

In the years leading up to the turn of the twentieth century, as in other fields of the applied arts, wide-ranging changes took effect in the European art of lace making. These changes were twofold. On the one hand, there was a drive to reinvest the technique with artistic values of a more expensive, but also personal approach that posed handcrafted sewn lace and bobbin-lace as an alternative to the onslaught of industrial manufacture. On the other hand, the line of change took inspiration from naturalistically or geometrically portrayed motifs of flora and fauna, often invested with symbolic meanings, which bred a new form of art to replace the variety of the baroque and rococo motifs. The style of women's clothes at the turn of the century paved the way for the flourishing of lace-work. Fans, frills, collars, cuffs, decorative kerchiefs and parasols embellished costumes for all occasions as accessories, to which we can add two elements of Hungarian gala dress, the woman's apron and tie-frills for men.

EMŐKE LÁSZLÓ

## Lace from the Secession (Hungarian Art Nouveau):

SEWN, COLOURED LACE ARTICLES

The design and preparation of lace was taught in all the schools of applied arts in the UK, France, Belgium and Austria. The designs relied on various early techniques (e.g. Alençon, Brussels, etc.), but their motifs called to life the stylized bird figures and flora of the Secession. A few examples picked from European art of lace-making illustrate the transformation described above, and the completely new perception. A design for a fan by Annie Stook (Taunton, Great Britain) won a silver medal at the English National Competition of 1898 and can now be found in the collection of the Museum of Applied Arts in Budapest.<sup>1</sup> Exploiting the possibilities of the alençon for minutiae and

detail in rendering, the designer depicts a dreamlike garden. She combined the fantastic floral patterns, bird figures and willowy style of the line-drawing characteristic of the Secession with an ornamental surface presentation. The decorative motifs of the fan rise out of the fine, hexagonal base net, and combine with other lace stitches only between blooms and above ground level, enriching the wings of the butterflies and the leaf veins with a complex web of geometrical forms.

In the years following the turn of the century, similar compositional devices are found in lace fans, especially those of French and Austrian design. A much simpler, more stylized version of lace-work in

fans can be observed in lace of the Austrian Hoffmanner's design (Gossengrün School).<sup>2</sup> The border is of wild roses whose stems descend down the radials, or weave around it and branch out. It is sewn lace once again, connecting the patterns at the base of the radials with an airy, light web. Professor Unger designed a sewn lace collar<sup>3</sup> for the students of the School for Lace-work in Graslitz. This is similar to the phlox, with the stems of many little blooms dextrously bending and connecting across the lace.

The great personality of Austrian lace design was Lady Hrdlicka, with work for both the Galician and Gossengrün Schools of Lace. Among her collars, fans and handkerchief trimmings of lace, the seam lace merits special attention for the similarity of its composition to Hungarian lace of the time. The upper edges of these compositions have either a wavy line of flower stems, or a straight line from which the stems curl out. Her lace depicting a row of pineapples is a good example of the first, and a seam lace with a bevy of little flowers (phlox), a row of their blooms, is of the second composition.<sup>4</sup> The fact that most lace of the new style, the Secession, is sewn lace is interesting, but also probably not a coincidence. For this technique is much less restrictive, giving free rein to the often luxuriant depiction of flora and fauna, leaping arches and tendrils.

The years preceding the turn of the century also saw the Hungarian publication of the journal *Művészi Ipar* [Artistic Trades], and later *Magyar Iparművészet* [Hungarian Applied Arts] (1897 onwards) reporting on current events in the applied arts both at home and abroad, international and global exhibitions, Christmas exhibitions and spring shows, with profuse illustration to complement the written accounts. The pattern papers (such as the pattern-papers of the weaving and spinning crafts) were soon to follow with a wealth of published patterns drawn by European and Hungarian designers for damasks, embroideries and lace in the main. In this way Hungarian designers could follow designs not only by their European colleagues, but also by their fellow contemporary Hungarian artists. Classes for the cottage industry were formed at the Women's School of Applied Arts and the School of Applied Design, Budapest, where various techniques of embroidery and lace-work were taught in addition to weaving. As in many parts of Europe, the sewing of lace and making of bobbin-lace was a part of the cottage industry in Hungary; it not only provided work opportunities for girls and women in villages, but also had the goal of keeping folk-art alive and in the public eye.

Béla Angyal (1847-1928) established the National Bobbin-lace Making School of Körmöcbánya in

1882, with the same aim. However the revival of the heritage of flax, or more rarely metal-threaded bobbin-lace making in the highlands, had already begun a decade earlier. He first had seam-lace of extremely simple design made in the villages of the regions under the supervision of his sister, and then revived the motif treasures of the 'floral renaissance' in his own designs. These lace articles won him a prize at the Paris World Exhibition of 1900<sup>5</sup>, and later in Turin, Milan, and Brussels. Though exceptional pieces of Hungarian lace, in terms of both technical and artistic merit, can be found among the historicizing lace works, the new style of the Secession did not register in his work.

Later, others also came to prepare designs for the lace workshop, including István Gróh (1867-1936), a teacher at the School of Applied Arts. He considered decorative Hungarian folk art and the possibilities for its use in the applied arts on a theoretical basis in a number of his books. One of his lace works, designed for the 1906 international exhibition of Milan, was a collar<sup>6</sup> that employs a 'sleeved' motif of the old bobbin-lace from Gömörmegeye and Csallóköz creating a surface of charged lines and a symmetrical composition while encircling the motif in foliage. The piece of bobbin lace bearing the stylistic marks of the Secession was in all probability a one-off initiative among the works of bobbin-lace to be made at Körmöcbánya, with no known work similar to it among the products of the workshop that closed during the First World War.

The creation of the type of lace particular to the Hungarian Secession, the lace of Halas, is attributed to the designer Árpád Dékányi (1861-1931) and the lace maker Mária Markovits (1875-1954). The first pieces of lace made in this style made a debut at the Christmas exhibition of the Hungarian Society for the Applied Arts in 1902. The designer of the lace was an arts teacher of Kiskunhalas, an originator of the Hungarian cottage-industry movement.<sup>7</sup> To complement his teaching he joined with great enthusiasm the movement, which had as its goal the widening of knowledge about folk art and the collection of its remnants and motifs. Besides adding a style to the applied arts in Hungary with the creation of the lace prepared with 'authentic Hungarian patterns and an original new technique', as a member of the movement he wanted to provide work opportunities for the girls and women of the region.

The production technology of the sewn lace of Halas differs from European types of sewn lace. Its peculiarity is enhanced by the fact that, especially in the first decade of the workshop's operation, it

was very often made with coloured silk thread. The motifs of the lace from Halas are encircled by a rather pronounced outline. This outline thread was at first made from the same yarn as the base lace, but later a ready-made outlining thread was procured. In contrast to the classical net stitches for the filling of motifs, sewing stitches are used here. The filling was perfected to such a degree that it could be compared with the finest cambric. At first rough, but later a diaphanous, un-whitened flax yarn is used for the lace. Unlike a variety of other lace, the designs of Dékány are carried out in coloured thread; in rare cases metallic thread is also used for ornamentation. The use of silk thread was rather rare in the European tradition of lace-making; among the most famous of this type is possibly the Spanish Chantilly lace of the nineteenth century.

A particular curiosity of the silk lace from Halas is that in producing a field of colour, two threads might well be combined. Grey and red threads are

combined in this manner for the lace trimming with paprikas depicted whole,<sup>8</sup> (Fig. 1) and a soft vibration of the red colour is achieved. Another version of colour-play can be observed in the instances of lace done in pastel colours, in that of the wild hyacinth lace trimming,<sup>9</sup> (Fig. 2) or the lace fan<sup>10</sup> with the peacock design for example, (Fig. 3) where stronger and lighter shades of the same colour are combined. The stitches holding the decorative motifs of the first articles of lace are rather simple. A bar-like or meshed is frequent, with ornamentation in spider stitches. Ten, fifteen types of connecting stitches were used in the earlier years as Mária Markovits<sup>11</sup> remembers. The simplicity of the connecting stitches emphasized the motifs of the lace by contrast, and enhanced their decorative presence.

Lace designed by Árpád Dékány can be classified into three groups on the basis of the motifs used: trimming, collar and frill lace with floral patterns; trimming lace and lace fans with patterns of fauna;



FIGURE 1 Lace trimming with paprika patterns, 1903 (detail)

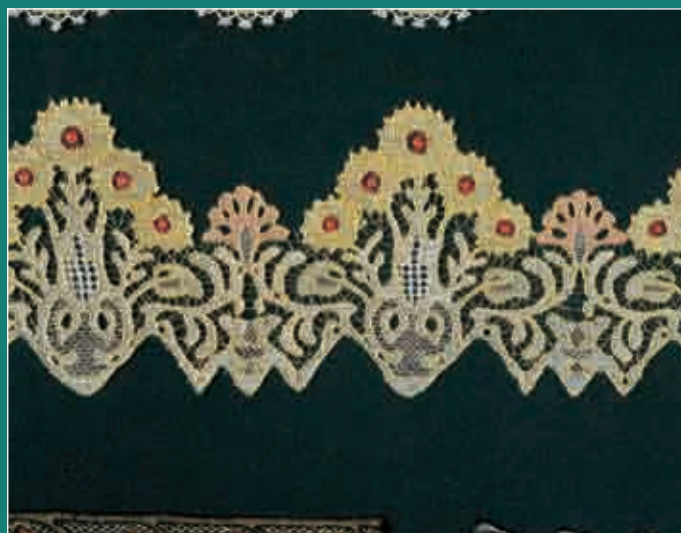


FIGURE 2 Lace trimming with hyacinth patterns, c. 1906 (detail)

FIGURE 3 Lace fan with a peacock, 1903



bags, fans and covers decorated with boys and girls dressed in traditional costumes, often a depiction of a folksong or story. His thin lace trimmings of floral and fruit patterns are composed of a row of motifs drawn from the paprika, flower buds, pomegranates, tulips, daisies, wild hyacinths, morning glories, strawberries, cherries, snowdrops and water-violets. The colours used are red, faded-green, faded yellow, orange, green, pink, grey, bluish-grey and white. The thread outlining the motifs is usually black or white. The slightly swaying stems of flowers or fruit, with stylized foliage, emerge from a lobed or straight upper hem edging.

Stylized foliage<sup>12</sup> (Fig. 4) embellished<sup>13</sup> with motifs that conjure stag-horns (Fig. 6) and heart, lace frog or braids (Fig. 6) make up the patterns for wider strips of lace made as trimming for either church or regular covers, or those<sup>14</sup> (Figs 4 and 5) made to adorn women's dresses or shawls, whose compositions are reminiscent of the way hung jewels are built up in the style of the Secession. Their colour is of a softer tone, and the outline is less pronounced. In this group of works, attention is summoned by a collar, which is covered all over in poppy-flower stems, merely as a result of its size. A rich play of lines formed by stems with flowers in bloom or already waning, lobed leaves, globes formed of pistils, and capsular fruits weave a net over the whole collar. The outer hem of the lace is also lobed, with an ornamentation of small bows.<sup>15</sup> (Fig. 7)

Stags, peacocks and doves populate lace works with figures of animals. These patterns are either arranged by the designer in the manner of composition continued since antiquity, where the animals are depicted in symmetrical, reflected pairs<sup>16</sup>, (Fig. 8) or following the composition of other lace trimmings, are set in a row. Each of the three animals has symbolic significance and is a very popular motif in Hungarian folk art. The peacock facing forward with its tail spread is a typical motif of the applied arts in the Secession, and can be found in almost all its genres. Dékányi combines the folk costumed youths and girls in his figural lace pieces with the playful line characteristic of the Secession. Two of the earliest pieces among these, the trimming which repeats the figure of a girl dancing<sup>17</sup> (Fig. 9) and a lace fan held in an Australian collection at present<sup>18</sup>, were lace sewn with coloured silk yarn, while the later ones are of flax.

The lace workshop set up in Halas in 1903 achieved great success both at home and abroad even in its first years. Besides various prizes in Hungary, it won the Grand Prize at the 1904 World's Fair in St. Louis<sup>19</sup>, and was shown at the International exhibitions of Venice in 1905 and Milan 1906, where it



FIGURE 4 Lace trimming, 1903

FIGURE 5 Lace trimming, 1903

FIGURE 6 Lace trimming with stag-horn and braid patterns, 1903

won another Grand Prize. Árpád Dékányi was posted to Budapest and charged with the organization and direction of the lace industry throughout Hungary in the autumn of 1906. Among his immediate successors, Ernő Stepanak and Antal Tar are worthy of mention. Although Dékányi continued to design Halas lace as reported by the volumes of *The Studio* from 1908 and 1910<sup>20</sup> among others, his connection



FIGURE 7 Collar, c. 1905

FIGURE 8 Lace trimming with a pair of doves pattern, 1902

FIGURE 9 Lace trimming with a depiction of 'I was born in a rose bush', 1902



to the workshop in Halas slowly declined. The first artistically and technically prominent period of the 'Lace From Halas' in the style of the Secession come to an end with his departure.

## Endnotes

- 1 Anon. *Style 1900. A Great Experiment of Modernism in the Applied Arts*. Museum of Applied Arts, Budapest 1996. Cat. 1.59
- 2 A.S. Levetus. State Schools for Lace-Making in Austria. *The Studio*. (October 1905) 24.
- 3 A.S. Levetus, op cit., p.20.
- 4 A.S. Levetus. op cit., p.25.
- 5 The lace cuffs, which poetically reinterpret the Renaissance flower bush, along with the collar of the same set, can be found in the collection of the Museum of Applied Art in Budapest.
- 6 *Magyar Iparművészet* (1906): 232.
- 7 Extracts from an autobiography, dating in all probability to the final year of his life, which he sent to Károly Lyka, an outstanding Hungarian art historian of the age who knew him well and had great respect for him. (Database of the Hungarian Academy of Sciences, MDK-C-I-17/261. 1-9) 'I was born on the 12<sup>th</sup> of March in the year 1861 in Alsó Jára, in the county of Torda aranyos, where my father was an official at a mine. I went to middle school in Nagyenyed, Marosvásárhely and Székelyudvarhely. The drawing teachers Károly Nagy of Nagyenyed and Gyula Fankovich of Székelyudvarhely were a strong influence upon me in these years. I had a great love for folk art, and dealt with it a lot even at that time. My father intended me to take up the profession of an engineer, and in line with this I enrolled at the technical university in Budapest, but I did not like the profession, and I left it without the knowledge or permission of my father, to join the art-teacher's school on Andrassy Street. When my father came to know of this, in his anger he cut off all support for a whole year. I lived from hand to mouth, as best I could, giving lessons, taking my books to the antiquaries, just as any poor kid would. My father was not appeased until I won the state scholarship of 600 crowns. I think of the times I spent at the teacher training school with eternal gratitude and delight. My teachers were: Gusztáv Keleti, Bertalan Székely, Károly Lotz, Frigyes Schulek, János Greguss, Adolf Huszár, Lajos Rauscher and Szilárd Várdai. I secured a diploma at the teacher training school in 1885. I had hardly arrived home to my parents when I received the letter from Károly Szász, ... Bishop of a region by the Danube banks, inviting me to join as teacher of art at the High-School of the Reformed church in Kiskunhalas.'
- 8 1903. Light green, red, grey, orange, yellow and black silk yarn. Budapest, Museum of Applied Arts, inv. no. 13428
- 9 1906. Pale yellow, greenish blue and red silk and raw coloured flax yarn. Budapest, Museum of Applied Arts, inv. no. 54.2962.1.
- 10 1903. Orange-red, yellow, green, greyish blue, claret silk and raw coloured flax yarn. Budapest, Museum of Applied Arts, inv. no. 18135
- 11 Emőke László, Emese Pásztor, and Aurél Szakál: *Halasi csipke - Halas Lace - Halaser Spitze*. Kiskunhalas, 1996. pp.9-12.
- 12 1903. Pale red, grey, greenish grey and yellow and raw coloured flax yarn. Budapest, Museum of Applied Arts, inv. no. 10600
- 13 1903. Two types of light green silk and raw coloured flax yarn. Budapest, Museum of Applied Arts, inv. no. 13422
- 14 1903. Light green, yellow, and brick coloured silk and raw coloured flax yarn. Budapest, Museum of Applied Arts, inv. no. 10587
- 15 c. 1905. Sewn from bone-coloured silk, and white and raw coloured flax yarn. Budapest, Museum of Applied Arts, inv. no. 11994
- 16 1902. Pale red, green and yellow silk and raw coloured flax yarn. Budapest, Museum of Applied Arts, inv. no. 10593
- 17 1902. Pale green, red and yellow silk and raw coloured flax yarn. Budapest, Museum of Applied Arts, inv. no. 10597
- 18 László, Pásztor and Szakál, op cit., Cat. 11. This work is unique in the history of Hungarian lace and Dekáni's work. Apparently inspired by the painted fans of the eighteenth century, he depicts a village scene on the fan. A Hungarian village is portrayed in the background, with shepherds in the corners, and a wedding procession makes its way across the sticks of the fan.
- 19 According to reports published in newspapers of the day, a major collection was bought on behalf of the St Louis Museum (*Az Újság*, 25<sup>th</sup> December 1903). It is up to future research to uncover these tracks.
- 20 Studio Talk. *The Studio* 1908. Sept. p.283-285; A.S. Levetus. The revival of Lace-Making in Hungary. *The Studio* 1910. Vol. 51. No.211. p.30-35.

This travelling tapestry is a valuable item in the textile collections of the Hungarian National Museum.<sup>1</sup> It is known to have been in the possession of Ferenc Rákóczi.

[ GYÖRK MÁTÉFY ]

## The conservation of the painted cloth travelling ‘tapestry’ of Ferenc Rákóczi II\*

**T**he travelling tapestry, which was made to imitate the texture of tapestry weaving, is of calico painted in tempera with evidence of Italian influence in its colours, used to hang in Rákóczi’s hunting castle in Zboró, together with six other hangings. Unfortunately some pieces were taken to Vienna by an art dealer, where, in a similar way to other Hungarian treasures, they disappeared. One of them was bought in 1930 by the artist Viktor Olgyay, who had seen all of the pieces in situ in Zboró 30 years before. This object, being the travelling ‘tapestry’ of Ferenc Rákóczi II, is an extremely interesting relic of cultural history. There is another painted ‘tapestry’ in Transylvania and six other painted tapestries in the Batthyány Castle in Körmend, which are the last relics of this little known Hungarian craft, which had been shaped by the Hungarian way of life.<sup>2</sup>

As can be read in contemporary written sources, in Europe, and in Northern Hungary and Transylvania as well, the walls of the suites of rooms in royal and aristocratic castles, palaces and mansions were made more comfortable and pleasant with valuable oriental carpets and wall hangings made from wool and silk yarns, decorated with metal threads (gold

and silver), usually depicting mythical, historical and biblical scenes. As said at the time, their homes were dressed up. Dressing up houses was quite widespread in the fourteenth century in Hungary, and even during the reign of King Matthias (1440-1490). The wall hangings and carpets were referred to as ‘house dressings’ in the will of Gábor Bethlen, prince of Transylvania (1580-1629). The precious hangings were bought in Italy (Venice) and in the Low Countries. There were 12 large-size Flemish tapestries among the belongings of Catherine of Brandenburg, the wife of Gábor Bethlen. In 1631 she reclaimed from György Rákóczi a series of wall hangings which had been left in the castle of Munkács; they depicted the *History of Alexander the Great* and were worth 15,000 tallérs in her estimation.

The felt hangings were written, that is painted, decorated with figures and the walls in the ceremonial hall of György Thurzó’s house and his wife’s house were covered with hangings like these. Whenever he set off on a journey he took 14 pieces of the painted calico ‘tapestries’. If the hanging was made of linen, it was also painted, so that it would not be so monotonous. In the guestroom of Baronesses Viczay there was one

FIGURE 1  
 Photograph, c.  
 1930, of travelling  
 tapestry (after Pál  
 Voit 1943)



like that in 1681; four years later János Haller bought a similar one in Vienna and paid half a taller an ell for painting it.<sup>3</sup>

The painters, sign-writers, and drapery painters, who painted these linen or felt tapestry wall hangings, which were called travelling or Viennese tapestries, started arriving in Hungary in the seventeenth century. 'It is known that our seventeenth-century painters, apart from painting frescos and panel pictures, made coats-of-arms, flags and tapestries as the members of the picture-writers' guild in Kolozsvár'.<sup>4</sup> The popularity of picture-writing and painted hangings is also mentioned in several contemporary, fragmentary written sources. In Hungary and Transylvania the first picture-writing guilds were organized in the seventeenth and eighteenth centuries. Several important guilds were active in Rákóczi's time in Kolozsvár, Nagyszeben, Kassa and Lőcse. The tapestry restored by the author could have been made in any of these workshops, although, as their widespread name indicates, such textiles could have been brought to Hungary in large numbers from Vienna and probably from Nuremberg.

Written sources often mentioned the Viennese hangings alongside the Italian silk and velvet 'tapestries' and the leather 'tapestries' from the Low Countries and Flanders. The 'tapestry' in Mihály Apafi's court in Ebesfalva was probably a painted imitation of the one with hunting scenes, probably from Flanders. The travelling 'tapestry' of Ferenc Rákóczi II, which can be seen in the collections of the Hungarian National Gallery at the moment, is probably from the prince's castle in Zboró; it is a painted calico imitating the technique of tapestry weaving.<sup>5</sup>

The above-mentioned tapestry had the following label in the exhibition: 'Hungarian or Polish, from c. 1700. Alexander the Great and Diogenes. A piece from the series of travelling' tapestry' of Ferenc Rákóczi II'. (It differs in size from the object in the Hungarian National Museum). Apart from the woven or gilt tapestries painted on calico or felt, there were other hangings made of textiles, embroidered leather and appliqué wall hangings.

