likely used in the chapel at Towneley Hall. The varying levels of interventionary treatment carried out on the Whalley Abbey vestments and Whalley Abbey altar frontal indicate that priorities have changed in the way textile artifacts are viewed and appreciated by both the textile conservator and the viewer.

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END NOTES

¹ 'English work', embroidery typical of the late medieval period which was almost always professional work. The height of manufacture in England was 1250-1350.

² The term *High Mass vestments* are referred to within the framework of the Roman Catholic Church in Western Europe where matching vestments are worn by the priest and deacons to celebrate High Mass.

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