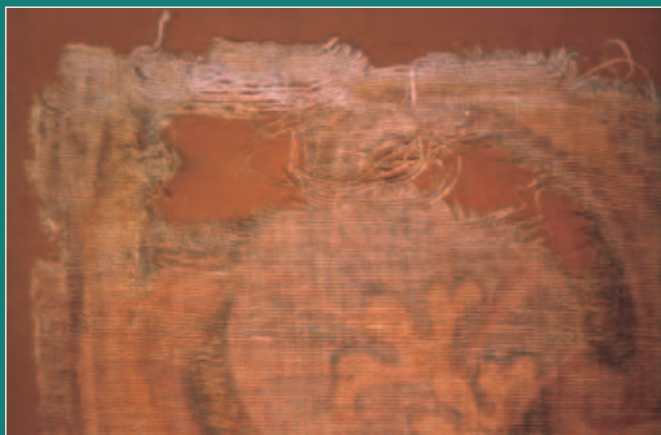
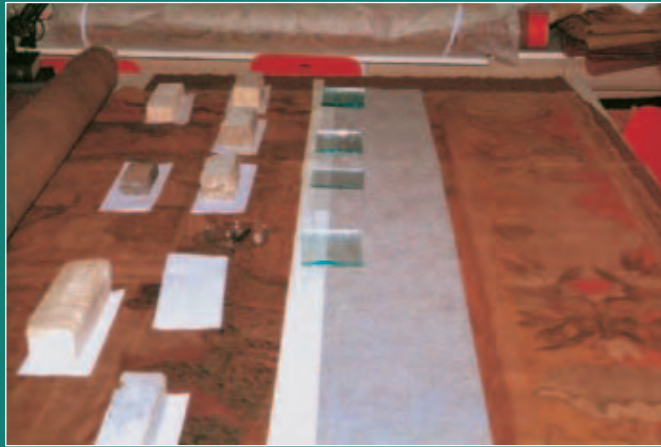
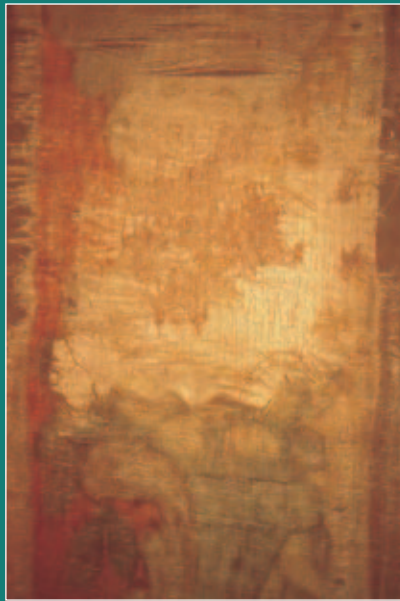
In a similar way to the sign-writers, the wall hangings can also be found in relevant entries of the

FIGURE 2 Left border, showing early repairs (detail)

FIGURE 3 Left border, early repair stitching

FIGURE 4 The tapestry during conservation

FIGURE 5 A frayed part of the tapestry being applied to the new support fabric



Beczi'(Viennese) or 'Iratos, Vászonra írott kárpit', which means 'painted, tapestry painted on calico'. Examples include:

'1489. Two pieces of fine Viennese tapestry and five ragged ones ...'

'1596. Ten cubits of tapestry ... 10 f. And eight cubits of Viennese tapestry ... 44 f, there are six Viennese tapestries ...'

'1627. Three worn-out Viennese tapestries ...'

'1629. A fine hanging ... Three worn-out Viennese hangings ...'

'1637/1639. There is a Viennese hanging decorated with horses by the first window. Then at the doorway behind the stove there is another green Viennese hanging. Between the door and the second window there is a red felt Viennese hanging decorated with kings in two pieces ...'

'1651. There are three Viennese hangings, two of them with horses, one with columns ...'

The woven wall hangings made in western European workshops were so valuable that the expensive textiles were not carried anywhere, not even by the great princes, to avoid damage during the journeys. For this purpose cheaper fabrics (usually calico or felt) were painted as replicas of pictorial woven tapestry although they were only fair imitations of the original. They were excellent however for transforming temporary lodgings or tents into a luxurious palace when, for example, Ferenc Rákóczi II was travelling, living in tents or staying somewhere.<sup>7</sup>

The conservation of the travelling tapestry was problematic because the base material had to be treated according to the rules of textile conservation

*Transylvanian Hungarian Etymological Dictionary* (Erdélyi Magyar Szótörténeti Tár)<sup>6</sup> relating to the sixteenth-eighteenth centuries, when the 'tapestry' restored by the author was probably made. This type of 'tapestry' is referred to as 'Bécsi/Bechy, Bechi,

FIGURE 6 Detail of the tapestry showing conservation stitching

FIGURE 7 The tapestry in the permanent historical exhibition at the Hungarian National Museum



while the painted surface had to be treated like the pictures painted on cloth. This problem is similar to those encountered during the conservation of pictures painted on cloth (landscapes, gardens, interiors), which were used until recently as backgrounds for photography; the treatment of such cloths is even more complicated because these items were painted with water-soluble colours; they therefore have to be treated with special methods during cleaning.

The technical data of the travelling tapestry is as follows: Size: 456x329 cm. Threads: warp: flax, weft: flax. Twist of threads: warp: Z, weft: Z<sub>4</sub>S. Basic texture: warp-faced rep. Number of threads: in the warp: 66/10 cm, in the weft: 44/10 cm. Due to earlier poor storage conditions, the tapestry was rather soiled, dust-covered, dry and brittle, and due to inappropriate packing and storage it was broken and wrinkled when it was taken to the National Museum. There is an ambiguous word - Botek or



Batek - written in cursive handwriting in the bottom right corner of the reverse.

The wet-cleaning treatment of the travelling tapestry, necessary to soften the textile and smooth out the wrinkles, was problematic because the paint medium, probably gum arabic, was soluble in water.

After the mechanical cleaning the tapestry was placed on blotting paper and the surface slightly dampened by ultrasonic humidification. Care was taken not to dissolve the binding medium of the paint. Then the fibres of the textile were arranged in their original position.

The tapestry was supported with a cotton fabric which had been dyed to a matching colour. The supporting fabric was stitched to the tapestry in 25 x 3 cm sections. After that, the weak, deteriorated parts of the tapestry were fixed with couching stitches. The missing parts were not replaced with new threads, but were only supported. The blue trimming of the tapestry, which was not original and had been stitched to the object with a sewing-machine, were removed. A new trimming was made from the fabric of the supporting material, was folded back in a 4 cm width. For hanging, velcro-tape (10 cm wide, 110 cm long) was stitched to the upper edge and to the upper part of the left and right sides.

The large size of the tapestry caused many problems during the work, so the parts which were not being worked upon were temporarily rolled into a 460 cm long and 13 cm diameter cylinder, covered with acid free fabric.

The tapestry was conserved for the exhibition 'The history of Hungary between 1000 and 1990' which was opened in 1996 in the Hungarian National Museum.

## Endnotes

- <sup>1</sup> Hungarian National Museum Inventory number: T 1989.16
- <sup>2</sup> Voit, Pál: *Régi otthonok* [Old homes], Budapest, 1943: 144-146. The photograph on p.145 shows one item from the collection of Viktor Olgyay's widow.
- <sup>3</sup> Radvánszky, Béla: *Magyar családélet és háztartás a XVI. és XVII. században* [Hungarian family life and household in the 16<sup>th</sup> and 17<sup>th</sup> centuries] Budapest, 1879:15-16, 24-25.
- <sup>4</sup> Voit: op.cit. p.144.
- <sup>5</sup> Written by Erzsébet Vadászi in the Radvánszky book, published in a re-print, 1986.
- <sup>6</sup> *Erdélyi Magyar szótörténeti Tár* [Transylvanian Hungarian Etymological Dictionary] ed. Attila Szabó T.) Budapest, 1993. Vol. 6. p.211-212., 399.
- <sup>7</sup> I have to mention a third painted travelling tapestry, which I saw in private ownership in the 1990s in Budapest. The base material had a finer texture than the hanging in the Hungarian National Museum.

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\* Ferenc Rákóczi II. (born in Borsi, 1676; died in 1735 at Rodostó, known today as Tekirdad, Turkey) was the reigning prince of Transylvania between 1704 and 1711. Due to the difficult financial and political situation of the country he sought help from Louis XIV, King of France, who agreed to support him in the revolt against the Emperor of Austria. The plot was detected by the Austrians, so Rákóczi fled to Poland, whence he set off with his troops and they succeeded in reaching the river Danube. The parliament declared the Habsburg Dynasty dethroned in 1707 and was determined to continue the fight for independence. The Emperor's troops outnumbered Rákóczi's fighters, who were forced to slowly retreat. In the autumn of 1711 Rákóczi left the country and lived in the French royal court from 1713; after 1718 he went into exile in Turkey where he lived in the coastal town of Rodostó until his death in 1735.

The title of this paper uses the word 'restoration', but what does it mean? In Europe the job title 'restorer' means the same as the job title 'conservator' in the UK and America. In both cases these are the professionals who 'conserve' antiques, antiquities, works of art and historic sites and structures. In English the origin of *this* meaning of the words conservator/conservation is very recent, probably having been 'invented' not long before the founding of the International Institute for Conservation of Historic and Artistic Works in 1950. It has gradually become preferred to the title 'restorer' since the introduction of the 'conservation' grade in the UK National Museums in 1964.

[ ANDREW ODDY ]

# The philosophy of restoration:

NEW FOR OLD?\*

**N**evertheless, as late as 1995 *The Concise Oxford Dictionary of Current English* was apparently unaware of the new use of the word,<sup>1</sup> as it defines 'conservation' as 'preservation, esp[ecially] of the natural environment' and a 'conservationist' as 'a supporter or advocate of environmental conservation'.<sup>2</sup> Conservationist was first used in 1870.<sup>3</sup>

So, what is meant by 'conservation'? The process has four stages:

- cleaning
- stabilization
- repair
- restoration

Not all four stages will be necessary for all objects or historic structures.

A typical example would be a broken pottery vessel excavated in the Middle East where soil often has a high concentration of soluble salts, usually chlorides.

- Stage 1 is the careful removal of soil by mechanical methods, washing, or, infrequently, the use of chemicals.
- Stage 2 consists of soaking in changes of distilled water to remove the soluble salts; without this stage the pot will be unstable and is likely to deteriorate if subjected to variations in relative humidity.
- Stage 3 is the re-assembly of the sherds by sticking with an appropriate adhesive; at the British Museum the preferred adhesive is cellulose nitrate.
- Stage 4 is the filling of *lacunae* with plaster of Paris or some other filler.

\* This paper was read to a colloquium held at the Humboldt University in Berlin on 3 and 4 March 1997. It has not been published, but as it represents a stage in the evolution of my thoughts on the philosophy of conservation, it is offered as a tribute to the memory of Ágnes Timár who was deeply interested in the theory of conservation.

To ‘conservators’ working in museums before about 1960, the second stage was often ignored as the potential instability of many objects was not recognized. Of course, the instability of excavated metalwork *was* usually recognized as the signs of continuing deterioration were so obvious – flaking and ‘weeping’ of iron or bright green powdery excrescences of bronze disease on copper alloys for instance. But salt problems in ceramic and stone objects often took months, or even years, to manifest themselves, by which time the objects were ‘safely’ in the museum store where the chance of their being regularly inspected was remote.

So if stabilization was often ignored, were stages 1, 3 and 4 carried out before *ca.* 1960 as they would be today? The answer, of course, is ‘no’.

Cleaning, to a conservator of today, means removing material which is not part of the original object while looking out for evidence for the contemporary ‘life’ of the object. Thus, soot on a cooking vessel would have been cleaned off by a previous generation of conservators, but not, it is to be hoped, by the conservators of today. Vessels should be inspected inside for any evidence of the food which was processed in them, and tools may retain traces of the materials on which they were used – and this also includes the possibility of finding traces of blood on weapons. Even clothing may retain evidence of the occupation of the wearer and textiles may have stains relating to their use.

Traces of paint are frequently found on objects nowadays when many conservators have access to a

good binocular microscope, and a few of them also have access to an analytical laboratory which may even be able to identify the actual pigment and the binder. In fact, it has long been known that much stone sculpture was painted, but it is now emerging from the examination of well-preserved material from waterlogged sites that metalwork was also painted,<sup>4</sup> although the extent of this practice in the past is far from certain!

The problem with metal objects is that corrosion has usually destroyed the original surface, although the *position* of the surface may survive within the corrosion layer. A good example is a bronze altar from South Arabia, now in the British Museum. When it was acquired it was covered in very thick corrosion products (Fig.1), but mechanical cleaning with the help of a hand-held electric engraving tool revealed the original surface (Fig.2). That original surfaces really do exist deep in the corrosion can be demonstrated by examination of a cross-section of a fragment of a corroded Assyrian bronze bowl from Nimrud (Fig.3), also now in the British Museum. The metal is almost completely corroded away, apart from traces in the centre of the section. The bowl now consists almost entirely of red cuprous oxide and green corrosion products of copper (most probably basic cupric carbonate) but within the cross-section two parallel ‘lines’ are clearly visible. These represent the original surfaces (top and bottom) of the thin bronze bowl. Chemically, however, both sides of the original surface now consist of cuprous oxide.



FIGURE 1 Bronze altar from South Arabia before mechanical cleaning of the surface



FIGURE 2 Bronze altar from South Arabia after mechanical cleaning of the corrosion layer down to the original surface.

This is a perfect demonstration of why *chemical* cleaning of ancient bronzes has been largely abandoned as chemicals cannot distinguish between the cuprite on top of the original surface and the cuprite below it. The result of chemical stripping, unless very carefully controlled, is that it removes all the corrosion products and leaves a much pitted metal surface.

But even the corrosion product now on top of the original surface is derived from the original object itself. The same is true of weathering layers on marble and glass. So if these alteration products<sup>5</sup> were (albeit in a very different form) part of the original object, should they ever be removed?

Before about 1970, the question of whether or not to remove alteration products was hardly ever asked. Conservation was seen as an attempt to travel back in time and present the object as it appeared before it was lost, broken or abandoned. Thus the stripping of metals was routine and has resulted in the wholesale ‘destruction’ of iron objects in particular, but of other metals as well. What happened was that corrosion products were removed without the depth and extent of the corrosion having been estimated beforehand. The result was that the outlines of objects changed – swords, for instance, ended up with a ‘ragged’ edge to the blade or with a ‘lacy’ appearance because the corrosion had penetrated completely through the

metal in some areas. Another result of stripping is that the extent of ancient polychromy on metals was never even envisaged as any remaining traces of colour were destroyed forever by the ‘stripping’ process.

What is surprising today is that it took so long to recognize the folly of chemical or electrolytic stripping of metals<sup>6</sup> – a *mere* 60 years or so from the first publication of some of the commonly used methods by Friedrich Rathgen at the very end of the nineteenth century.<sup>7</sup>

But what today is regarded as excessive cleaning was not, in the past, confined to metals. The so-called ‘orange patina’ on parts of the Elgin Marbles<sup>8</sup> was partially removed in the 1930s, and was a source of controversy at the time because of disagreements about its origin and because of the abrasive methods used to remove it.<sup>9</sup> But this cleaning, was carried out in the spirit of the times when the philosophy of many restorers was, as far as possible, to make the objects look like they did when first made. What today would be regarded as excessive cleaning was the ‘norm’ at that time, not only for antiquities, but also for works of art on paper as well as for easel paintings. Thus, black-and-white prints were routinely bleached to remove dirt stains and ‘foxing’, but the by-product was a ‘staring white’ paper which was undoubtedly ‘brighter’ in many cases than when

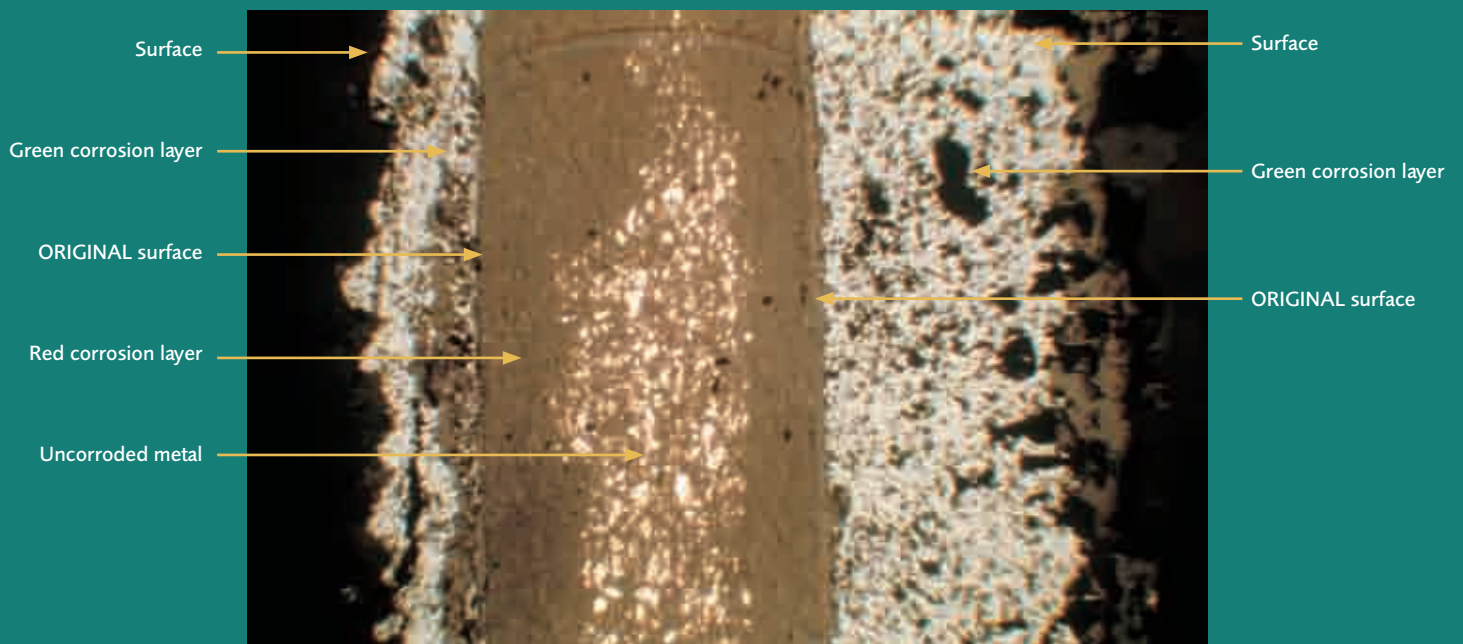


FIGURE 3 Metallographic cross-section of a fragment of a corroded Assyrian bowl to show, in particular, the original surfaces

first used by the artist for the printing. Similarly, many metal objects had all their corrosion products chemically stripped from the surface so that they lost their original outline..

Easel paintings are a special case, and the debate about cleaning in the National Gallery in London has now raged for one and a half centuries.<sup>10</sup> The recent cleaning of the Michelangelo frescoes in the Sistine Chapel in the Vatican has again focussed debate on the original appearance of works of art and on our attitudes to what the objects *should* look like now.<sup>11</sup> Hence the ‘new for old’ subtitle of this paper.

There was, however, one category of object which was, on the whole, protected from excessive cleaning regimes – those with a surface patina which was regarded as aesthetically pleasing. The first recorded use of the term *patina* in English is in 1748 to describe the green alteration product on bronzes, which was smooth and attractive.<sup>12</sup> The word was borrowed from Italian. The use of the word ‘patina’ was gradually extended to other materials, including marble statuary and wooden furniture, but whereas the nature of the natural patina on bronze is very clear – the result of the reaction of the metal with water and (usually) carbon dioxide in the atmosphere to generate a layer of basic copper carbonate (the green layer) – it is less easily definable on marble and wood.

According to Plenderleith,<sup>13</sup> patina on marble is the result of the dissolution and re-deposition of the marble (calcium carbonate) to produce a translucent layer, which may be coloured by impurities in the rainwater or ground water. Today most conservators would not dream of removing this type of patina on marble, but to the pre-war *formatori*<sup>14</sup> it was just another disfiguring surface deposit which was seen as no different from layers of ingrained dirt compacted with ‘modern’ wax polish. The latter have no place on the surface of marble sculpture, either in the 1930s or today.

When the Elgin marbles were redisplayed in the Duveen Galleries of the British Museum in the 1960s, they were again cleaned, but this time only using a poultice made of Sepiolite (a naturally occurring magnesium silicate) and distilled water.<sup>15</sup> This removed so much dirt that had settled on the stone from the notorious London smog of the previous 30 years that, after cleaning, the sculptures appeared *light* against the darker background of the off-white gallery wall, whereas, before cleaning, they had appeared *darker* than the surrounding building (Fig.4).

Cleaning, even though no chemicals were used, did have an undesirable side-effect. The cleaned marble had a ‘milky’ or ‘hazy’ appearance because, on a microscopic scale, the removal of dirt had

opened up the surface, which was no longer smooth. Before cleaning, the irregularities of the stone surface were full of dirt and the sculptures reflected light differently. This effect was largely mitigated by applying a 10% solution of polyethylene glycol in distilled water – a wax-like material which remains soluble and so is easily removed.

As far as furniture is concerned, *patina* is a combination of colour changes in the wood brought about by the effect of light, deliberately applied surface finishes, and the build-up of wax polish. Although this *patina* is not an alteration product of the wood, it should usually be preserved, although it is difficult to know what the original craftsmen intended the piece to look like in many cases.

This discussion of cleaning has been rather wide ranging and it has been shown that attitudes to cleaning have changed radically in the last 40 years. But the question put earlier about whether it can ever be right to remove metal alteration products from objects when the corrosion products are derived from the objects themselves has still not been answered. In fact, there is no doubt that this is perfectly acceptable and the museums of the world are full of wonderful ancient works of art made of metal – usually bronze – which have been skilfully liberated by hand from a cocoon of unsightly alteration product.

As far as the conservation of potentially ‘active’ or ‘unstable’ materials is concerned, stabilization has now become an automatic sequel to the cleaning process following the introduction of methods for treating potential problems like ‘bronze disease’ and ‘weeping iron’. The same principle is true for fragmentary textiles which will be supported on an inert backing textile, or for furniture which will have loose joints re-glued. But what of the third and fourth stages of the conservation process – repair and restoration?

The science of adhesion and adhesives has increased out of all recognition since the Second World War, but the universally accepted standard is still to match the strength of the adhesive to that of the material being repaired. Thus, although an epoxy resin adhesive is appropriate for the re-assembly of porcelain and glass, it is inappropriate for sticking together prehistoric pottery because it is far too strong. Interestingly, the earliest of the modern synthetic materials, cellulose nitrate, first used commercially as a plastic in 1855 and recommended by Rathgen in the 1890s as an adhesive for conservation, is still the best material for repairing and re-assembling many different types of antiquity,<sup>16</sup> in spite of recent attempts to discredit it.<sup>17</sup>

Thus the philosophy of repair has *not* changed over the years. The aim was, and still is, to assemble the existing fragments of a broken object using the

most appropriate adhesive to minimize the impact of the joins on the eye. What has changed is the range of adhesives. For conservators before the middle of the 20th century, it was a question of natural gums or resins, shellac, animal or fish glue, or cellulose nitrate, and the use of the last of these gradually became more and more popular. When a gap-filling adhesive was required, one of the above materials would be mixed with sawdust, powdered marble, or any 'inert' filler related to the materials of which the object was made. Sometimes plaster of Paris would be used, or even mixtures of casein and lime. Today, of course, gap-filling is done by adding inert fillers to an appropriate synthetic resin, and, although powdered marble may be used, it is more common to use glass or resin micro-balloons. Plaster of Paris, however, also remains a firm favourite, although the totally synthetic alternatives are preferable for many materials.

If the philosophy of repair has not changed, that of restoration has. In the past, restoration, reflected the approach to cleaning. Thus, what is now seen as excessive cleaning was felt to be complemented by complete restoration, so that objects looked like they did when first made. More recently, however, a more thoughtful approach to cleaning has gone hand in hand with gap-filling which is clearly visible on close

inspection of the object, or even no gap-filling at all on some objects, particularly ancient sculpture.

The change in philosophy has been gradual, so that in the British Museum in the late 1960s, the Department of Greek and Roman Antiquities was removing nineteenth and early twentieth-century restorations from their sculptures, while the Department of Egyptian Antiquities was still carrying out almost invisible restoration. In the 1990s, the Greek and Roman department is again interested in having 'invisible' restoration in some cases.

For most materials, the basic rule of restoration is that any agreed (that is 'agreed' between the curator and conservator) restoration should be carried out in a different material from the original. Thus ceramics conservators usually gap-fill using plaster of Paris and metals conservators often use a polyester paste. However, conservators of organic materials may use the *same* material, particularly when restoring furniture or works of art on paper. In these cases, the normal process of documenting the conservation assumes an even greater importance as the added materials must be clearly identifiable in the conservation record.

Few conservators would disagree about the meaning of restoration; it is gap-filling but with a multitude of different approaches to the finishing

FIGURE 4

Two pediment figures from the Parthenon in Athens. The left-hand figure was cleaned by the Sepiolite method in the late 1960s. The right-hand figure has not been cleaned for thirty years. Since the 1960s, the Elgin Marbles have been exhibited in an air conditioned gallery and have not needed to be cleaned



of the fill. But what is gap-filling trying to achieve? Invisible gap filling is (presumably) trying to recreate the object at some stage in its life. But do the curators and conservators ever consciously consider *what* stage? 'Perfect' restoration of an otherwise 'perfect' object generates an object which looks like the day it was made. Although the appearance deceives the viewer, it can be justified (if conservation records have been kept) on the grounds that the object once looked like that. Most museums, however, prefer a restoration that goes unnoticed by the casual visitor who strolls past an exhibition, but is obvious on close examination.<sup>18</sup> But can this be justified? The object *never* looked like this in its lifetime.

Should the aim of restoration rather be to portray reality, rather than a creation of today? If this is so the modern approach to restoration is quite wrong and we should be choosing one moment in the life of an object and trying to recreate that – the day it was made – one day during its 'life' – the day it was broken, lost or abandoned, or even **the day it was found**. And if the final act in the life of a pot was its breaking on the floor, have we any 'right' to repair and restore it at all?

The conservation process has changed radically in the last two generations from (usually) maximum intervention to (more often) minimum intervention. For many types of object, the emphasis is on stabilization rather than on complete cleaning and total restoration, and while the process of stabilization may involve, for instance, the removal of soluble salts from porous stone or pottery, it may involve merely keeping (displaying or storing) the object in a controlled environment in which the soluble salts will not be a problem.

Thus, in the last 30 years, 'passive' conservation has assumed major importance as another way of 'conserving' objects. What the managers of conservation have to do now is to assess the relative costs of the two approaches to the preservation of objects: a one-off treatment (assuming that the stabilization stage is always totally successful), or ongoing care (the permanent provision of controlled environments). But these relative costs are not always easy to calculate.

An example of this dilemma is provided by the three recent attempts to conserve the Riace bronzes, two Greek bronze statues of gods/athletes/heroes recovered from the sea off Riace Marina on the Calabrian coast of the Ionian Sea in August 1972.<sup>19</sup> Since the bronzes were found they have been conserved three times: first in the museum at Reggio di Calabria immediately following their discovery; second in the laboratories of the *Soprintendenza Archeologica della Toscana* in Florence between

1975 and 1979; and third at the *Istituto Centrale per il Restauro* in Rome between 1992 and 1995. All three treatments have struggled with the fact that when the bronzes were found they still contained their original iron armature and clay casting-core, all of which was thoroughly impregnated with chloride from the sea. Inevitably, the bronze was unstable, and so at the third restoration a decision was made to remove the casting core. This was done in Rome and the process recorded as thoroughly as possible under the difficult circumstances. The result, however, is a pair of bronze statues now bereft of the original core, but which are reported *still not to be stable* and need to be exhibited in a controlled environment.<sup>20</sup> As so few statues from the ancient world still retain their casting core *in situ*, it must be asked whether the statues could not have been exhibited in a controlled environment *without* removing the cores. If future generations do not agree with the interpretation put on the method of casting, we have only the fragments of core in the storeroom and the video footage of the investigation for documenting any other theory.

It is, of course, easy to be wise with hindsight, but a partial excavation of one statue, with the rest of the core left for future generations to excavate, might have been a better course of action. It would certainly have been much cheaper than three expensive interventions, and the ongoing costs of exhibition in a controlled environment would be the same.

Some of these thoughts will be seen as controversial, or even heretical. But the emerging profession of conservation has been too slow to question its methods and techniques. The result has been distrust of conservators by some curators and positive opposition by others. With the start of the new millennium it is time to show that we are aware of the long-term implications of our profession for the cultural heritage.

## Endnotes

- <sup>1</sup> *The Concise Oxford Dictionary of Current English* (9th ed.), Oxford, 1995.
- <sup>2</sup> It is interesting to note that in the USA, *Webster's Third New International Dictionary of the English Language* is more up to date. It defines a 'conservator' as 'one that preserves from injury or violation: protector, preserver (a fine art conservator)'; a 'conservationist' as 'one that advocates conservation especially of natural resources'; and 'conservation' as 'the repair and preservation of works of art'.
- <sup>3</sup> Little, W. et al., *The Shorter Oxford Dictionary*, 3rd ed., Oxford, 1973. In the UK today, the media frequently use the word 'conservationist' when 'conservator' is meant.
- <sup>4</sup> Private communication from Suzanne Keene
- <sup>5</sup> 'Alteration product', rather than 'corrosion product', is the preferred term to indicate a weathered surface.

- 6 Jedrzejewska, H. Some new experiments in the conservation of ancient bronzes, in G Thomson (ed.), *Recent Advances in Conservation*, London, 1963, pp.135-139; Jedrzejewska, H. The conservation of ancient bronzes, *Studies in Conservation* 9(1) (1964)23-31.
- 7 Rathgen, F. *The Preservation of Antiquities: A handbook for Curators*, Cambridge, 1905. First published in Berlin in German in 1898.
- 8 The 'Elgin Marbles' is the name by which the sculptures from the Parthenon in Athens, now in The British Museum, are known.
- 9 There is an extensive recent bibliography on this episode. St Clair, W. The Elgin Marbles: Questions of Stewardship and Accountability, *International Journal of Cultural Property* 8 (2) (1999) 391-521; Jenkins, I. The Elgin Marbles: Questions of Accuracy and Reliability, *International Journal of Cultural Property* 10 (1) (2001) 55-69; Jenkins, I. 'Sir, They are scrubbing the Elgin Marbles!' Some controversial cleanings of the Parthenon Sculptures, *Minerva* 10 (6) (1999) 43-45; Oddy, A. The conservation of marble sculptures in the British Museum before 1975, *Studies in Conservation* 47 (3) (2002) 145-154; Jenkins, I. (ed.), *Cleaning and Controversy: The Parthenon Sculptures 1811-1939*, British Museum Occasional Paper no.146, London, 2001.
- 10 The literature on the cleaning of paintings at the National Gallery in London is very extensive. There is no recent, balanced account but see: Beck, J. *Art Restoration: The Culture, the Business and the Scandal*, London, 1993, ch. 5; Hendy, P. *An Exhibition of Cleaned Pictures*, National Gallery, London, 1947.
- 11 Various authors, *Michelangelo e la Sistina. La tecnica, il restauro, il mito*, Rome, 1990; Mancinelli, F. Michelangelo's Frescoes in the Sistine Chapel, in Oddy, A (ed.), *The Art of the Conservator*, London, 1992, pp. 89-107; Mancinelli, F. The Frescoes of Michelangelo on the Vault of the Sistine Chapel: Conservation Methodology, Problems and Results, and Colalucci, G. The Frescoes of Michelangelo on the Vault of the Sistine Chapel: Original Technique and Conservation, both in Cather, S. *The Conservation of Wall Paintings: Proceedings of a Symposium ...*, The J Paul Getty Trust, Los Angeles, 1991: 57-66 and 67-76; Beck, J. *Art Restoration: The Culture, the Business and the Scandal*, London, 1993, chs. 3 and 4. There are many other articles in journals, magazines and newspapers debating this cleaning episode.
- 12 Little, W. et al., *The Shorter Oxford Dictionary*, 3<sup>rd</sup> ed., Oxford, 1973.
- 13 Plenderleith, H. J. *The Conservation of Antiquities and Works of Art*, Oxford, 1956: 314.
- 14 *Formatori*, according to Harold Plenderleith in an interview with Andrew Oddy in 1987, is the name by which the craftsmen who conserved objects before about 1940 were known.
- 15 Oddy, A. op. cit., *Studies in Conservation*.
- 16 Shashoua, Y, Bradley, S. M. and Daniels, V. D. Degradation of cellulose nitrate adhesive, *Studies in Conservation* 37 (2) (1992) 113-119.
- 17 Koob, S. P. The instability of cellulose nitrate adhesives, *The Conservator* 6 (1982) 31-34.
- 18 Oddy, A. Compensation for loss – why do we do it?, *Abbey Newsletter* 21 (2) (July 1997) 22-24.
- 19 See the special number of the *Bolletino d'Arte*, devoted to the Riace Bronzes, which was published in 1984 (special series 3, vol.1).
- 20 From a paper given by M. Bartolini, B. Colombo, M. Marabelli and A. Marano at a conference (as yet unpublished) in Rome in November 1995.

A rich variety of 'linens' made from cotton or linen fibres can be found mentioned in Transylvanian sources and are documented in Hungarian in the inventories of aristocrats and the nobility, listed in marriage settlements and in the stock records and limitations of inherited estates. Both fine and somewhat rougher cotton or linen fabrics were used to prepare the sort of textile articles collectively identified at the time as 'white linen', and which comprised: noble men's and women's shirts worn as underwear and as over-garments, and embroidered handkerchiefs; aprons, veils, headwear, bonnets and protective masks, etc. that were the accessories of women's clothing at the time; table-cloths, napkins, and handkerchiefs used as table linen, as well as bedding, which included upper and under sheets, pillow- and bolster-slips, and quilt covers; and finally, liturgical cloth, with embroidery on a cotton base fabric, antependia, chalice-covers, altar-cloths, etc.<sup>1</sup>

EMESE PÁSZTOR

## Bulya vászon:

A TYPE OF LOOSELY WOVEN CLOTH

A short extract from the inventory of the personal effects left as a legacy by Mihályné Bécsi in Rimaszombat (now Rimavská Sobota, Slovakia) in 1644, exemplifies well the great variety of these cotton materials: six sing [unit of measurement] Turkish chinatof ..., one piece of Polish cambric; nine fine linen camisoles, some from the Szepes, some Turkish and others of German cambric; one bodice of Janissary linen; 'Turkish cambric suitable for a shirt; one piece of linen from the Szepes.<sup>2</sup> It is difficult to differentiate between the various sorts of linens today. The sources demarcate three groups according to quality: the light, veil-like expensive cambric of the first order; in the second class one finds linen woven to a greater density than cambric; canvas materials of a rougher weave are relegated to the third class.

The most frequent places of origin for cambric would have been Poland, Turkey or India. Swiss,

Moravian, South German, Silesian, Dutch, Polish, Bartfean (now Bardejov, Slovakia) and Italian linen are also mentioned. Turkish or Hungarian canvas is mentioned, but was further categorized as best, medium and poor quality, as well as by additional attributes related to its suitability for a particular use, application of a pattern, or its material. These features all combined to form a name for the kind of 'linen'. By such definitions we are able to recognize 'golden or silk-edged', 'quartered', 'cotton', 'janissary', 'marrow', etc. cambric, and 'stick', 'folded', 'collar', 'thin', etc. linen, and 'janissary cotton', 'chalk', 'thick-set' canvas.

The bulya, or buja linen once belonged to these linen and cotton goods; it was of the finer category, and came to be known in Balkan languages as the Turkish woman, a Mohammedan woman, aunt, sister-in-law, a bride, etc. According to research by

Zsuzsa Kakuk, the word ‘bulya’, adopted directly and indirectly in the Hungarian language (first used in 1556) signified ‘a Turkish woman’, ‘a Turkish slave woman’ and ‘a Turkish woman embroiderer’. It was used at times to denote a feminine characteristic, and also to denote a special type of linen.<sup>3</sup> The last of these uses can be found only in the Hungarian tongue, and not in the Balkan languages or Turkish.<sup>4</sup>

*Bulya vászon* came into the country primarily by way of trade as testified by customs’ nomenclature and limitations. The list of Cambric and Linen in the conventional tariff of Transylvania made in 1620 shows that a length of bulya vászon was somewhat more expensive than fine linen, Turkish canvas and bagazia of Bursa, while Polish fine linen cost almost twice as much.<sup>5</sup> In the Transylvanian limitation of 1627, a sing of ‘good Bulya vászon’ found among

the ‘cattle imported by Turkish, Greek and Jewish merchants’ was set at the same price as a sing of ‘gilded cambric of lesser quality’.<sup>6</sup> Apart from ‘good’ and ‘lesser’ bulya vászon, a silk-edged bulya vászon was also produced.<sup>7</sup> Bulya vászon appeared regularly alongside Turkish textile goods, such as Turkish carton, bagazia and Turkish material for quilts, sold by Balkan merchants at the beginning of the eighteenth century in regions that had belonged to the Turkish empire.<sup>8</sup> Bulya vászon was bought directly in Turkey, in the cities of Istanbul or Adrianople (Edirne) on the orders of one or another aristocrat. János Gáspár bought ‘three lengths of bulya vászon’, and Pál Bornemissza bought one tablecloth sewn onto a large bulya vászon on behalf of Gábor Bethlen, prince of Transylvania (from 1613 to 1629) in Constantinople,<sup>9</sup> and bought bulya



FIGURE 1 Napkin embroidered on black bulya vászon with coloured silk thread, belonging to the Presbyterian Church of Szendrő. Ottoman Turkish, early eighteenth century, 71 x 43 cm. Budapest, Museum of Applied Arts, inv. no. 19476. Flax yarn, Z spun; warp density: 19/cm, weft density: 18/cm; width of material: 46 cm. (Photo: Katalin E. Nagy).



FIGURE 2 Detail of Fig. 1. (Photo: Katalin E. Nagy).

vászon on the orders of Mihály Teleki, the Transylvanian chancellor, in Adrianople (Edirne) in 1667.<sup>10</sup>

As regards the use of *bulya vászon*, Péter Apor's memoirs, set down in 1736, explain that according to the aristocratic fashion of the seventeenth century, youths would wear 'a shirt of fine linen or *bulyavászon*' under their shirt of chain-mail,<sup>11</sup> and that tablecloths, aprons, gowns, hussar's pelisses, foot-cloths,<sup>12</sup> bodices,<sup>13</sup> bonnets, and pants would also be made from the material. We find the purchase of *bulya vászon* for cheesecloth among the expenses of the city of Kőrös in the year 1661;<sup>14</sup> mention of wages to servants in the form of *bulya vászon* (along with linen, Turkish canvas and cambric) is also made in the register.<sup>15</sup>

*Bulya vászon* or material of its kind was produced in more places than just the Ottoman Empire. According to the thirtieth register of Kolozsvár, drawn up between 1599 and 1637, *bulya vászon* of Polish manufacture was available in addition to that from Turkey. István Eperjesi brought 'bulya vászon' from Krakow in 1632; Márton Réz transported *bulya* or nettle (muslin) material from the city of Jaroslav, Poland; and, István Eppel also imported 'csalyanj (nettle or muslin) or *bulya*' material into Kolozsvár from Krakow.<sup>16</sup>

Muslin, the gauze-like, often mottled material for undergarments that was imported from Poland and Silesia, was in general use during the seventeenth and eighteenth centuries.<sup>17</sup> The thirtieth register



FIGURE 3 Napkin embroidered on white *bulya vászon* with coloured silk thread, belonging to the Presbyterian Church of Szendrő. Ottoman-Turkish, early eighteenth century, 66 x 45 cm. Budapest, Museum of Applied Arts, inv. no. 19.472. Flax yarn, Z spun; warp density: 19/cm, weft density: 18-2/cm, width of material: 41 cm. (Photo: Katalin E. Nagy).



FIGURE 4 Detail of Fig. 3. (Photo: Katalin E. Nagy).



FIGURE 5 Turkish wrapping kerchief (*bohça*) made out of a Turban cover (*kavuk öröstü*), belonging to the Presbyterian Church of Ónod. Ottoman-Turkish, early sixteenth century, 75 x 75 cm. Budapest, Museum of Applied Arts, inv. no. 11307. Flax yarn, Z spun. Warp density: 15/cm, weft density: 17/cm. Width of material: 76 cm. The microscopic investigation of the material was undertaken by Márta Tóth, chief conservator at the Museum of Applied Arts, Budapest.

mentions it 28 times, with the earliest mention dating to 1599. In comparison, however, *bulya vászon* is only mentioned five times: twice in the case of *bulya vászon* from Turkey, once from Poland, and two notes that refer to ‘bulya, or muslin material’.<sup>18</sup>

If the available data is collated it seems that the expression *bulya vászon* was in common use in the Hungarian language to denote a gauze-like fabric irrespective of whether its composition was of cotton, flax or any other fibre, or whether it was of Turkish or any other origin, at the time that Turkish *bulya vászon* appeared on the market along with the muslin materials from Poland and Silesia. The earlier data from Kőrös, where it was mentioned as ‘cheese cloth’, seems to support the premise that *bulya vászon* was loosely woven.

Records pointing to the existence of *bulya vászon* made in Hungary, rather than in Turkey or Poland, are also in evidence. In the opinion of Márta Bur,<sup>19</sup> the *bulya vászon* of Eger, found next to the Turkish variant in the stock of merchants in

the Balkans during the eighteenth century, denotes a product made by the significant craftsmen’s colony of Serbs and Greeks living in the Hungarian town of Eger. István Sugár’s research showed that during the eighteenth and nineteenth centuries the *bulya vászon* of Eger was usually a flax [linen] material, at times woven together with cotton, whitened, unwhitened or dyed black, but it was a linen of higher weft density, with a width ranging from between 26 and 52 cm.<sup>20</sup>

The question arises as to whether it is possible to identify this type of ‘linen’, which had been used for a great variety of purposes from the costumes of the nobility to servants’ clothing and must have been different from other linens due to its singular texture. Only a textile article that can be verified on the basis of a note from the time of its origin would provide a certain identification.

Contemporary textiles of Turkish origin will on the whole only have remained extant in collections belonging to the church or museums.<sup>21</sup> In a search through fifty-nine parish inventories within the registers of canonical visitations made between 1665 and 1805 at Protestant churches in Borsod, Abaúj, Zemplén, Gömör and Torna counties, Béla Takács<sup>22</sup> revealed thirty-seven mentions of *bulya vászon* kerchiefs or covering cloths, and three of *bulya* linen (*patyolat*).<sup>23</sup> Among the registers published by the author, those taken in Szendrő and Ónod are significant for determining the nature of this material. A *bulya vászon* kerchief and a black *bulya vászon* kerchief decorated with assorted silk embroideries were found in the inventory of Szendrő from 1759; while in Ónod, among eight kerchiefs recorded in 1757, a kerchief is found that was once ‘lined, outside with yellow taffeta, and *bulya vászon* inside, bedecked with a variety of silk flowers sewn on’.<sup>24</sup> The parish collections of sacred cloths from both churches can be found at the Budapest Museum of Applied Arts,<sup>25</sup> so that each article can be identified on the basis of its description (Figs. 1, 3 and 5).

Although the inventories do not mention this, all three articles were made in Turkey. The kerchiefs of Ónod were originally napkins (*yağlık*) used to wipe the hands and the mouth, and the altar cover of Szendrő was originally the quilt cover of a turban (*kavuk örtüsü*) from which a wrapping kerchief (*bohça*) was then made. The material of each embroidered kerchief is made from loosely woven canvas with a stiffly spun flax yarn (Figs. 2, 4 and 6); this is inconsistent with the categorization of Turkish ‘linens’ from the eighteenth century published by Márta Bur, according to which the *bulya vászon* would have belonged exclusively to the category of cotton fabric.<sup>26</sup> The definition of the term given by



FIGURE 6 Detail of Fig. 5 (Photo: Katalin E. Nagy).

the dictionary of Ferenc Pápai Páriz from 1708 also backs up the notion that *bulya vászon* was a flax [linen] material: ‘*bulya vászon*: Zartes Geweb, dünne durchscheinende Kleidung, zarte Leinwand’.<sup>27</sup>

In an inventory of the personal effects of Pálné Wesselényi, née Zsuzsanna Béldi, drawn up after 1690 in Kolozsvár (?), the data found under ‘whitened linen articles listed’ goes as follows: ‘25 sing of bleached *bulya vászon* in a single roll’, which makes it clear that *bulya* was bleached during preparation.<sup>28</sup> The inventory also mentions the ‘loom with reed’ used for weaving white *bulya vászon* in other parts of Hungary, as well as in manor houses of the nobility.<sup>29</sup>

The expression *bulya vászon*, generally known and in use at the beginning of the eighteenth century, gradually passed out of the language with the end of

Turkish rule, and remained only among characteristic types of exotic Turkish merchandise, as for example in the literary work of József Gvadányi from 1790:

The adventures of a rural notary in Buda:  
 ‘He said: to bring me blessing he will make a gift,  
 of a Turkish pipe, numerous okka of Pasha’s tobacco,  
*bulya vászon* and coffee for his mother, and a caftan’.<sup>30</sup>

Though the expression *bulya vászon* has gradually been erased from the language, the light type of linen with a slightly rippled surface, and loosely-woven from stiffly spun flax yarn, remained recognizable among the woven peasant cloths of southern Hungary and Transylvania under the name of Serb linen, Sada or purple linen. Gertrúd Palotay was the first to draw attention to the type of linen still known as *bulya* in some parts of Sárköz, in her book published in 1940, entitled *Ottoman Turkish elements in Hungarian embroidery*.<sup>31</sup> When describing the material of the so-called purple shirts (*byssus*), a typical item of traditional women’s dress in Sárköz, Edit Fél (relying on an earlier work<sup>32</sup>) remarks in a study of 1950 under the title *Women’s clothing in the Sárköz*, that:

canvas of a plain surface is in common use all over Hungary, a type of rippled canvas similar to that used in Sárköz, though of a rougher fibre is known; Hungarians are aware that this is used by the Romanian People of Kalotaszeg. Peoples of nationalities other than Hungarian also used it in villages by the Danube, in the counties of Baranya and Bács-Bodrog. We also have knowledge of it thanks to the peoples of mostly Southern Slavic origin living in the Romanian counties of Temes, Torontál and Arad. Yet the true home of this type of canvas lies to the South of Hungary, in the Balkans.<sup>33</sup>

In addition to the purple canvas, frilled canvas and sada shirts of loosely woven fabric registered in the textile collection of the Ethnographic Museum, there is also a sample of a material, akin to the purple shirts, that was collected in Decs village of Tolna county, where it was called ‘*bujavászon*’.<sup>34</sup> It is, therefore, true that, even if only sparsely, the expression was still in use in the 1950s, in certain settlements situated in the south of Hungary. As regards the close relation of the seventeenth- and eighteenth-century *bulyavászon* with the purple canvas or *byssus* used in the folk dress of Sárköz, there is no better proof than the Latin equivalent of *bulyavászon* given in the Pápai dictionary of 1708: ‘*Tela coa*, *Coa vestis*, *Byssus*’<sup>35</sup>

## Endnotes

- 1 For further reading compare with Emőke László, *Hungarian Renaissance and Baroque Embroideries. Aristocratic Embroideries on Linen. The Collection of the Museum of Applied Arts*, Budapest II. Budapest, 2002: 26-8; Gervers, Veronika, 'Linens and cottons'. In: V. Gervers. *The Influence of Ottoman Turkish Textiles and Costume in Eastern Europe with Particular Reference to Hungary*. Royal Ontario Museum. History, Technology, and Art. Monograph 4. Toronto, 1983: 61-4.
- 2 Béla Radvánszky: *Magyar családélet és háztartás a XVI-XVII. században*. [Hungarian family life and home management in the sixteenth and seventeenth centuries] I-III. Volume I. Budapest, 1879; Volumes II-III. Budapest, 1896. [Reprint 1986] (Hereafter Radvánszky: 1986) II. pp. 288-9.
- 3 Zsuzsa Kakuk: *A török kor emléke a magyar szókincsben*. [Remnants of the Turkish age in the Hungarian vocabulary] Kőrösi Csoma Könyvtár 23. Budapest, 1996 (Hereafter Kakuk 1996): 251-2.
- 4 Zsuzsa Kakuk: Cultural Words from the Turkish Occupation of Hungary. *Studia Turco Hungarica*. Tomus IV. Budapest, 1977 (Hereafter Kakuk 1977) p.19. Other opinions on the Hungarian meaning of the word: István Sugár suggests that 'The word *bulya* came to signify a particular cloth in Hungarian because Turkish women were famous for their linen-making, and especially their homespun, extremely fine, diaphanous materials.' *Az egri bulyavászon*. [The Bulyavászon of Eger] *Agria XXI* (1985) (Hereafter Sugár) p. 215. Edit Egyed traces the word *bulya* back to the Turkish for 'colour', the word 'boya', and ventures that the word *bulyavászon* did not primarily refer to the quality of the material, but to the vivid colouring of the embroideries (Sugár 1985: 216). Dezső Pais traces the origins of the word *bulya* back to the Turkish word 'bog', which means 'to tie, fasten' (ibid.).
- 5 Az erdélyi vámok tarifája 1620-ról. [The conventional tariffs of Transylvania in 1620] *Oklevéltár Kolozsvár története* II. és III. kötetéhez. [Archives for the History of Kolozsvár, volumes 2 and 3.] Vols. I-II. Ed. Elek Jakab. Budapest, 1888: 246.
- 6 Árucikkék szabályzata 1627 és 1706 évekből. Adalékul a XVI. és XVII. század ipar- és erkölcstörténetéhez. [Regulation of prices from the year 1627 and 1706. As a point of reference for the trade and moral history of the 16<sup>th</sup> and 17<sup>th</sup> centuries] Publ.: Iván Nagy. *Történelmi Tár* [Historical Archive] 18. (1871): 215. According to the thirtieth register of Kolozsvár, for example, Lázár Örmény brought '2 rolls of canvas f 3-9' in 1614 and 1615. május 18-án Lázár Csizmadia brought '16.f. arra rolls of canvas - . 48' from 'Teor[ky] into Kolozsvár. *Kolozsvári harmincadjegyzékek* (1599-1673) [The thirtieth register of Kolozsvár] Published, introduced and annotated by Ferenc Pap. Bukarest-Kolozsvár, 2000 (hereafter: Pap 2000): 213 and 227; further examples of materials of the type of *bulya* vászon 1754: 'One roll of *bulya* vászon from Trabzon.' Kakuk 1977: 20. From the court diaries of I. Mihály Apafi (1662-1690) Prince of Transylvania, noted in 1675 'Twenty four and a half sing's worth of *bulya* vászon fl 22', brought at the festivities of Enyed for the court. Béla Szádeczky: *I Apafi Mihály fejedelem udvartartása. I. köt. Bornemissza Anna gazdasági naplói (1667-1690)* [The court of Transylvanian Prince I Mihály Apafi. Vol 1. The day to day accounts of Anna Bornemissza] (1667-1690). Budapest, 1911: 242.
- 7 Among the belongings of Ákosné Barcsay confiscated in 1661 'Two pieces of bulia vászon with silk trimmings worth three sings' *Barcsay Ákosné lefoglalt javai összeírása. 1661. május 10.* [Register of goods confiscated from Ákosné Barcsay 10 May, 1661. Publ.: József Koncz. *Történelmi Tár* 1887: 382; Trousseau of Gáborné Szegedi née Mariskó Cserei in 1716 'A couple of silky *bulya* vászon shirts'. From the registers of Mihály Cserei. Publ.: Lajos Szádeczky. *Történelmi Tár* 1903: 507.
- 8 Márta Bur: A balkáni kereskedők és árukészleteik a XVIII. századi Magyarországon [Merchants from the Balkans and their wares in eighteenth-century Hungary] (1737-1753). *Ethnographia* XCVI (1985) (Hereafter, Bur): 251-74.
- 9 Béla Radvánszky: *Udvartartások és számadáskönyvek, 1: Bethlen Gábor fejedelem udvartartása*. [Holding court and keeping accounts, 1: The court of Prince Gábor Bethlen] Budapest, 1888: 106 and 120.
- 10 *Archives of the Teleki family of the Holy Roman Empire. The correspondence of Mihály Teleki IV. 1667-1669*. Ed. Sámuel Gergely. Budapest, 1908. (Hereafter, Teleki Lev) p.165.
- 11 Péter Apor: *Metamorphosis Transylvaniae, azaz Erdélynek változása (1736)* [Metamorphosis or the Transformation of Transylvania] Ed.: Gyula Tóth. Budapest 1972: 34. Judit Veér also engages her husband Mihály Teleki, Chancellor of Transylvania, in the Purchase of *bulya vászon* for making shirts in 1670: And if there be no beautiful *bulya* vászon, ... let a search be made ... a roll of nice and thin *galos*, but not of that bad, tender kind, for it holds nothing.' Teleki lev V. 1910: 408.
- 12 Kakuk 1977, pp. 19-20.; Kakuk 1996: 251-252; further readings in *Erdélyi magyar szótörténeti tár*. [History of Hungarian words in Transylvania] Attila T. Szabó (ed.). Vol. 1: 1092-93.
- 13 In the course of his research on the bourgeois code of dress in Debreceni, Lajos Zoltai found bodices cut from 'bujavászon' in a number of 18th-century inventories. For example, silk bujavászon enough for 67 bodices was registered in the house of István Ethey Borbély in 1719. Lajos Zoltai: Debreceni viselet a XVI-XVII. században. [Dress codes in Debrecen in the 16<sup>th</sup> and 17<sup>th</sup> centuries] *Ethnographia: Népelet* XLIX 1938, 1-2, p. 292.
- 14 Áron Szilády and Sándor Szilágyi: Okmánytár a hódoltság történetéhez Magyarországon. [Archive of records for the History of Hungary under Turkish rule] *Török-magyarokori történelmi emlékek. Okmánytár I-IX*. Pest, 1863-1872 (Hereafter Szilády and Szilágyi) I (1868): 293.
- 15 Among expenses of the city of Kőrös in 1661, the woman cook was given *pulya vászon* to the value of 1 tallér instead of a roll of Turkish canvas. Szilády and Szilágyi I, p. 291; Among other things, György Mocsáry gave his servant Dóra *bulya* vászon as payment in 1676. Publ.: István Mocsáry. *Történelmi Tár*, 1892: 376.
- 16 Pap 2000: 426, 429, and 446.
- 17 Nettle linen might be either linens [cloth] woven from the fibre of nettle, or stuff made from flax or cotton. Walter Endrei: *Patyolat és posztó*. Budapest; Sugár 1985: 216.
- 18 Pap 2000: 215, 227, 426, 429 and 446.
- 19 Bur 1985: 266.
- 20 Sugár 1985: 216-20.
- 21 The most significant collections of ecclesiastical embroideries on a cotton base are now in the care of the Museum of Applied Arts (Budapest), the Hungarian National Museum (Budapest), the Museum of Scholarly Collections of the Presbyterian diocese to the west of the Tisza river based in Sárospatak and the Museum of Scholarly Collections of the Presbyterian diocese to the east of the Tisza river based in Debrecen.
- 22 Béla Takács (1930-1997), as Director of the Museum of Scholarly Collections of the Presbyterian diocese to the west of the Tisza river, and then the Museum of Scholarly Collections of the Presbyterian diocese to the East of the river Tisza, spent many years researching the material and source material of the region.

- 23 Béla Takács: Református templomok török hímzései Észak-Magyarországon. [Turkish Embroideries in Presbyterian Churches of the Northern Hungary] *Herman Ottó Múzeum Yearbook* (XIII-XIV.) Miskolc, 1975 397-413. (Hereafter, Takács 1975).
- 24 Takács 1975: 400-1.
- 25 The textile artefact from Ónod came into the possession of the Museum of Applied Arts, Budapest, in 1914, while the piece from Szendrő arrived in 1939. *IM Archives* 1914/597 and 1939/45
- 26 According to a list published by Bur (1985: 265-8), the following articles could be found among the cotton ware of Turkish and Greek shopkeepers in the regions under Ottoman control in the eighteenth century: Turkish carton, Turkish bulya vászon, bagazia, baraber's futa, Turkish winder, coloured Turkish material, quilt material and the Turkish kerchief made from the spun cotton fibres; fine Turkish linen, Turkish canvas as well as Turkish and Persian cambric, the veil and the dikta were made of flax.
- 27 Pápai Páriz, Ferenc: *Dictionarium Latino-Hungaricum et Hungarico-Latino-Germanicum*. 1708. The facsimile of the extended version published by Péter Bod Nagyszeben (now Sibiu, Romania), in 1767. Budapest, 1995: 35.
- 28 Publ. István Török *Történelmi Tár* 1899: 359.
- 29 Publ. István Török *Történelmi Tár* 1899: 361.
- 30 Selected works of József Gvadányi and Mihály Fazekas. *A magyar költészet kincsestára* 32, edited by: László Lator, Budapest, 1995, p. 90.
- 31 Gertrúd Palotay, *Ottoman-Turkish elements in Hungarian embroidery*, 1940, p. 17, footnote 73.
- 32 Edit Fél: Délszláv kölcsönhatások a Sárköz népviseletében. [Reciprocal Balkan influence in folk costumes of Sárköz.] *Délvidéki Szemle* II. 1943: 3.
- 33 *Folia Ethnographica* 1950: 11, footnote. The study also appeared in Hungarian as 'Női ruházatkodás a Sárközben'. *Ethnographia* 1991, 1 2, pp. 1-49. The author summarized the results of her research during 1938 and 1949 in Sárköz.
- 34 White sada bujavászon. Flax with black and white cotton threads woven in. 12 x 27 cm. Inv. no. 52.2.11. I would like to thank Edit Katona, the head of the textile collection of the Ethnographic Museum, Budapest, and Mónika Lackner, ethnographer, for their most practical help in the ethnographic aspects of my work on *bulyavászon* and *bíborvászon*.
- 35 Pápai Páriz, op. cit., p. 35.

The Textiles and Costumes Department of the Budapest Museum of Applied Arts has the only backgammon board with a textile covering, a feature of great rarity among board games.<sup>1</sup> While most examples of this type of object are made of special types of wood, ivory, precious metals or precious stones, the textile covering and outstanding quality of the embroidery make this artefact exceptional.<sup>2</sup> Various Venetian books of embroidery patterns printed late in the sixteenth or early in the seventeenth century may have provided the source for these pictures.<sup>3</sup> Yet in spite of an amassed puzzle of figurative and emblematic images and lines of poetry, it has proved impossible to ascertain the person who commissioned or owned the object.

[ ANIKÓ PATAKI ]

## Restoration of an embroidered board game

**T**he Hungarian name for the board game, 'os board', a term no longer used, denotes both the tools for the game (board and pieces) and the game itself, which is played on the inner, two-part face of the board. The fields for three different games are found on this 'open and shut' hinged box. Chess and draughts can be played on one of the outer faces, merrills (sometimes called Nine Men's Morris) on the other, and backgammon on the inside. The disks and pieces required for the games are missing.<sup>4</sup>

### Description

The chequered field for draughts and chess has the squares decorated with rosettes, with tulip and tendrill motifs. The alternating colours of the squares are

achieved using silver and gold-coated silver metallic threads. A thin strip at the top and bottom of the board has a picture in an oval laurel-wreath frame depicting an eagle descending upon a crested fish, and another snatching it. The following text is embroidered in silver thread on a curling ribbon of pink silk extending on both sides of each laurel-wreath<sup>5</sup>:

eximan aut mergar

Aut mea iacta tam vesanis eximer undis

Dextra Crucem aut mergar strenue cesar bis  
profundissima...

Hostibus ulla tuis iam non est tuta latebra

Cernere cuncta vales vincere cuncta potes

I catch the fish or drown

Either my right arm saves the cross from the  
waves

Or let me sink with it courageously into the sea

most profound

Your enemies no longer have a haven on this earth

You see all, and can vanquish all.

The 12 mm high frame of the board carries ornamentation of a thicket of intertwining leaves. At the centre of each side, Turkish military insignia (so-called 'trophies') are placed in medallions surrounded by leaves. Flowers made with silver threads (gilded and un-gilded) decorate the side panels of the raised frame. The following lines of verse, worked in silver metallic thread, are framed in laurel-wreaths at the corners:

Freggi adu na e á lui dispone

Favorevole la sorte

Ma virtute al prode al forte

di trofei lauri e corone

He that is born for the battle

Should grab this weapon given by fate

May power and courage be his virtues

laurels and a crown will be his reward.

Ornamentation with leaves on a tendril, made from

metallic thread, fills the ground between the lines of the game of merrills. As in the case of the draughts board, pictures framed in laurel wreaths can be seen above and below the game: an eagle descending upon a seven-headed hydra, and a stag. The script on these ribbons reads:

obuia centeno

Obuia centeno que semper ger minat Hyde

Quam si vin cere quam vincere sola potes

consilio et robore

Longa corona cadesi am mente et viribus aucta

Concep toque hostis pulvere plena verit

facing the hundred heads

Facing the hydra whose hundred heads sprout anew

For if he can be conquered, you will be the conqueror

With brain and brawn

The awaited laurel, richly entwined by brain

and power

Coated in the dust of enemies on the run

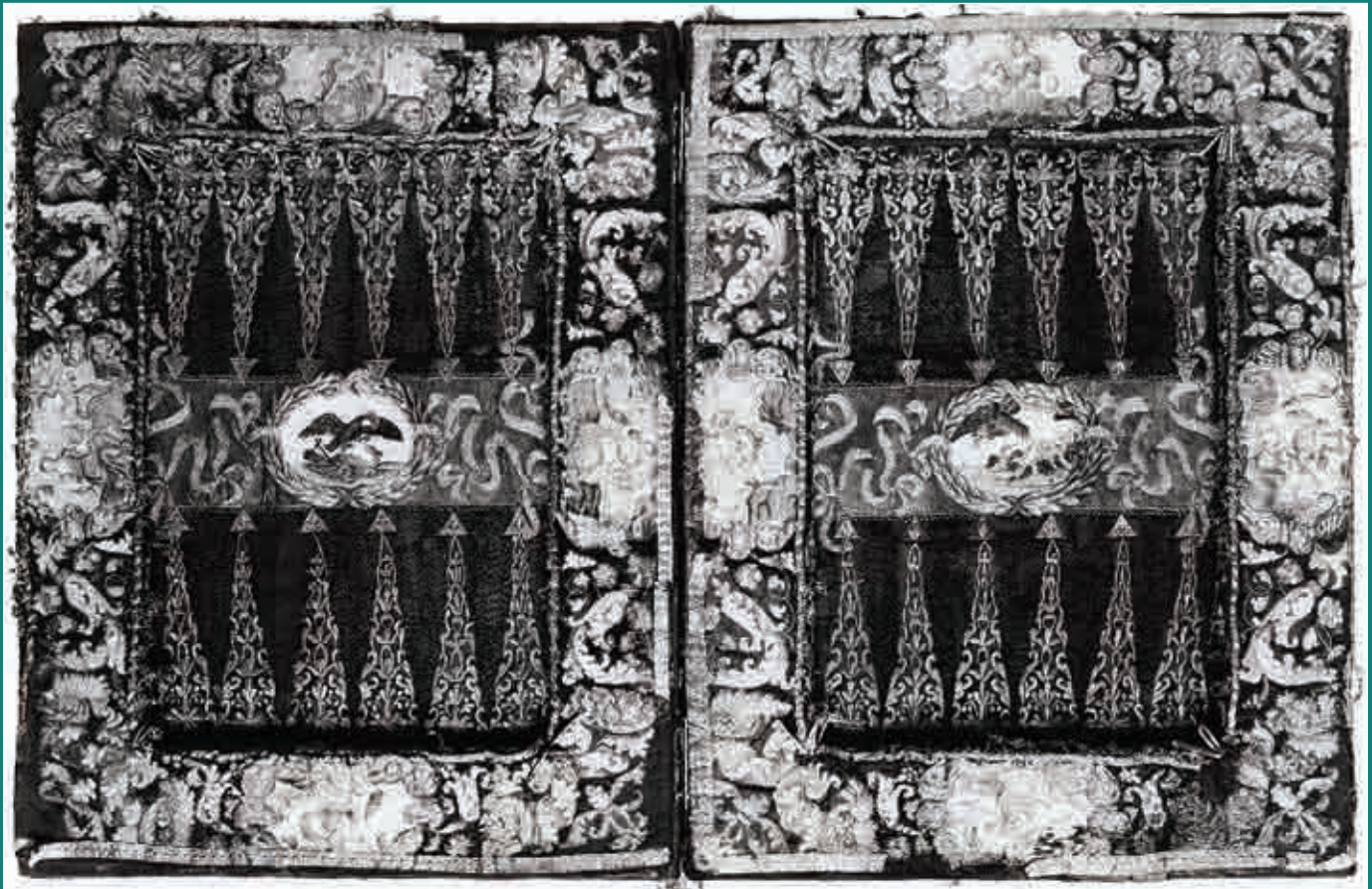


FIGURE 1 Backgammon board, before restoration

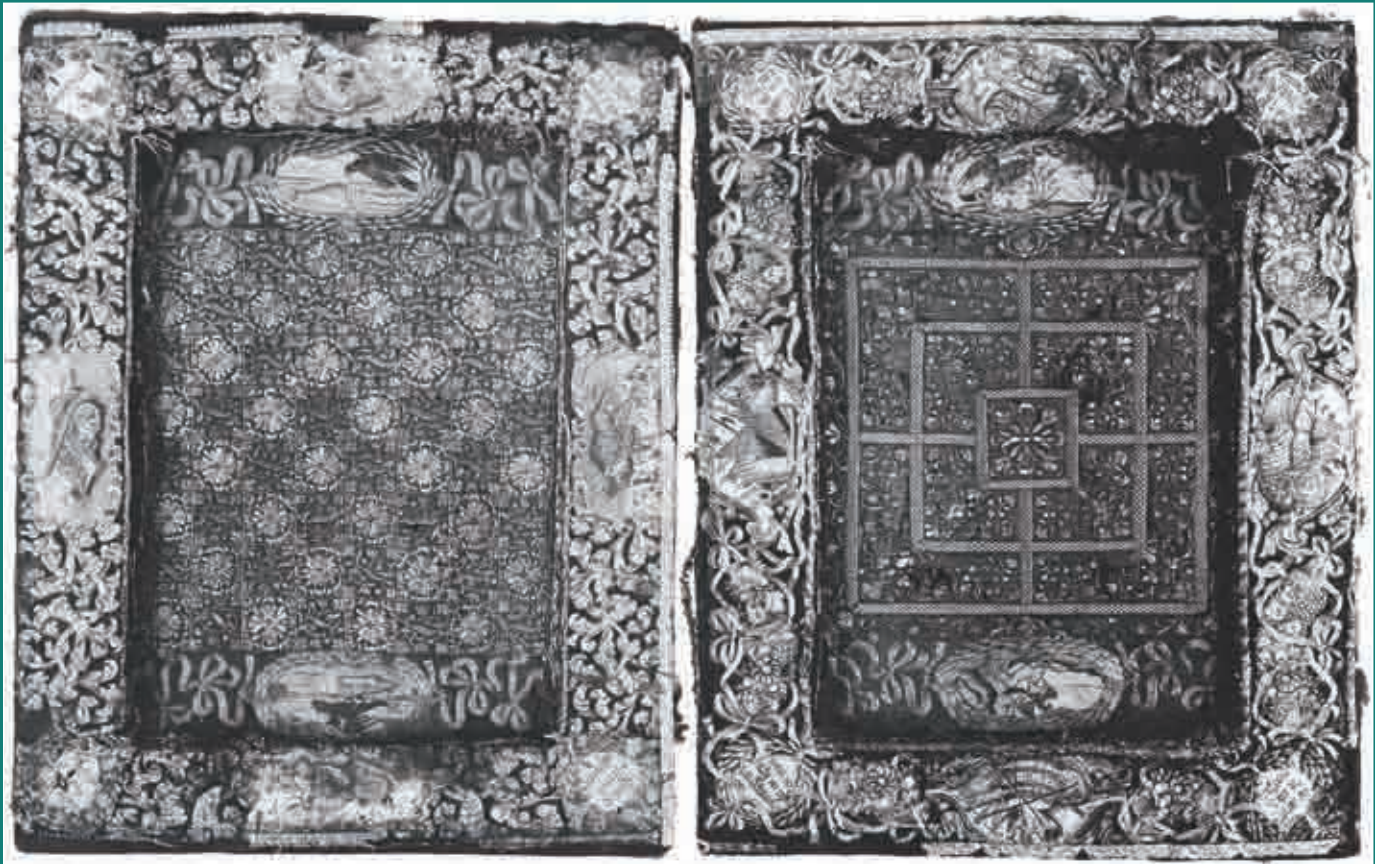


FIGURE 2 Chess and merrills board, before restoration

Turkish military insignia are represented in oval medallions at the centre of the side panels, with rich strings of flowers and fruits linked by ribbons filling the rest of the border. A rhyme can be found on each corner here, too:

Ora pace ed ora guerra  
 Giuoca il feto su la terra  
 Variamen te có i mortali  
 Maneggian do or beni mali  
 Time of peace and time of war  
 Blind fate leads the world on  
 It can bring good or evil  
 Variously on mortals

Opening the hinged board reveals the two-part field for backgammon. The characteristic acute-angled triangles of the field have been formed from floral ornamentation. Each triangle is capped with an arrowhead ending with a flower of three petals at its centre. Two wide strips partition the fields into quarters; one shows an eagle swooping upon ten nesting birds with long beaks; the other shows an eagle fighting a crane; each scene is encircled by a laurel wreath. The following scripts appear on the pink ribbons which fly on both sides of the pictures:

Animo et viribus

Hanc victricem Aquilam cernens Triumphum de  
 Victis  
 Turcis sic Sacra Musa canit  
 Odrusias depasta Feras Calvari ad culmina  
 Christum (?)  
 Deferat geminet Splendida templa Deo  
 Par numero virtus  
 Par numero virtus Volucres de cedite  
 campo et decus et vires una Tonanis habet.  
 Quo Plures hostes Celo curante Triumphos  
 Plures ista feret Screptraque plura habit  
 With strength and courage  
 The Muse sings your victory seeing the triumphant  
 eagle  
 Rejoicing over the sacred beaten Turks.  
 Chasing the beasts of Odrusias onto Christ's  
 Calvary  
 Doubting the bright temples of our Lord.  
 In numbers they are tackled by mettle  
 Your numbers are attacked by metal off the field  
 of battle,  
 His light and power are like the thunder of Jupiter.  
 The more his enemies, the more victories he wins  
 from  
 heaven, handing down more imperial sceptres.



Huge horns of plenty are placed crossed at the corners of the frames. Nine laudatory muses, with their attributes, are embroidered in oval fields in the centre. Each figure is named: Ter-psi-core, Callis-pe, Clio, Polin-n-ia and Ta-li-a, Ura-nia, Erato, Euter-pe and Melpome-ne.

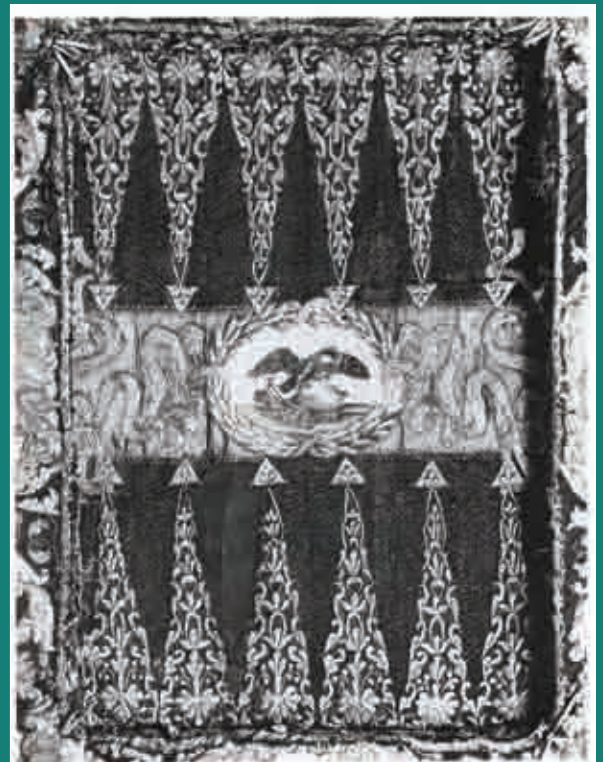
## Construction of the object: materials and technology

The game in the Museum's collection is made of two boards which can be shut like a box. The embroideries are worked on a black silk rep ground fabric with coloured silk and metal threads.<sup>6</sup>

FIGURE 3 The nine muses are depicted on the frame surrounding the field of play. One of them, Urania, is shown here. The figure was embroidered with metallic threads, using the needle-painting and stem stitch techniques

FIGURE 4 Micrograph of the metal thread embroidery. The ribbons were made with a needle painting technique, while the inscriptions were fashioned from silver threads

FIGURE 5 Detail of the repaired surface of the game



The lyrical quality of the figurative, ornamental and emblematic segments worked in silk threads was achieved using a technique of needle-painting. Silver and gilded silver metallic threads were used to give form to the vegetal motifs, ribbon inscriptions, verse and the contours. Satin stitches, stem stitches, couching stitches and embroidery that imitates tabby woven fabric were used in the realization of these motifs. The rare finesse of the execution indicates that the embroidery was the work of a professional hand.

A thin, more loosely woven silk material was added beneath the ground fabric, and calico forms the stronger and thicker material of the inner lining. Bow-shaped decorations of gilded silver thread, wound around parchment, were tacked into the corners of the frames.

The base onto which the embroidered covering was applied is composed of two boards of pinewood and four frames of pine. The textiles were stuck to the wood with a starchy adhesive.<sup>7</sup> The frames and the fields of play were stuck together with glue and nailed together.

## The condition of the object prior to restoration

### The embroideries

The ground fabric, which was originally black, is in an extremely faded condition and has become dark brown. The material is very weak, aged and incomplete where there is no embroidery.<sup>8</sup> The embroideries have broken up following the deterioration and loss of the ground fabric; this has resulted in the loss of a number of motifs. Silk threads are worn away on the face of the embroidery. The colours of the threads had lost their original sheen, fading gradually and turning brown. The embroidered surfaces had become extremely dry and stiff. The dimensions of the four framing embroideries, which have become quite fragmentary, are now quite dissimilar; this is probably due to the material's drying out. The soiled surface of the object had an additional adverse effect on its appearance. The reverse side was coated with a thick layer of glue. Corrosion, of a dark grey colour, covered the silver and gilded silver metallic threads, which meant that the difference between the two types of metallic thread was hard to distinguish. The text and verse embroidered on the ribbons or framed in laurels were virtually illegible. The thread making up the flower motifs had disintegrated or become tangled. The metal strip covering the threads had crumbled in many places.

### Wooden parts

The inferior quality of woodwork and finish of the boards and frames, used as the base for the embroidery, was obvious at first sight. A rather fragmented set of imprints from Hungarian (comic) papers could be deciphered on the board which had been used to support one of the games, but no further information could be found on their date or title. The wood had dried out, the corners had split, and grown deformed. Nails joining the boards and the frames had rusted.

### Signs of repair

The assumption is that the object was repaired a number of times, though the dates of these interventions are unknown. The ground fabric's ragged condition, resulting from use, may well have given cause for these interventions and alterations. After the artefact had been dismantled, empirical evidence seemed to indicate that the embroideries had been unstitched from their original base fabric, and stitched onto new materials. Loose and disarranged metal threads were stitched down; the ground fabric was fixed with darning stitches; and, segments over the frames that had become fragmentary were



FIGURES 6-7 The front and the reverse sides of the fragmented framing embroideries, after the previous repairs had been undone



FIGURE 8 The backgammon field, after previous repairs had been unstitched and before restoration



FIGURE 9 The backgammon field, after restoration

stitched down around the edges. The fabrics, threads and stitches applied were of a varied, weak or rough quality. The hems of the material hid variances in the size of the frame and the sizes of the embroideries. Hinges and the lock were fixed to the boards with nails. It was surmised that these had been fitted at a more recent date. Embossed, gold-coated paper and braids had been stuck or stitched on to conceal the most obviously damaged parts.

## Restoration

The deteriorated condition of the embroideries and the ground fabric, deformations resulting from the folds and the aesthetically disturbing character of some later repairs made the choice of a complete restoration of the object reasonable. The fact that this intervention would necessitate the complete disassembly of the object into its constituent elements, was taken into account. Its size, as well as the state and finish of the materials making up the artefact,

gave grounds for the use of better wood to rebuild the object.

## Disassembly

The hinges and nails holding the frames, and the paper strips were removed in the first phase, followed by removal of the glue holding the frames and the boards together. Removal of the embroideries from the wooden material was the next phase. In the many areas where the glue had aged, a mechanical approach was sufficient. Where the adhesion was still strong, a moistening of the material to aid its removal could not be avoided. The pliancy of the glue could be increased, and layers separated by wetting the cloth. Previous surmises about earlier repairs proved correct: after the layers had been taken apart, a variety of fabrics of different quality used to further support and complete the embroidery became visible on the reverse side of the material. The following step was to remove this mixture of materials and stitches, to allow the realignment of the deformed parts of the original during cleaning.

## Cleaning

The initial stage of cleaning involved the partial cleansing of metal thread by softly rubbing the surface with mixture of ethanol and water (in a ratio of 1:9). Removal of the remaining glue and starch was the aim of the next phase. Placing the embroideries between two layers of plastic tulle made it possible to avoid fragmentation. A sufficient quantity of warm water was necessary for the removal of glue, and the use of enzymes to dissolve starch. Neither prolonged soaking nor the higher temperatures required for the removal of glue were advisable in view of the weak condition of the embroideries. A choice of temperature below the 30°C necessary for the optimum activation of the diastatic (starch-digesting) enzymes was made, and the material was left to soak for a shorter period. This part of the cleaning was not entirely satisfactory: the layer of starch deposited on the back of the needle-painted embroideries is visible to this day. The deposits were on surfaces that could not be accessed for mechanical action, forcing a retreat from the aim of removing all adhesive substances. Wet cleaning followed immediately and was carried out with a solution of a non-ionic detergent (Prevocel) in softened water. The pieces were left to soak for the shortest possible periods of time. The pressure of a sponge applied across the tulle removed the wash solution. After repeated rinsing in soft water, the pieces were fixed with entomological pins, carefully aligning the weave. The metal threads had regained some shine, the cloth some flexibility, and the depictions a livelier outline as a result of the cleaning.

## Providing a support fabric

A satin material was chosen as the support fabric for the embroideries, and was dyed to match the faded brown of the silk ground material used for the artefact. A black silk thread was used for stitching. The fixing of details and fragments in a variety of techniques required the use of stitches other than laid and couched stitching:

- the ground material was held in place by hold stitches and stab stitches
- the needle-painted fragments were fixed all around with tiny stitches around their edges
- for surfaces made with the couching technique, and for metal threads, the silk threads that had held them in place were replaced
- the disintegrated or jumbled metal threads composing the flowers were laid out in the space available and stitched up according to the pattern. The threads used for the satin stitch made up the realignment of disintegrated yarn.



FIGURE 10 Framework embroideries pinned onto the polyfoam model

FIGURE 11 Preparation of the new frames, their covering in calico

FIGURE 12 Framing embroideries being sewn onto the frames covered in calico

FIGURE 13  
The board game  
reassembled after  
restoration



FIGURE 14  
The board game  
reassembled after  
restoration



## Reassembly

Three major conditions were to be fulfilled when the artefact was reassembled:

- a wooden frame would be made to fit the dimensions of the textile; this was desirable due to the inadequacy of the wooden parts of the object (as described in the condition report)
- it was thought best to avoid the use of adhesives this time, i.e. to avoid direct contact of the embroidery and its base material with glue
- nails were not to pass through the object when the frame and the boards were joined, and if possible the use of nails was to be avoided altogether.
- instead of nailing on the hinges (which allowed the box to open and close), a new technology was to be designed. A model would be made according to the measurements of the embroideries. A comparison of the embroideries would be made and a cardboard pattern would be prepared on the basis of the largest pieces. A polyfoam model would then be made, and each piece of embroidery would be tried on it. The polyfoam model would form the model from which a new oak frame would be made. The wooden boards, unsuitable for reuse, were replaced by 2 mm thick acid-free cardboard.

To circumvent the use of glue in reapplying the embroideries, stitching was selected. For the implementation of this choice a thin, tested and uncoloured calico covering was given to the frame.<sup>9</sup> This layer provided a firm base on which to stitch all the frame embroideries. The black silk thread used for the earlier conservation stitching was employed again. Only the edges of the ground fabric applied to the play field embroideries were stuck to the acid-free cardboard, so that the embroideries had no contact whatsoever with adhesives.

The following phase entailed joining all the listed segments together. A silk ribbon was placed between the cardboards carrying the playing fields, the ribbon stood in for the hinges used to open the box earlier. Gluing together those board surfaces and frames not covered in embroidery came second. The conservation was completed by sewing together the edges at the sides and by returning the ornamental bows to their places. The conservation was carried out by Katalin E. Nagy and Anikó Pataki.

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## Endnotes

- <sup>1</sup> Storage registry no. 10.694
- <sup>2</sup> To our knowledge, no board game of a similar age or similar technique has been published, or found in collections in Hungary.
- <sup>3</sup> Maros Szilvia. Draught-board. In: Baroque and Rococo. An exhibition from the collection of the Budapest Museum of Applied Arts. ed.: István Bardoly. Budapest, 1991, cat. 2.15, p. 67-9.
- <sup>4</sup> The source of the game of backgammon, which belongs to the family of tactical chance games, can be traced back to ancient India, Iran or Egypt. The first known description of the game is found in the book of manuscripts passed down from Wise Alfons, the King of Leon and Castilia (1251-82), which gives an account of 15 versions of the game known in medieval times as tabula. Illustrations of the boards can also be found in later English manuscripts dating to the end of the thirteenth century, and in the *Carmina Burana*. The earliest extant example of a backgammon board game is also dated to the late thirteenth century; it was already in the form of a box combining backgammon with the games of chess and merrills, as board game boxes have done ever since. (Board games, the catalogue of the exhibition held at the Palace Museum of Nagytétény, Museum of Arts and Crafts. Written by the curator of the exhibition, Szilvia Maros, Budapest, 1982; Walter Endrei and László Zolnay: *Fun and Games in Old Europe*. Budapest, 1986.
- <sup>5</sup> The poems were translated into Hungarian by Mihály Détsky. In: Baroque and Rococo. Budapest, 1991. cat. 2.16, p. 67-9.
- <sup>6</sup> Identification of the materials of the embroidery threads and characterization of the morphological types of the metallic threads were conducted with a microscope with an Opton operational mechanism. Quick chemical 'spot' tests were carried out to identify the metallic makeup of the metal threads.
- <sup>7</sup> Analysis of adhesive was carried out with a starch test.
- <sup>8</sup> Disintegration was quickened by the mordant used for the dyeing. This premise could not be proven without a colour test.
- <sup>9</sup> Adhesive: Methyl hydroxide ethyl cellulose (Glutofix). Beatrix Kastaly. Adhesive substances in book-binding, book and paper restoration. Course notes for book and paper restorers, National Széchényi Library, 1991.

The shrouds, sarcophagi, cartonnages and other funeral objects that accompanied the dead to eternal life, were painted for the upper classes in ancient Egypt. The deceased, funeral masks, and protecting divinities were represented. The paintings are quite impressive and these objects have been very much appreciated since their discovery. The paintings on funeral objects are often very fragile: taken out of the relatively constant climate of the tombs, and also with the passage of time, they became very friable. Therefore, they have been subjected to many conservation treatments. These were not always very appropriate, and now the objects need new intervention. Seven painted items, a wooden sarcophagus, a wooden chest, four linen mummy shrouds and a cartonnage (all belonging to the Musées d'art et d'histoire of Geneva, with the exception of a linen shroud, the property of the Musée des Beaux Arts of Lyon, inv. 1982-100<sup>1</sup>) came to our laboratory for examination and analysis prior to conservation or purchase.

[ ANNE RINUY ]

## Conservation of ancient Egyptian painted artefacts

In the literature, references exist on the painting pigments, either on colour symbolism in ancient Egypt,<sup>2</sup> or the pigments' chemical composition,<sup>3</sup> but relatively few give information on the binding media.<sup>4</sup> It is true that the small quantities of material used, mixed later with consolidating varnishes or adhesives, complicate the analysis. Identification of the binding media is a priority and a necessity for determining a conservation treatment. So, we concentrated on this aspect, not forgetting however to look at the pigments, and at the conservation materials used. Among the objects, three had not been consolidated at all, allowing us to analyse untreated, original material. The results obtained are presented below for three types of painted objects: a wooden chest, a linen shroud, and a cartonnage.

### Brief description of the items

- a. Two painted sides of a small wooden chest, dating back to the thirteenth-eleventh century BC (New Empire). The front represents the deceased, the scribe Amenemheb, with a curly wig, adoring Isis and Osiris, and was recently offered by a generous donor (Inv. A 1998-110.35 x 19.5 cm). The back represents the same Amenemheb, but with a shaven skull, like the priests of the time, also adoring the divinities (inv. 19297, 35 x 19.5 cm) (Fig. 1). It entered our Museum 50 years ago. The chest probably contained small figures which ancient Egyptians used to take with them for eternity, to protect them and do their work



FIGURE 1 Back of a painted wooden chest, 35 x 19.5 cm, thirteenth-eleventh century BC – Amenheb adoring Osiris and Isis. Musées d'art et d'histoire, Geneva

in their place, as explained by J.-L. Chappaz,<sup>5</sup> the curator of our Egyptian collection. The painting of the back is very friable; the painting on the front had been treated with an adhesive, which has since turned brown, and which greatly disturbs the appearance of the painting. Both painted sides need a new conservation-restoration treatment.

- b. The *Shroud of Geneva* is more recent. The painted mummy, accompanied by protecting divinities is typically Egyptian, but the face is a real portrait of a woman, wearing a pearl necklace and earrings, and she is shown with a nimbus. Its execution is very influenced by Roman painting (Fig. 2). It is dated c. AD100. The shroud was bought in 1985 for the archaeological Museum of Geneva and entered later into the Musée d'art et d'histoire. It was folded and packed in a small box, where it stayed until in 1997, when it was 'rediscovered'<sup>6</sup> (inv. D 957, 140 x 240 cm). The painting was very fresh, but the shroud needed conservation treatment.
- c. Finally, the painted and gilded feet of a mummy cartonnage, also attributed to the Roman period (second century AD), (inv. A 1998-165),<sup>7</sup> had been largely consolidated with different adhesives and needed new conservation treatment (Fig. 3).

## Experimental Analysis of the binding media

Microscopic paint samples were embedded in a polyester resin<sup>8</sup> in order to prepare cross-sections. They enabled observation of the paint layers and pigments under normal and UV light.

Analyses with specific coloration and heating tests on the cross-section of the whole painting structure indicate precisely in which layer each binding medium is present:

- a. Fuchsin S, Amido Black and FITC (fluoro-iso-thiocyanate) tests indicate the presence of proteins.<sup>9</sup> Fuchsin S is most appropriate for animal glue, the coloured protein is red. Amido Black II allows the detection of egg (white and/or yoke) and casein. The coloured proteins are blue. So, it is also useful for identifying animal glue mixed with red pigments. The different aspects of the resulting blue colour depend on the protein and on the possible presence of an emulsion. Both Fuchsin S and Amido Black II contain acetic acid and have a pH around 3.5. Acidic water-sensitive paint samples, i.e. containing a vegetable gum, can dissolve in the solutions. FITC is very appropriate for

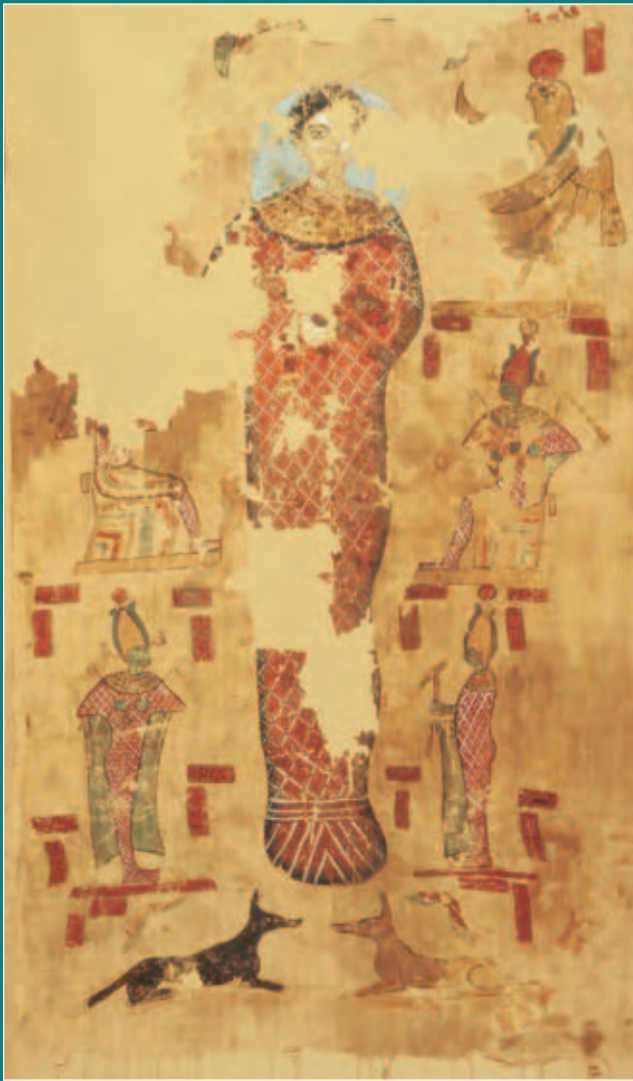


FIGURE 2 The Shroud of Geneva, painted linen, 140 x 200 cm, about AD 100 – Egyptian mummy with adoring divinities and a portrait of a woman with a pearl necklace and earrings. Musées d'art et d'histoire, Geneva

FIGURE 3 Painted and gilded foot fragments of a mummy cartonnage, second century AD. Musées d'art et d'histoire, Geneva

such cases, since it dissolves in acetone. FITC becomes brightly fluorescent under 450-490 nm UV light exposure, when bound with proteins. So it allows the detection of a protein medium even in dark colours. Though all the proteins react the same way, very small quantities can be detected.

- b. Heating tests characterize waxes, resins, oils, gums, or their mixtures, with or without proteins.
- c. Specific coloration of carbohydrates indicate the presence of gums; thin layer chromatography (TLC) can confirm their presence.<sup>10</sup>

### Analysis of pigments

- a. Mineral pigments are identified by X-ray fluorescence spectrometry (energy dispersive, EDXS) and X-ray diffraction.<sup>11</sup>

- b. Scanning Electron Microscopy (SEM), coupled with EDXS, performed on paint cross-sections indicates more precisely in which layer the pigments are present.

## Results of analysis

### Binding media

All the paintings analysed contain only a small quantity of binding medium.

The same media were identified for all the objects:

*animal glue* for the white ground, maybe with some *vegetable gum* (probably *gum arabic*) (Figs. 4-7);

*vegetable gum* for the glossy colours, some also containing a small amount of *animal glue*.

## Pigments

Calcite ( $\text{CaCO}_3$ ), and gesso ( $\text{CaSO}_4 \cdot 2 \text{H}_2\text{O}$ ) for the white ground and white colour;  
red: hematite ( $\text{Fe}_2\text{O}_3$ );  
yellow: ochre (clay containing iron oxides, such as goethite a –  $\text{FeO}(\text{OH})$ ); orpiment ( $\text{As}_2\text{S}_3$ );  
orange: realgar ( $\text{As}_2\text{S}_2$ );  
blue: Egyptian blue (similar to natural cuprorivaite [calcium copper silicate]  $\text{CaCuSi}_4\text{O}_{10}$ );  
green: Egyptian green (cuprowollastonite ( $\text{CaCuSiO}_3$ ); atacamite [ $\text{Cu}_2\text{Cl}(\text{OH})_3$ ];  
black: charcoal.

## Painting technique

The paint of the different objects has been applied in a similar manner: usually one layer of colour lying on a white ground (Figs. 4-5).

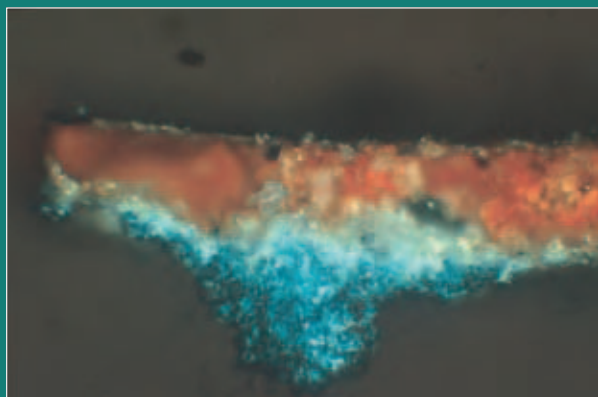
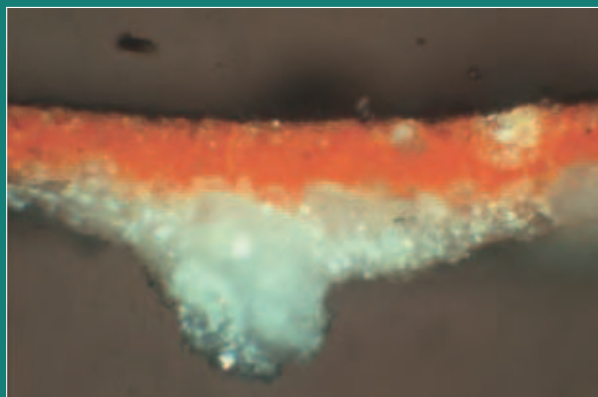


FIGURE 4 Painted and gilded feet of a mummy cartonnage. Microsample in a toe, cross-section. Red colour: hematite, thickness 100 microns ( $\mu\text{m}$ ). White ground: calcite, 250  $\mu\text{m}$ . Optical microscope, original size: 0.60 x 0.90 mm

FIGURE 5 Painted and gilded feet of a mummy cartonnage. Same cross-section as in Fig. 4. Specific coloration for proteins: Amido Black II indicating that the white ground medium is animal glue. The red colour is soluble in the acidic-specific coloration, pointing to the probable presence of a vegetable gum; Optical microscope, original size: 0.60 x 0.90 mm

The *Shroud of Geneva* differs in having no white ground: the colours were painted directly onto the primed linen textile (Figs. 6-7).

On the two sides of the wooden chest, the blue colour is made of Egyptian blue – which now appears black due to a consolidant – (e.g. in the Osiris divinity) is applied onto a red ochre layer containing charcoal (Fig. 8). The painted side was also surrounded with a blue border of Egyptian blue. In this case pigment is lying on a thin black charcoal layer (Fig. 9). So, the same blue pigment, painted on different places, had a different hue, due to the colour of the underlying layer. According to the curator, the brown-appearing layer applied onto the fragile coarse Egyptian blue can now be considered as a recently introduced consolidant, since we identified it as being a mixture of gum and animal glue and not a resin.

The cartonnage mummy had been partly gilded. The 3-4 micron thick gold foil was applied onto a fine pink bolus (about 15 micron thick), made of a small quantity of red ochre mixed with fine ground calcite. The binding medium of the bolus is probably egg white, while the thick white calcite ground is bound with animal glue.

## Conclusion

The palette of pigments used corresponds to former analyses of similar Egyptian objects.

Most interesting was to discover that the technical finesse for obtaining different values of colour, i.e. the Egyptian blue hue varies according to the composition of the underlying layer, already existed 32 centuries ago. As recently published by Klocke and Lehman,<sup>12</sup> and nearly a century ago by Raelhmann, who also analysed wall paintings and mummies of the New Empire (around 1200 BC),<sup>13</sup> this method of intensifying and modifying the blue colour of the coarse-ground blue pigments has been known for many centuries. It was believed to have appeared in Europe during the twelfth century AD, since Theophilus described the way of applying a grey or black layer, which he called ‘Veneda’. But as Klocke and Lehmann, and Raelhmann mention, Plinius already wrote about it in his *Historia Naturalis*, in the first century AD.

We could also confirm the use throughout centuries of animal glue (mainly in the white ground) and, probably, the vegetal gum arabic (mainly for the more glossy and translucent colours; animal glue gives a matt aspect) as binding media of Egyptian paintings.

The quantity of medium used is so scarce that it has been difficult to identify.



FIGURE 6 Painted Shroud of Geneva, grey nimbus around the portrait. Microsample cross-section; the grey colour (thickness 60  $\mu\text{m}$ ) is painted directly on the primed linen textile. Optical microscope, original size: 0.60 x 0.90 mm

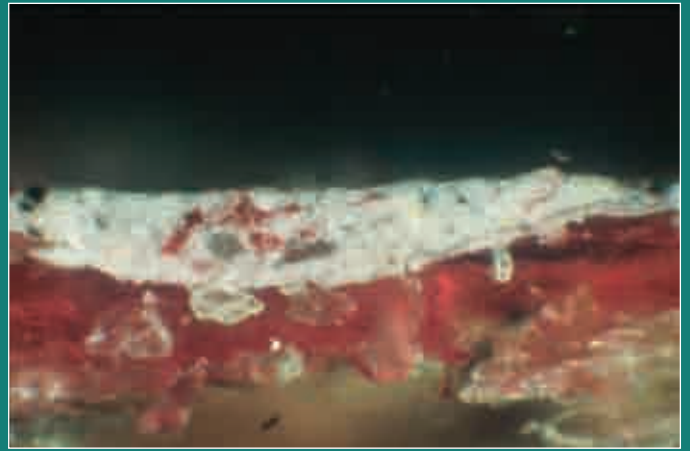


FIGURE 7 Painted Shroud of Geneva, grey nimbus around the portrait; same cross-section as in Fig. 6; Specific coloration for proteins: Fuchsin S indicating that the grey colour contains some animal glue (red filaments) and showing the animal glue-primed linen textile (red coloured fibres) Optical microscope, original size: 0.30 x 0.45 mm



FIGURE 8 Back of a painted wooden chest; Microsample in Osiris' throne; Cross-section of the blue colour; Egyptian blue (> 150  $\mu\text{m}$ ) on red ochre mixed with charcoal (10-15  $\mu\text{m}$ ). On a thick layer of a mixture of calcite and gesso (100-150  $\mu\text{m}$ ). Optical microscope, original size: 0.30 x 0.45 mm



FIGURE 9 Back of a painted wooden chest. Microsample in the blue border: cross-section of the blue colour; Egyptian blue (100  $\mu\text{m}$ ) on a charcoal layer (10  $\mu\text{m}$ ); On a thick layer of a mixture of calcite and gesso (100-150  $\mu\text{m}$ ), Optical microscope, original size: 0.30 x 0.45 mm

The use of small quantities of media, and the use of water-sensitive media, like gum arabic, has a great influence in conservation treatment: painted textiles such as the shroud of Lyon,<sup>14</sup> and so-called Shroud of Geneva, cannot be washed! We thus had to locally treat the Museum label which had been glued onto the textile just above the head of the portrait with enzymes.<sup>15</sup>

The low quantity of binding medium also leads to loss of the painting material. Most of the various water-sensitive consolidants or adhesives like animal glue, PVA<sup>16</sup> or gum arabic, were applied

onto the painting in thick layers which have now turned brown. They penetrated into original binding medium, and now probably cannot be removed from the paintings without causing further damage.

The analyses of the binding media (and of possible consolidation material) prior to any conservation treatment seems to be a continuing necessity. As already stated, the methods used do not need very sophisticated equipment and provide the conservator with sufficient information to carry on appropriate intervention.

## Acknowledgements

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The ecstatic reception of Albert Gayet's Egyptian discoveries at the Paris World Exhibition of 1900 went a long way to foster developments in the methods used for textile conservation and restoration in France. (Gayet's work was first supported by Émile Guimet and then the Chamber of Trade and Commerce). Conservation and restoration treatment of the finds was necessary before their exhibition to a wider public. Sadly, no documentation of the treatment was kept at the time, and so the fact such treatments did occur can be deduced only from careful examination of the objects. Scarcely any written material could be found on the restoration of the textile objects in the course of a thorough investigation of the records of the Textile Museum of Lyon. An exception is a letter dating to 1952, in which the donor of Charles de Blois's tunic, Messier Chappé, refers to the fact that he had given the tunic to Messier Robert, an employee of the Musée des Invalides with expertise in costumes, for repairs.

[ MARIE SCHOEFER-MASSON ]

## The evolution of conservation and restoration as reflected in the Coptic textile collection of the Textile Museum of Lyon

**N**ot until the more extensive investigation and restoration of two cloaks found in Antinoöpolis were carried out in 1964–65 are there any further revelations to be found on the subject. A. Geijer, senior member of the Pietas Restoration Centre in Stockholm, conducted the research, while Margit Wikland carried out the restoration of the artefacts. Sigrd Müller-Christensen, a pioneer of conservation and restoration, came to work at the Bavarian National Museum in Munich right after the Second World War.<sup>1</sup> She carried out treatment on the two cloaks from Lyon free of charge, but was lent one of

the pieces for the following twenty years. (inv. no. 34872). The restoration employed techniques still in use today, notably the use of dyed support fabrics and conservation stitching. The stitches were made with some relatively thick silk thread, and as a result are rather prominent. The use of silk crepe line seems to have begun at this time. The latter material did not, however, gain its present brown colour in the course of this restoration.<sup>2</sup> No documents referring to the treatment of these textiles were found.

In a letter dated the 4<sup>th</sup> of June 1976, M. Tuscherer, the Director of the Museum at the time, refers to Margarete Classen-Smith, with regard to

conservation carried out by her as the only French expert in the field:

Though I am full of respect for the work of Mrs. Classen-Smith, I must add, that her methods are elementary, ... She has no purpose-made equipment for the cleaning, dyeing or drying procedures ... The Abegg Foundation situated near to Bern is the lead institution in the field. I must confess, I believe that we ought to have all conservation work done abroad.<sup>2</sup>

This letter, which is addressed to Paul Bressol of the Louvre, Director of the General Purpose and Equipment Department of the Directorate of French Museums, is quite expressive of the situation of conservation in France at the time. The correspondence is due to the fact that Bressol was very much concerned with these issues, and knew the few European textile conservators, including Mechtild Flury-Lemberg, the head of the Conversation Department of the Abegg Foundation [Abegg-Stiftung]. Flury-Lemberg developed the workshop for the incomparable collection of the Abegg-Stiftung, founded in 1963, with the full understanding and support of the founder and donor. She kept up a lively professional contact with the Director of the Textile Museum of Lyon. This is what made the conservation of twenty valuable textiles in our collection possible, including the silk woven goods of Boyide [Buyid], on which she worked together with G. Viall.<sup>3</sup>

Conservation reports were not prepared; such documentation was not yet routine at the time the author joined the Abegg Foundation as a student in March of 1975. The action taken can only be deciphered by careful examination of the objects and how they are assembled, and the overall impression given by the item on display. Characteristics included the use of a thin, rather dense, dark pressed-fibre board, which was covered in a raw silk cloth of grey colour, without the insertion of a padding or insulating layer of cotton. The extremely fine silk textiles were placed under a covering of protective glass. The glass is attached with sprung metal clips, which are not conspicuous, but do exert a somewhat uneven pressure upon the mounted textiles. The same can be said about the documentation of all earlier interventions: only the frame and the means of securing the glass provide evidence that restoration had been carried out, or that some steps had been taken to ensure a more attractive appearance. (Fig.1)

Fragments now in the collection of the Textile Museum of Lyon were at times washed on the site of the excavation. They were then often mounted with glue or red sealing wax (a procedure followed for the Coptic object no. 24439 called 'Sabina's Shawl' by

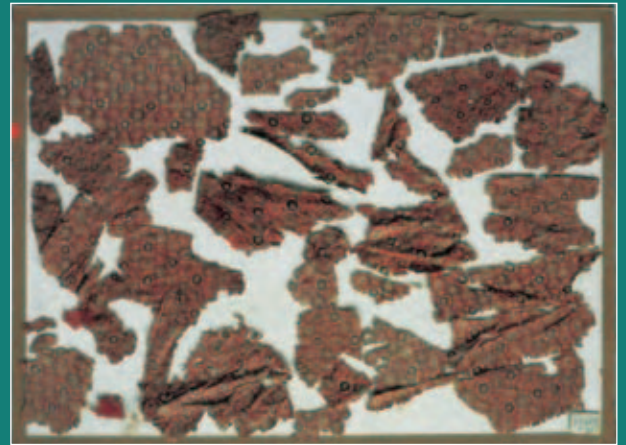


FIGURE 1 Islamic fragments from the ninth and tenth centuries (inv. no. 41664), prior to treatment in 1992. Mounting was achieved with two planes of glass, sealed with strips of paper around the edge

A. Gayet). A quotation from a letter sent by Émile Guimet, another of the great donors of Lyon, and kept carefully in Turin since 1902, is informative: 'I am sending you [...] two pieces of card, onto which I have mounted specially prepared textile fragments.'<sup>4</sup>

Based on the objects found in the Lyon collection, it becomes apparent that more than one framer worked on the collection in the 1920s. Labels found on the back of the supporting sheets, have the following inscriptions: 'Gilding, Framing, Mirror Shining, L. Roux, 2, rue Vabecour, Lyon', or 'Gilding, Mirror Shining, the workshop of Thorel, Chatelain and Bossy, 27, quai de l'Archevêché, Lyon'.

The way in which the finds were mounted at the time is indicated by their current state. The textile finds of smaller dimensions (50 x 40 cm) lay stretched without any insulation, on everyday cardboard, that has discoloured to brown with oxidation. The larger historic textiles (c. 100 x 50 cm) were stuck down with adhesive applied in a number of places. A pane of sand-blown glass was placed over the textile, and the whole assembly finished with a plain or gold-painted wooden frame. At best, a layer of new fabric was inserted between the card and the old material. Black velvet was used for the purpose sometimes, as in the case of the finds from Achmim (no. 32662 and 25236), the Dioscuro fragments (no. 22627), as well as for the Byzantine (no. 31347) and Amazon fragments (no. 27585), the latter having been bought from the Chapel of Sens treasury in 1904. The procedure was the same in the instance of no. 25957, which the museum bought from the Baron House of Paris. The procedure therefore seems to have been accepted.

Sometimes the finds were mounted upon cream-coloured fabric or satin, chosen to imitate silk; the extraordinary Byzantine fabric (numbered 27386) from the monastery of Mozac may be taken as an example of this practice. (Fig. 2) Adhesives with a starch base were also in use for mounting antique textiles. This glue was either used in spots, or more infrequently, applied to the whole surface of the material. Glass and frames were then fitted, as in the case of the Sassanid silk no. 26812/8. (Fig. 3)

More brittle fragments, with patterns on both sides, were placed between two panes of glass. The archaeologist Jakob Heirli writes at the end of the nineteenth century: ‘the new found textile materials were spread out on the ground to dry in the open air, and then placed between two panes of glass, whose edges were sealed with strips of paper.’<sup>5</sup> Many objects treated in this manner can be found in storage at the Lyon Museum.

The technique of warm gluing also crops up in places during the 1960s, but luckily, unlike in England, it was rarely used in France. It was tried

out to sad effect on one of the most significant pieces of the Textile Museum of Lyon, the ‘Fish Carpet’ numbered 28927; the label on the inner edge of the frame records the work was carried out by André Ház. The warm adhesive has left permanent marks on the treated surface, and these have darkened over time with oxidation. This side of the ‘Fish Carpet’ is also a perfectly worked surface, since the piece does not have an ‘underside’.

In the meantime, Margarete Classen-Smith also carried out textile conservation treatments in the department between 1965 and 1968 on some of the objects to be found in the cathedral treasury of Sens (the chasuble of Saint Ebbon).<sup>6</sup> It seems that she did not often work for museums, or not for the Museum of Lyon at any rate, as not a single letter or invoice has come to light. Yet she must have employed the above-mentioned technique of gluing on the veil of Saint Lazarus kept at Autun.<sup>7</sup> The then director of the Museum, Arizzoli Clémentel decided to establish the conservation workshop of the Museum in 1985. This was the first institute of its kind in France,



FIGURE 2 Fabric of Mozac (inv. no. 27386) prior to treatment in 1992. The piece was mounted on cream-coloured satin and covered with sand-blown glass



FIGURE 3 Brocade of Antinoöpolis (inv. no. 26812/1). It was framed in 1887–88 in the fashion accepted at the Textile Museum of Lyon. The piece decorated the cuff of the cloak from Antinoöpolis, which had undergone conservation treatment in Stockholm in 1965. It did not arrive at the museum together with the cloak. The decoration and the cloak are stored separately even today

founded on the model of the Abegg Foundation. The workshop carried out conservation work on the collection, which had until then been cared for in a rather simple way by framers, or handled in exceptional cases by experts called in from institutions in Stockholm or Switzerland.

In general, one finds that a much more thorough knowledge of the material effect of conservation materials and interventions became the norm all over Europe from 1980–85 onwards. The notion of washing or cleaning becomes more complex and gains in accuracy. Nonetheless, instructions do not appear in print; the techniques are passed on from workshop to workshop via expert-training courses. More suitable support fabrics are selected, and more importantly, as mentioned above, they can be dyed to blend with the original piece. The fastness of the dye is also an important matter. An increasingly aesthetic effect is sought in exhibition of the pieces, while the basic aim is to mount textile finds in the best possible way.

The methods in use at the Museum of Lyon since 1985 have taken strides to achieve these aims. Special care is also taken in the placement of the protective glass panes at the museum. It is no longer allowed to exert pressure on the fabric as had been done at earlier times. There is a preference for glass over transparent synthetic sheeting, because the latter is electrostatic, and is therefore not suitable for covering archaeological textiles. Space, of greater or lesser depth, is left between the textile find and the glass pane. Various means of placing the glass have been developed, e.g. the use of card mounts or adjustable grooves.

The conservation and restoration of textiles allows for a thorough, high-level examination of the artefacts, as well as the comparative examination of parts of any identical textiles that are held in other institutions. Museum collections of the nineteenth century can be examined more comprehensively since textiles with the complete design repeat, of the kind seen in textiles acquired by the Abegg Foundation in recent years, have entered the art market. These textiles give immense help in coming to a better understanding of the complete design of finds. The deduction and reconstruction of the connections between dispersed pieces becomes possible, as the following discussion of the fragments of a hanging will show. Publications play a particularly important role in this regard. Sad to say, there are too few publications in France.

Some textile fragments of larger dimensions were only 're-discovered' in storage in 1992–93, and therefore had not been subjected to any sort of examination or treatment. Thus a number of pieces,

such as the chlamis no. 47331, still lie in the original packaging in which they were put after excavation. Neither their identification, nor their conservation has been undertaken as yet. Among them are pieces that had patterned parts cut out (a practice accepted in the nineteenth century), leaving them bereft of their context. This was what happened with the piece numbered 24439 called the 'Shawl of Sabina', which was bought by the Museum in 1886 from an antiquities dealer called Tano.

It is a natural stage in development that it becomes imperative to investigate or re-instate the condition of artefacts preceding the earliest attempts at conservation. Such interest gives a new importance to the hitherto unpublished accounts of earlier methods. The first conservation of a piece for exhibition often fulfils its function to the present day. It happens that real, active relationships between various museums are formed. Two-way loans of artefacts allow textiles to be made whole, while a wider range of information also becomes available. In consequence, we reaffirm that the reversibility of conservation and restoration is important. Seven textile artefacts from Antinoöpolis are introduced below as an illustration of the above proposition. These have not been published before; their investigation took place in 1999–2000, on the occasion of their conservation and restoration treatment.

## 1) Conservation of a cloth, fourth-sixth century

(Inv. no.: 28520/47. Recovered in the course of the A. Gayet excavation in 1896–97.)

Linen cloth with a pile of crimson weft yarn. Dimensions: 187 x 246 cm. (Figs. 4-5)

This large cloth has interwoven geometrical motifs placed in the corners around a double symmetrical axis. It resembles the altar cloth depicted in the San Vitale mosaic of Ravenna (sixth century). It was last used as a shroud, which explains the stains towards the centre of the linen cloth. De-restoration was necessary to reinstate its original condition.

The de-restoration did not meet with any insurmountable difficulties, since the larger, extremely fragile fragments had been fixed by simple sewing onto a highly starched, bright cream-coloured cotton material of an inappropriate quality. Despite the soiling, the composition could be deciphered clearly. The organic materials saturating the fibres were not considered hygienic for the people working with the cloth, which had never been washed, so we decided to wash it. Re-establishing the form of the cloth and supporting it were the next steps, using a large-sized linen ground fabric of a light crimson



FIGURE 4 Covering cloth from Antinoöpolis (inv. no. 25520/47) prior to its restoration in 2000, with stitches fixing it to a rough, stiff canvas

FIGURE 5 Covering cloth from Antinoöpolis (inv. no. 25520/47), following restoration



shade matching the original. The fragments and parts where the ground weave is missing were supported by stitching.

Fixing the cloth onto an appropriate mount was an important phase of the whole intervention. Such a large cloth could not be placed under glass, due to the weight of the glass. The pile of the weft yarn also precluded mounting under glass. The following solution was selected: the cloth, which had already been supported, was stitched on to a lightweight, cloth-covered board. The preparation of the board was as follows: a standard wooden stretcher frame with a diagonal support was covered with 4 mm thick card sheets. The resulting board was then covered in a double-layer, starch-free, cotton padding material, to which the supported cloth was stitched. The resulting mount is lightweight and easy to handle. The mounted cloth can be exhibited in a glass case. (Conservation and restoration were carried out by Sylvie Brun, with the guidance of Marie Schoefer.)

## 2) Cloth or cover, sixth-seventh century

(DUL 17, custodial collection of the University of Lyon. Recovered in the course of the A. Gayet excavations of 1896–97. First exhibited in Paris in 1900, prior to any conservation.) (Figs. 6-7)

Linen cloth measuring 255 x 123.5 cm with square pieces of tapestry weave in its four corners. The cloth was exhibited, in its wholly extant form, at the Lyon museum in 2000. The square panels depict scenes from the Nile with nereids and fish. Both hemmed edges, as well as the fringe composed of the warp threads, are extant. The object not only affirms the importance of Nilotic motifs, but also makes it possible to examine the way in which the square pattern was used, and the placement of the squares in the composition; in most instances these squares are the only parts to have survived.

The cloth, which had previously been indecipherable due to dirt, was washed, aligned and fixed onto



FIGURE 6 The carpet (inv. no. DUL 17) prior to the intervention of 2000, in the 'as found' state of excavation

FIGURE 7 The carpet (inv. no. DUL 17), following the intervention carried out during 1999 and 2000

dyed linen cloth. A fine, semi-transparent material (silk crepeline) was stitched onto it with great care, making sure that the decorative corners were never covered, and always remained visible. The purpose of the silk covering was to hold a number of frayed parts in place while avoiding extensive repairs directly affecting the original cloth. The cloth was mounted in a way similar to the method outline above. (Alice Vrinat and Agathe Strouk carried out the conservation and restoration work under the guidance of Marie Schoefer.)

### 3) Weaver's practice piece, fifth-seventh century

(28520/154. Gift of Émile Guimet (1907). Place of origin: Antinoöpolis.)

This piece of cloth, used as a model in teaching the weaver's craft, is made with wool weft and a linen warp. Not counting the warp yarn that has been left unwoven, its dimensions are 39 x 36 cm. The conclusion that the cloth must have been the practice piece of an apprentice weaver was reached in 2000, and a number of studies dealt with it in the years thereafter. Preparations for its exhibition took the traditional form: the mount was made by applying a layer of acid-free card to a wooden board; the mount was then covered with starch-free, cotton padding material; finally, a show fabric of beige material was applied. The object was stitched on to this show fabric, and was then covered with glass. A gap was created between the mount and the glass, so that the glass would not exert any pressure upon the object, by inserting tiny wedges under the clips holding the glass to the mount. (Conservation and restoration carried out by Denise Cotta.)

### 4) Fragments of a hanging, with column segments and a variety of patterns, sixth-seventh century

(MTL 28520/22, 23, 116 and DMBA 48, 107, 122, 123, 124. Gift of Émile Guimet (1907). Place of origin: Antinoöpolis.)

Linen cloth of greatly varying length, but with a general width dimension of 12 x 12.5 cm. It is similar to the large Dionysus hanging at the Abegg Foundation in Switzerland; common elements established between these two artefacts include: motifs, measurements and the weave count. The pieces must have been made in an important workshop of Antinoöpolis; this is confirmed by a weaving pattern at the Museum of Lyon, and by a fragment of a capital found in the Louvre in 2001 (E 28172), which bear a strong resemblance to those seen on the Dionysus hanging, and also came from the 1906 excavations

of Antinoöpolis. The fragments were each fixed separately, after they were exhibited in various forms, singly and together. The arches connecting the columns are missing on the pieces in Lyon and at the Louvre. Careful spacing of the columns was used to give the impression of the missing arches. Each fragment was then fixed in place and covered with glass, leaving an air space between object and glass. In the Lyon exhibition of 2000, the public could gain some impression of the original design of the hanging via a representation of the presumed original form of the cloth painted on the wall behind the mounted fragments. (Conservation and restoration carried out by Marie Schoefer.)



FIGURE 8 Contents of the package received from the excavations of Antinoöpolis (inv. no. DUL 35)

FIGURE 9 A fragment from a tunic (inv. no. DUL 35) after conservation in 1999 and 2000. The detail depicts the snake of Jason, or according to another interpretation, of Adam and Eve as it twines around the tree

## 5) Tunic fragments, fifth-seventh century

(DUL 35. Found in the same grave as the shawl with the inv. No. DUL 17, in Antinoöpolis, in the course of the A. Gayet excavations of 1896–97) (Figs. 8-9)

Fabric woven from linen and wool yarns. Dimensions: 12.5 x 46 cm; 35.25 x 17 cm; 20 x 6.5 cm. The two parallel edges of the tunic have a green and dark blue ground, with superimposed geometric motifs. The ground colour in the centre is Turkey red. Medallions portraying human and animal figures alternate with half star-shaped forms with floral motifs. One of the particularly finely woven motifs depicts a snake, in blue and white colours, twisting around a tree. (Fig 9) Apart from the typical Nilotic motif, there is also the rare scene of a cherub holding a duck, which allows for the two interpretations noted below. The figures can either be recognized as Adam and Eve, as shown on the cupola fresco of the fifth-century graveyard chapel of the Kharga Oasis, or as Medea and Jason, as depicted on the water jug of Lucenia (see Millingen 1813, image no. 6, p.12-13) or on one of the textiles of the Museum of Medieval Art.<sup>8</sup>

Identification of the fragments became possible during the process of restoration. Until then they had been left, still wrapped in paper, among the materials found during Albert Gayet's excavation, with the following note: find no. 35, grave no. 1377. The iconography of the fragments came to light during their washing. The weaving is exceptionally fine. It deserves mention that, following the restoration, Dominique Benezath discovered another piece of the tunic in the Louvre (inv. No. AF 5553); this suggests that the tunic was disassembled immediately after its excavation.

The fragments are individually mounted on acid-free card mounts covered with linen, without a protective glass cover. The small fragments are the remains of a tunic that is only partially extant; the placement of the separately mounted fragments is left to the discretion of exhibitors. (Conservation and restoration carried out by Marie Schoefer.)

## 6) Tunic with dancers, fourth century: five fragments kept in three museums

(MTL 28520/38; DMBA 7 and EG 2410; Louvre E 28067 and E 28072. Recovered in the course of the A. Gayet excavations of 1907 in Antinoöpolis.) (Fig. 10)

Linen cloth with decoration in wool yarn. The dimensions of the tunic when whole were: 77.5 x 146.5 cm. Pieces of the tunic were discovered over several years; their assembly, conservation and

mounting were carried out in two phases. The fragments were held in three museums. Couples dancing under arches decorate the tunic, while a row of busts decorates the area around the neck. Only work in a purple colour can be found on the unstarched linen cloth; a mottled weave achieved with the linen and the purple wool yarn, makes up the background of the silhouettes. Ochre spots of oxidation on the surface of the linen mark the positions of the bands that were used to bind the corpse buried wearing the tunic.

The conservation of the two largest pieces from the front and the back of the tunic was first carried out in Lyon in 1995, before it was known that further fragments of the tunic were in the Louvre collection. Even this first phase of conservation required the cooperation of the Textile Museum of Lyon and the

Museum of Applied Arts, Lyon, which each had to 'surrender' the fragment in its possession.

The shape of the tunic was given full consideration even for the mounting of the two fragments in 1995. The supporting linen fabric was left much larger than the fragments, and was extended to the supposed waistline. Thanks to co-operation with the Coptic division of the Department of Egyptian Art at the Louvre, three further pieces could be added to the tunic in 1999. This, however, necessitated an enlargement of the ground fabric, a modification that could best be carried out along the fold at the waistline established in 1995. New material was added to the existing support fabric along this line, and the three additional fragments were added to that.

The deductions made from certain empirical observations made during the intervention of 1995 allowed for the continuation of the conservation and restoration, without having any adverse effect on the pieces conserved in 1995. Of the three Louvre pieces, only the two fragments with the inv. numbers DMBA 7 and EG 2410, which had been restored in the nineteenth century by mounting onto card, as well as a fragment restored by Mrs. Carbonnel in 1979, by sewing on to an undyed, beige-coloured, stiff material, needed a de-conservation treatment before they could be combined with the other fragments. A tunic of discernible shape and pattern was successfully assembled from the previously scattered fragments. (The conservation and restoration were carried out by Mercédez Fernandez Alvarey and Alice Vrinat, under the guidance of Marie Schoefer.)

FIGURE 10 A tunic with dancers (inv. nos. 28520/38; DMBA 7; EG 2410; L.E. 28 072 and E. 28067) after conservation and assembly of the fragments from three different museums



## 7) Woven clavus band with painted details, fifth-sixth century

(MTL 35555. Pozzi bequest, 1971) (Fig. 11)

The object is the lower part of an extraordinarily finely woven decorative band, depicting a Nubian shepherdess with a baby on her back. Next to the shepherdess, we find two sheep grazing on a faded red background. An edge of little white waves, on a green ground, frames the image. The colour of the skin of the human figure, the pleats of the tunic and the sheep's ears are highlighted with a dark brown colour, which is painted on. The composition of the paint was analysed by Anne Rinuy, of the History Laboratory in Geneva, establishing that its base is natural brown clay, with a binding agent mixed from oil and glue of animal extraction; the paint was therefore deduced to be authentic, i.e. part of the band's original materials and construction. This piece, which is still considered unique, deserves special attention. Of course, it was never washed, as the paint is water-sensitive. It had fortunately remained in pretty good condition,

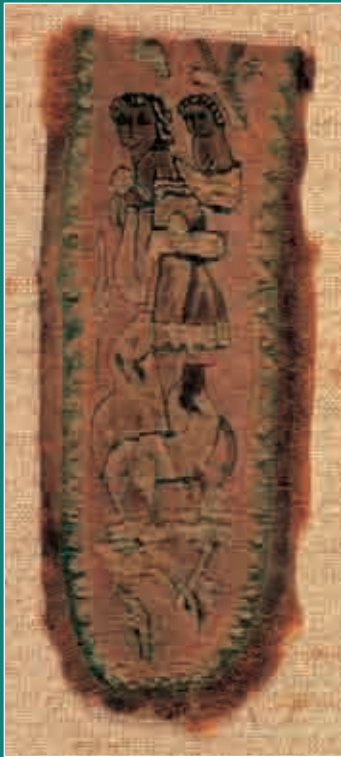


FIGURE 11 Tunic ornamentation (inv. no. 35555), linen and wool, with outline painting

so treatment was restricted to supporting it onto dyed linen cloth, and covering it with a glass pane, leaving an air space in between.

After its exhibition in 2000, Dominique Benazeth called my attention to four medallions at the Brooklyn Museum of New York with similar ornamentation (44143 a-d). A bucolic scene is shown on one of the medallions, with the woman holding her child appearing in the company of the shepherd, a flautist, a dog and other animals. Another medallion depicts a feast. We see a well, and the woman playing with her child once again on the last medallion, as well as the shepherds, and perhaps Jason, as he prepares to kill the snake twining around the tree. These four medallions also originate from Antinoöpolis, and the brown paint can also be discerned on them, just as in the case of the tunic band in Lyon. Close examination of the band during conservation led to investigation of the composition. The composition of the paint has not

been verified in the case of the medallions in New York. Another piece may have come to light at the Medieval Museum, but it has not yet been examined. (Marie Shoefler conducted the conservation and restoration treatment.)

## Conclusion

The conservation of textile artefacts being prepared for the 2000 exhibition in Lyon led to the identification of further new pieces, and provided new data on the production techniques employed by Coptic craftsmen; last, but not least, it resulted in working out new methods for conservation and restoration, and for mounting and exhibiting the textiles. The treatment provided the opportunity to reassemble fragments that been scattered over many years, treating them as single, whole objects. Research into these textiles shed light on the true significance of the excavations of Albert Gayet.

It is important to note that the interventions of our predecessors to conserve and restore objects

played a major role in the process of developing our methods. Some conclusions of fundamental importance could be reached based on examination of their work, despite the fact that not a single line of written documentation was available to provide answers to the questions that arose. Without the experiences of the nineteenth century and the early twentieth century, it would not have been possible to develop the current methods of conservation and exhibition.

I take this opportunity to thank Dominique Benazeth, who always gave inspiration, and provided valuable data in the fields of both art history and conservation history, as a person familiar with the archives of the Louvre. Finally, I would like to express my gratitude for all the expert advice given me by Ágnes Timár-Balázszy in connection with various treatments for textiles, and for the link she made between the fields of chemistry and conservation. The development of conservation and restoration is due to the cooperation between such varieties of expertise. The present study is a first attempt to outline the history of the conservation of textile finds.

## Endnotes

- <sup>1</sup> Unpublished course, held in 1975, led by Mechthild Flury-Lemberg, herself a student of Sigríd Müller-Christensen.
- <sup>2</sup> These details were confided to me in 1988 by G. Vial.
- <sup>3</sup> Flury-Lemberg, M.
- <sup>4</sup> An unpublished dissertation by Thalia Bouzid (IFROA, 2000).
- <sup>5</sup> Fiette, A. 1997. Tapestry restoration, an historical and technical survey. *The Conservator* 21:28-36.
- <sup>6</sup> Guion-Argenton, C. 1990. *Restauration de la dalmatique de Saint Ebbon*. [Restoration of the Chasuble of Saint Ebbon] IFROA (unpublished report.).
- <sup>7</sup> Valérie Marcelli, V. and Wallut, C. 2003. Le Suaire de Saint Lazare d'Autun: une restauration plus importante que prévue. *Coré: conservation et restauration du patrimoine culturel*, 14: 21-9. [Conservation of the veil of Saint Lazarus in Autun.]
- <sup>8</sup> D. Bénazeth, fellow of the Coptic department of the Louvre, brought my attention to this information in a letter of the year 2000.

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In 2002 the Hungarian National Museum (HNM) purchased nine pieces from a set of eighteenth-century, Neapolitan Nativity crèche figures, which must have belonged to a set of many figures used to re-enact the story of Christ's birth. The HNM set consists of two Virgin Marys sitting on stools, a St. Joseph, a woman acting as midwife, two shepherds, a kneeling king, a noblewoman and an angel. (Fig. 1)

[ ENIKÓ SIPOS ]

## Figures from a Neapolitan Nativity crèche

**T**he history of setting up a Nativity scene started in the town of Bethlehem. The mystery of the Nativity has been re-enacted with statuettes, and partly with living figures, for a long time.<sup>1</sup> The art of Nativity crèches, which developed over the centuries, is called *Presepio* in Italian, *Krippenkunst* in German, and *Bethlehem* in Hungarian. The custom of putting up a manger started in Italy when Pope Theodosius (642–649) took away the wooden boards of the Holy Manger from the Muslim conquerors, brought them to Rome, and safeguarded them in the Basilica of Santa Maria Maggiore. There we find what is probably the oldest incomplete Nativity crèche, carved by Arnolfo di Cambio (c.1250–1301), with figures that are half life-size.<sup>2</sup>

In 1223, St. Francis of Assisi set up the first Nativity manger, which was surrounded by living figures. This custom became widespread from that time on.<sup>3</sup> It became a real Nativity crèche when the figures of shepherds and the three magi were added. The custom became quite popular in the fifteenth century.<sup>4</sup> The Nativity crèche, which was

initially set up only in churches, slowly spread and reached people's homes by the seventeenth century. Aristocrats rivalled each other in setting up bigger and more artistic crèches in their palaces. At first the figures of Mary, Joseph, angels, oxen and donkeys were put beside the statuette of the baby Christ in the manger. Later the scene was gradually extended with more and more figures from the story of Christ's birth.

### Nativity crèches in Naples

The largest and most artistic Nativity crèches were from Naples. The custom was probably introduced to Naples from Tuscany in the fourteenth century. At first, the Nativity crèches in Naples also consisted of a few life-size figures. Later, in addition to the three magi and their several attendants, the entire everyday life of Naples was represented with all its craftsmen, vendors and a marketplace. Naples became the true centre of crèche-making in the seventeenth



FIGURE 1, a-e. Some of the Nativity crèche figures from the Hungarian National Museum

and eighteenth centuries.<sup>5</sup> It was at that time when the production of adjustable figures started. Their height was limited to 35-40 cm instead of the life-size figures. The large, static figures, carved from one piece, appear next. These were later replaced by figures built on wire armatures with terracotta heads and wooden limbs.

They were dressed up in richly decorated clothes. (Fig. 2.) With the flexible wire braces, it was possible to position the figures in a more lifelike way, allowing more freedom in composition. The new style was created by Giuseppe Sammartino. Naturalistic representation is typical of the style in Naples. Each figure has its own personal character.<sup>6</sup> The materials of the background and the surroundings were moss, branches of wood, cork, or cardboard. The various perspectives within a scene were made possible with figures of different sizes.<sup>7</sup>

In the course of time, a specialist industry developed in Naples to make Nativity crèches. They were made by famous artists, sculptors, architects, goldsmiths and other Neapolitan craftsmen who made the crèches to order from prefabricated components; some made the limbs, others made the clothes or the small accessories, wax flowers, vegetables, musical instruments, and small objects which were called 'finimenti'.<sup>8</sup> Signed heads have been found but not all of them are authentic, as some replicas are also signed.



FIGURE 2 X-radiograph showing the inner structure of the figure

The names of several artists and craftsmen are known. One of the most important artists in eighteenth-century Naples was the sculptor Giuseppe Sammartino (1720–1793), who built complete Nativity crèches with figures and surroundings. Sammartino and his followers, Giuseppe Lori and Lorenzo Mosca (1719–1789), were leading crèche-builders in Naples in the court of Charles III. They made the most exquisite heads and excelled at artistic landscapes. Vinaccia was a famous silversmith, and he made a great deal of jewellery and small instruments. Luigi Ardia specialized in making waxwork, while Giuseppe di Lucca made vegetables and some of the shepherds' figures.

Matteo, then Giovanni Ferri, made perfectly cut, exquisite clothes, occasionally decorated with precious stones and oriental pearls. The patterns of the dresses were brought from nearby towns in Abruzzo or Calabria. They were cut according to the fashion worn by everyday citizens of Naples in the eighteenth century.<sup>10</sup> The costumes were not made of scraps. The patterns of fabric scraps would have been too large in proportion to the small figures. The fabrics for the clothes of the figures were made by specialized manufacturers in Naples, where small-scale fabrics, buttons, braids and other accessories were also made.<sup>11</sup>

## The figures from a Nativity crèche in the Hungarian National Museum

These have a similar construction to the contemporary figures from Naples. The body of the figures is made of linen tow wound on iron wire armatures. They have terracotta heads and oil-painted wooden legs. The heads were fastened to the body with a thick thread slipped through holes in the ceramic head, leading under the shoulders and to the hip. The limbs were fastened to the loose end of the wire frame through holes in the wood. (Fig. 3) The number 12 was painted on a shepherd's leg, indicating that at least the legs were probably mass-produced. (Fig. 4) No signatures were found.

Garments, which were made to match the character of each figure, were made of satin and plain-weave silk, silk velvet and twill- or plain-weave woollen cloth; the shirts were made of white cotton and linen. They were decorated with metal thread braids, embroidery, painted sequins and corrugated gilt paper. The robe-like coats, the bottoms of the skirts and aprons were braced with paper. The little coats (or only the coat fronts) were partly or



FIGURE 3 The body of the figure stuffed with linen tow and with a ceramic head, and the painted, carved wooden limbs

FIGURE 4 The method of fixing the leg and the serial number

completely lined with silk. Thin wires were placed in the hems of the dresses and cloaks in order to give them a lively appearance. Some of the tiny accessories (e.g. the shepherds' sandals, satchels and hat) were made of leather. The king's sabre is of cast bronze, covered in velvet, and decorated with corrugated gilt paper. (Fig. 5) The waistcoats (which are cut without backs) and the inner sleeves were sewn directly onto the bodies. The outer sleeves were sewn from the outer face, as the arms could not be moved, making it more difficult to dress the arms.

### Modifications, repairs

All the figures except the angels are fixed onto the base with metal pins nailed into their soles. The roughly made green bases and stools originally did not belong to the figures. They were probably made when they were removed from their original surroundings where they had been fastened directly to the base with metal pins protruding from the base. The angel's figure was probably modified and repaired on that occasion.

The angel was obviously suspended over the scene, as indicated by the two bore-holes at the wing junction with the body – the suspension point – and by the lack of any traces of suspension on the legs. The thread that had held the angel's head was torn, so the head was fixed with a small metal ring pinned

into its back. Thick aluminium wire was drawn through the ring and pinned into the wooden base, and the body was fastened to it with wires. The wings were fastened with two-two metal pins nailed from outside through the dress and cloak. (Fig. 6) The female figure, whose functions were difficult to define at first, was probably repaired or rather modified at the same time. (Fig. 7) Even before conservation it became obvious that, despite its fine, feminine hands, the figure had irregularly long and unsuitable legs. On the basis of its clothes – a long coat and trousers decorated with sequins and lace – it could have been one of the kings. After undressing it became clear that the legs attached to the feminine body were out of proportion, probably intended to match a male figure. The fact of the figure's being modified was reinforced by the undoing of the trousers, as they were found to have been originally a long skirt, which had been folded up to the knees and sewn together in a few stitches in the middle. Within the bottom piping a small piece of gold lace was found which must have decorated the hemline of the skirt.

### Condition

The clothes were dust-covered, torn, defective, and faded and stained in certain areas. (Fig. 8) The iron wire drawn into the bordering was corroded, broken



FIGURE 5 The figure of the kneeling king before conservation (after conservation see 1/a)



FIGURE 6 The fastenings of the wings and the figure during cleaning (after conservation see 1/e)



FIGURE 7 The figure of a noblewoman

and defective. (Fig. 9). The woollen materials were moth-eaten and frayed. (Fig. 10) The tow in the bodies was slightly decomposed in some cases. The terracotta heads and carved limbs were stained; the base was coming loose in some places so paint was peeling off, cracked or missing in large patches. One or two fingers had come off the hands of two figures. In some cases – like both Marys, the kneeling king and a shepherd – the arms or legs had come off the wire armature to which they had been fixed.. The halos of both Marys and Joseph were missing, with only the fastening visible on their heads. (Figure 11)

## Conservation

As the first step of conservation the dresses were taken off; then the waistcoats and elbow-length inner sleeves, which had been directly sewn onto the bodies, were removed. All of them were washed in a solution of distilled water and non-ionic detergents. They were spread out to dry or, where necessary, loosely stuffed with cotton wool covered in plastic foil and dried to shape. (Fig. 12) The frayed, ragged pieces were sewn onto support fabrics that matched in colour and fabric, and they were covered in silk crepe. The corroded iron wires from the hems were replaced with tinned, corrosion-resistant iron wires.



FIGURE 8 A shepherd and his clothes before conservation

FIGURE 9 The shepherd figure after conservation

FIGURE 10 The figure of Mary in red before conservation (after conservation see 1/d)

FIGURE 11 The figure of St. Joseph before conservation (after conservation see 1/c)



Damaged braids, laces and deformed sequins were repaired. The ripped decorations were secured; loose buttons and sequins were sewn back on. The dresses were assembled according to their original state. Finally, the outer sleeves were sewn back on from the face of the cloth.

Before cleaning the heads and limbs, the cracked, peeling paint was fixed with a solution of 2% acetone and Paraloid B72. The cleaning was executed with the method well established in the conservators' workshop in the Hungarian National Gallery, with an aqueous solution of 'Zoom' detergent. Cotton wool wound on little sticks was dampened in the diluted detergent and the stains were removed by gently wiping them off with the sticks. Detergent residue was eliminated with alcohol after the cleaning procedure was finished. The defects of the base were completed with a mixture of plectol B 500 ethyl acrylate and methyl methacrylate dispersion and chalk, then the paint was retouched with water-colours. Finally, painted surfaces were wiped off with a piece of soft flannel that had been soaked in beeswax dissolved in benzene. (Fig. 13) The legs and arms were pasted back to the wires from which they had come off with an epoxy-resin-based glue. The loose or torn threads that fixed the heads to the bodies were replaced with strong linen yarns.

Reassembly was carried out according to the original state, but the dresses and cloaks that were originally fastened to the figures with pins were not pinned again. Pins were replaced with tiny stitches. Broken fingers and missing halos were not replaced, as the aim was to preserve the original parts. Repair of defects of the painting was undertaken to restore the general aesthetic effect.

### The origin of the figures

In his book on "Christmas in the Arts", János Jajczay published a photograph of the eighteenth-century Nativity crèche of the 'Jó Pásztor Leányai' Convent in Óbuda.<sup>12</sup> In the nuns' possession there was a postcard with the following text printed on the back: *Nativity Crèche with 12 figures from Naples. Jó Pásztor Ház, Budapest, III. Szőlő utca 6.* In handwriting: *The artistic Nativity Crèche of the convent. A donation from Princess San Marco. Verbrannt, 1945.* (Fig. 14) Since the construction of the figures, the cut and the decorations of the dresses on the photograph are so similar to those of the figures in the Hungarian National Museum, and the Museum of Applied Arts, we may assume that once they belonged together and were the pieces of the convent's Nativity crèche, scattered during the Second World War.<sup>13</sup> (Fig. 15) This assumption is



FIGURE 12 The midwife during cleaning (after re-assembly and conservation see 1/b)

FIGURE 13 The figure of Mary in blue after conservation





FIGURE 14 A picture of the Nativity crèche of the J6 Pásztor Leányai Convent before 1945



FIGURE 15 Nativity crèche figures from the collections of the Museum of Applied Arts

justified by the fact that, as we know, Milena Nákó, the wife of Prince San Marco who came from Naples, supported the Jó Pásztor Church with charities, and the pair were ultimately buried there in 1926. The prince's valuable collections were taken to the Christian Museum in Budapest after the First World War.<sup>14,15</sup>

## Endnotes

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- <sup>1</sup> Sinkó, Ferenc. 1985. Betlehemről a Magyar Betlehemig [From Bethlehem to the Hungarian Nativity crèches] In: *Új Ember*, Dec, p. 22-9.
- <sup>2</sup> Jajczay, J. & Schwarz, E. 1944. *Karácsony a művészetben* [Christmas in the arts]. Budapest, p. 48.
- <sup>3</sup> Jajczay op. cit., p. 142.
- <sup>4</sup> Jajczay op. cit., p. 147-8.
- <sup>5</sup> Jajczay op. cit., p. 52, 146.
- <sup>6</sup> Mancini, Franco. 1965. Il presepe Napoletano, nella collezione Eugenio Catello. *Forma e colore* 47: 1-5.
- <sup>7</sup> Gockerell, Nina. 1998. *Krippen in Bayerischen Nationalmuseum*. München, p. 56-61.
- <sup>8</sup> Bogner, Gerhard. 1981. *Das grosse Krippen Lexikon*. München, p. 161, 163.
- <sup>9</sup> Charles III (king of Naples and Sicily from 1734) was a great benefactor of crèche-builders.
- <sup>10</sup> Mancini, op. cit., p. 8-9.
- <sup>11</sup> Gockerell, op cit., p. 49-50.
- <sup>12</sup> Jajczay, op. cit., p. 46.
- <sup>13</sup> The figures in the Hungarian National Gallery were restored in 1979 by my textile conservator colleague Katalin Nagy and myself, providing a good occasion to compare the production technology features. The figures in the Museum of Applied Arts were restored by Katalin Sós.
- <sup>14</sup> Genthon, István. 1948. *Esztergom műemlékei*. [The monuments of Esztergom]. Budapest, 11.
- <sup>15</sup> I am grateful to all my friends and colleagues of the case study. Primarily to the Very Reverend Dr. Attila Farkas who lent me useful literature and advised me on my work; to Katalin Z. Fikó, who restored 5 of the figures from the National Museum; to Gergő Kovács and Eszter Aczél for their translations from German and Italian, and finally to my conservator colleague Gábor Hutai who took the X-radiographs.

The Loránd Eötvös University was founded by Péter Pázmány in Nagyszombat in 1635. It was known as the University of Nagyszombat until the 1770s, both in Hungary and abroad. It was moved to Buda in 1777 when the faculties of Law, Medicine and Humanities were moved to Pest in 1784.<sup>1</sup> The flags of the university were used only on festive occasions and for processions. At all other times they were displayed on the gallery in the Faculty of Law. References to the foundation and the history of the flags are found in the literature of the university.<sup>2</sup> The restoration described below was undertaken on what is considered to be the first flag of the university; it was probably made in the period around the foundation in 1635. This has been justified not only by oral traditions but also by the Baroque-style painting typical of the period of Péter Pázmány.<sup>3</sup> The fact that Nagyszombat was called Tyrnau in German, which is written in the inscription of the flag, refers to the place and date of manufacture.<sup>4</sup> I was asked to restore the university flag in 1999. Conservation began in 2000 and the project was completed in August 2001.<sup>5</sup>

NIKOLETT SZEDERKÉNYI

# The conservation of the flag of the Loránd Eötvös University

## Description of the flag

On both sides of the flag, the central figure is the patron saint of Hungary, Mary with the infant Jesus, in a painted Baroque shield. The gilt inscription around the central figure is PATRONA HUNGARIAE MATER UNIVERSITATIS TYRNAVIENSIS. There are scattered gilt leaf patterns on the face and there is an 8 cm-wide dyed ornamental stripe on the edges. The inscriptions and the style of decorations are similar to those on the first seal of the university<sup>6</sup> and confirm the assumed date of the flag. (Fig. 1)

The original construction of the swallow-tailed flag consisted of a single layer of plain-weave silk; the flag is 288 cm long and 156 cm wide. Due to the large

size of the flag, it was sewn from two pieces of silk, with the seam in the middle where the tails meet. The flag is edged with yellow silk fringes, with a tassel on each end of the swallow-tails. The ornamentation is painted onto the silk and covers the surface of the silk to different degrees. According to the traditional flag-painting technology, the painted ornaments were made with a thin ground and pigment layers, being identical on both sides.<sup>7</sup> With thin materials the paint media often bleed through to the other side of the cloth, so the ornaments were arranged in the same places on both sides except the circular inscription, where it was impossible to do this. The staining left by bleeding media makes it more difficult to read the inscription.

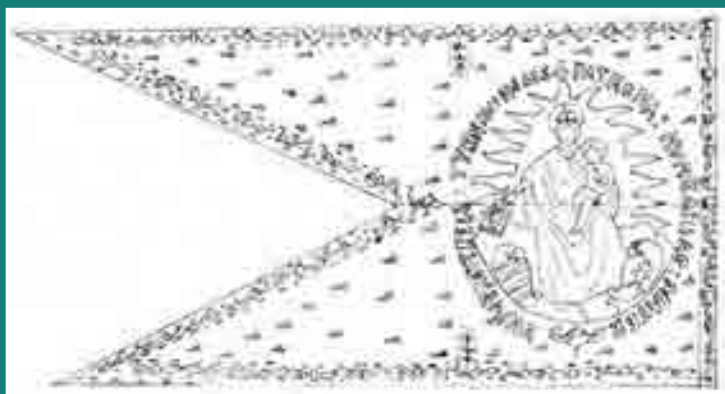
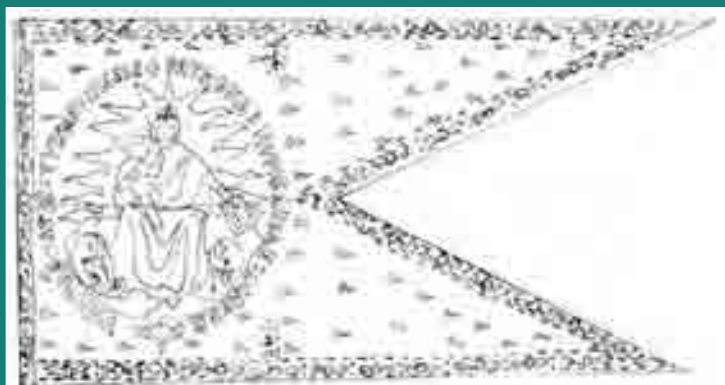


FIGURE 1 The state of the banner before conservation

FIGURE 2 The schematic drawing of the banner made of a single sheet  
a) face 1, b) face 2

The first repair to the flag was implemented in 1905. The budget for the conservation and the project outline, which describe the method of reconstruction, has been found. The reconstruction was carried out by the Viktória Flag and Decoration Manufacturing Company.<sup>8</sup> The second conservation must have been taken place in c.1920-1930, when the flag was probably sewn onto the backing net following the methods of conservation and reinforcement in use at the time.

## Condition of the flag

Several factors can influence the deterioration of materials used in making a flag. These include chemical, physical and biological changes, as well as mechanical damage resulting from use or the technology of production. A good example is when the flag was removed from display for different, important historical occasions. One such an event occurred in 1848 when the flag was handed over with the Rector's consent<sup>9</sup> to the students who were in revolt.

The repairs were visible on the flag, which was displayed in the ceremonial hall of the university. The beginning of the examination and disassembly of the flag revealed that two conservation interventions had taken place. During the first restoration of 1905, a new silk base had been glued to the whole surface of the brittle, torn, very weak and incomplete seventeenth-century flag.<sup>10</sup> The inscriptions and decorations of the original flag, which were made in a similar, but rougher style, were painted onto the glued silk base, which is similar to the original in its thickness, colour and texture. It was repainted because of the bad condition of the original silk, which needed reinforcement, and it was carried out using contemporary repair methods.

The central image of the flag was repainted at the same time, as this painted area was stiffer and thicker than the cloth of the flag, and it had cracked and broken off from the thin cloth along the painted areas. The weakened and dried layers of paint and ground had peeled off from the base. On the evidence of the repainted decoration, which was similar to the seventeenth-century originals, it was thought that the original style of depiction on the flag was truly reflected in the 1905 reconstruction.

A base cloth had been applied onto the edges under the glued silk before the re-painting, which had run through to the other side of the thin material, leaving stiff, white stains on the original, peeling gilt ornaments. During the restoration the only difference from the original style of painting was that the image was given a grey background on the ornamental decorations. The gold-imitation motifs were painted onto that, after outlining with black drying oil medium following the original technology. The peeled-off paint on the reverse of the flag was repainted, again using a drying oil medium, in the same style as in the reconstruction of the new silk base on the face. In this way the peeling layers of paint were secured, but the paint was absorbed into the ground fabric and stiffened in the course of time. This resulted in the stiffening of the decorations at the edges, so that

they cracked and fell off when the flag moved as it was being flown. The painted ornaments and the base materials were almost completely missing at the bottom of the swallow-tails on the edges. Approximately 20% of all the painted decorations on the flag had peeled off from the cloth base.

The second conservation intervention was carried out in c.1920 when the material of the repainted flag had become so torn and broken that another reinforcement was necessary. The rapid deterioration was probably caused by the gelatine used for gluing which had made both materials – the original materials of the seventeenth-century flag and the cloth base used in the reconstruction of 1905 – very stiff. The silk material had lost its softness, becoming stiff and brittle. The latter method of reinforcement was usual in the early 20th century.<sup>11</sup> The backing-lining and cloth of the flag were stitched in a grid pattern with thick, rough tacking threads. Tacking was implemented quite evenly on the whole surface of the flag in 2 cm squares. The tacking stitches were worked through the painted areas, resulting in further damage and deterioration to the already weakened painted surfaces. (Fig. 2)

## Conservation

Several aspects had to be taken into account when choosing the right method of conservation. The primary aim was to preserve the original seventeenth-century material. The method chosen and the materials used for treatment are all reversible, i.e. they can be removed without damaging the object. There are painted decorations on both sides of the flag, so a backing-reinforcing method had to be chosen which makes both sides visible and also supports the weakened base. The conservation of the flag was identical in many respects to the general methods of textile conservation.<sup>12</sup> The conservation of the painted surfaces of the flag is partly identical to and partly different from the reconstruction of paintings on canvas.<sup>13</sup> In the case where decorations are painted on the material of the flag itself and the painted surface cannot be separated from the cloth of the flag, different methods must be used.

### Removal of earlier treatments

After unstitching the fringes, the tacking threads used to fasten the second conservation were removed. This revealed an additional and more faded layer of paint under the cracked painted decorations. The original gilt decoration and the inscription under the reconstructed painting were exactly overlapping. (Fig.3) Today even the reconstruction from 1905 bears a

special art-historical value; while separating the two layers we considered it important to preserve intact both the silk bases from the seventeenth century and from 1905. The condition of the seventeenth-century base under the gluing was not visible, so we chose the most careful method to make it possible to separate the two bases without causing damage.

In separating the two sheets of the flag, a method was chosen which is not often used in the conservation of flags but more usually applied to protect painted surfaces in the conservation of paintings. The painted sheets were separated without any damage by gluing *Novotex*-impregnated paper onto the cloth with gelatine. First the silk layer which had been glued to the face during the earlier conservations was slightly dampened with a sponge, so the gelatine (used for gluing the two layers) swelled and could be easily removed mechanically with a scalpel. Then, proceeding from the edges inch by inch, silicon release paper was inserted between the layers and *Novotex* was laid on the base glued in 1905. A 5% gelatine solution was applied onto the outer layer of silk which stuck to the *Novotex*. (Fig.4)

The glued silk was removed after the gelatine had dried, and the cloth was rolled onto a paper cylinder of large diameter. In this way, the remains of the original flag were distinguished and separated from the base of 1905, and both were preserved. The imperfections of the original flag became visible after the separation of the two layers. (Fig. 5)

At this stage of treatment it turned out that the original central figure, which had been covered, was missing. The main problem for the aesthetic reconstruction of the seventeenth-century flag was the missing figure. The following options were possible: (1) to repaint and reconstruct the missing figure,

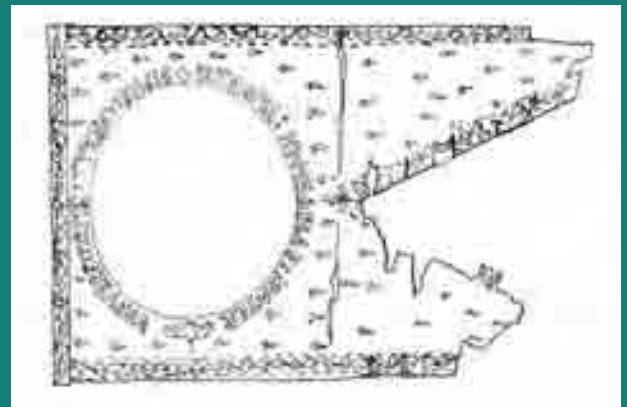


FIGURE 3 The remains of the seventeenth century banner

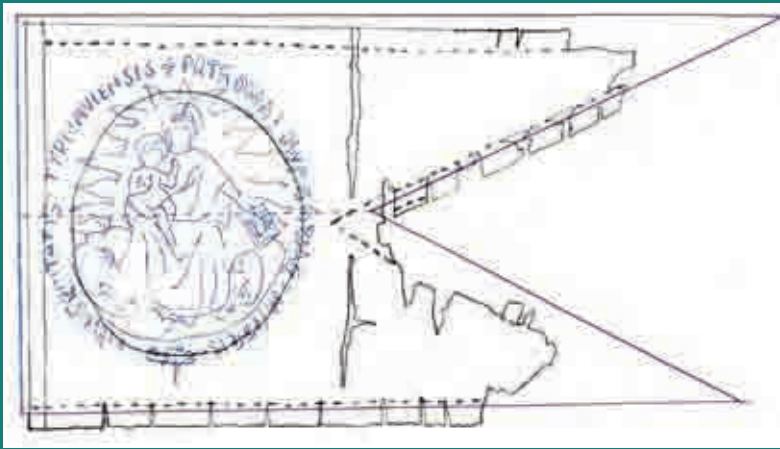


FIGURE 4 In 1905 face 1 was covered with a new silk and the picture was re-painted

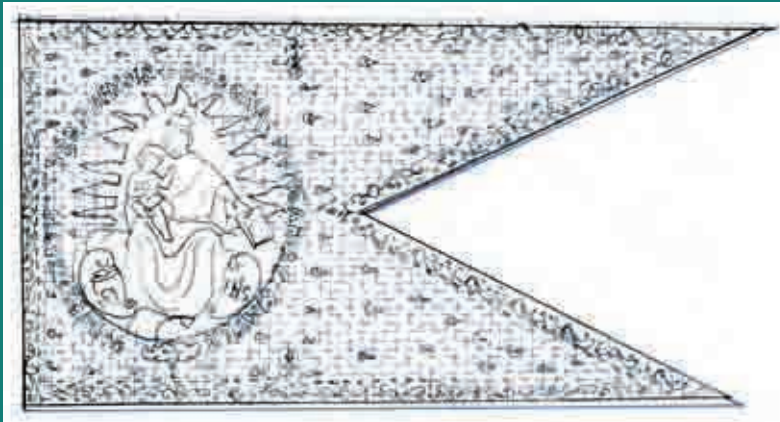


FIGURE 5 In 1920 the textile was conserved with additional stitching

using as a model the nineteenth-century figure which was a faithful representation of the original, using the technique of the original painting; (2) to put back the reconstructed figure of 1905 which slightly differs from the original in technique, but it is a faithful representation and is part of the history of the flag and the period. We chose the latter option, because the style of the painted surface on the reverse would reflect the conditions of 1905 just like the central figure. The reason for this was the inseparable layer of paint which had developed from the overlapping of the peeling layers of paint during the first conservation. The separated central figure of 1905 broke off from the secondary face of the flag in one piece along the painted surface due to its stiffness. In this way it became possible to treat it separately. (Fig.6)

After the removal of these repairs and additions, it was obvious that, apart from tears resulting from the natural ageing of the silk base, there was also some sharp disintegration due to mechanical damage

and losses of different sizes and shapes. The central and bottom parts of the flag were in the worst condition, due to the hanging and moving of the flag; the swallow-tails were the most incomplete and torn.

## Cleaning

### Preparation of the silk base

Before the original surface was cleaned, the base was glued with 'paper cloth' (*Novotex*) using the method outlined above. The gelatine that was left on the surface was enough to carry out the treatment, so a double coating of gelatine was avoided. The advantage of this method is that even the tiniest, torn pieces that are not fixed would not move from their place. The rolled-up and glued flag was put on a suitably large piece of tulle and placed in a washing tray, where it was slightly dampened, and the glued layers were removed; then the material was prepared for cleaning.

### Preparation of the painted surfaces on the base

The painted gilt decorations are quite sensitive to humidity, so before cleaning both sides needed surface protection. The dried and weakened layers of paint were treated with an 8% solution of polyvinyl-butyro-acetate consolidant (*Regnál S-1*) and ethanol.<sup>14</sup> The consolidant was ironed onto the surface between silicon paper sheets, so the layer of paint was fixed on the base, developing a thin coat on the surface, which enabled wet cleaning.<sup>15</sup>

### Cleaning of the base fabric

The brittle, dried silk was soaked in a fatty alcohol-sulphate washing liquid, and cleaned with foam applied with cotton-wool.<sup>16</sup> The swollen gelatine that remained from the earlier gluing could be removed mechanically by scraping it off. After several rinses, the reverse was cleaned in a similar way to the obverse of the silk. It was dried after the silk was carefully aligned according to its weave and dimensions. The gelatine remaining in the fabric made it slightly stiff, but the silk was smooth, and had become lustrous and soft again

### Cleaning of painted surfaces

The painted layers were softened and cleaned with ethanol; then the remnants of the white ground, which had run into the other side, were cleaned mechanically after careful dampening. During the 1905 conservation the silk was only stuck to the face, which was repainted; the original reverse was painted over in thick coats. So the base materials on the painted reverse became brittle and dry. The very

strong solvents required to remove thick coats of paint would have caused further damage to the material, and as it was not possible to remove the thick paint completely, the reverse was left untouched, leaving the thick painted layers in place.

### Gluing conservation

The cleaned, painted surfaces were consolidated with *Regnál* solution; after drying, the paint surface was ironed between sheets of silicon release paper. The *Regnál* used for gluing can be removed at any time after drying by wiping it with ethanol. So the torn base, fastened to the backing crepline, was taken out from the washing tray and turned face-up. The reconstructed figure, of Mary with the infant Jesus, was put back in place after a separate treatment. (Fig.7)

### Reconstruction of the central figure of Mary with the infant Jesus

The painted surface was dry, brittle and peeling off from the base on both sides due to the natural ageing process. The stiffer central figure had broken in several places in a few centimetre-long areas due to its movement and several smaller parts broke out of the figure. The distorted, wavy surface was covered with dust and darkened layers of lacquer and was also damaged by the needle holes of the earlier stitching. The extremely torn and incomplete silk next to the painted sun was fastened with gluing using paper cloth and gelatine after it was unstitched from the netting, and it was cleaned in a similar way to the base materials. The darkened layers of lacquer and dust on the painted surfaces were removed with the 'Brussels' mixture of solvents used in restoring paintings (30% ethanol and 70% stain-remover).

Peeling layers of paint were secured by applying and then ironing *Regnál* onto the surface. As a result, the layer of paint was fixed; the distorted, wavy painted area became smoother and elastic, and lost its rigidity. The broken parts were glued on the edges using crepline strips and they were ironed. Smaller imperfections were repaired with supported silk on both sides, with narrow crepline strips glued on the edges and ironed out so broken painted surfaces were levelled. The gaps of the incomplete and peeled-off coats of paint were completed with an elastic, diluted grounding paste on either side of the figure.<sup>17</sup> Aesthetic reconstruction was carried out first with retouching in water-colour paint; this was followed by lacquering the surface; the procedure was completed with retouch in oil paint.

### The backing method

As the flag was made with a single layer of silk, which was weak and torn, we chose a method which combines support with keeping both sides visible. That is why we supported the ground fabric between two layers of crepline with sewing conservation while the painted surfaces, edges, leaf patterns and the inscription were preserved with 'gluing conservation'. The crepline (which was sewn from two pieces) was laid out on the reverse of the cleaned flag with the seam in the middle of the face of the flag, as also on the base. The next stage was to fasten the painted areas on the reverse and the central figure of the flag onto the base.

### Completion of missing parts from the base:

The gaps in the ground fabric were 'completed' with pure silk which was similar to the original in



FIGURE 6 Detail of the inscription before conservation



FIGURE 7 Details of the inscription: the original (left) and the consolidated one from 1905 (right)



FIGURE 8 A motif from the original surface (middle), and the re-painting made in 1905 which hid the seventeenth century surface (left)



FIGURE 9 Figure of the Madonna which was painted in 1905 to replace the missing original (lower part), and the remains of the original (upper part)

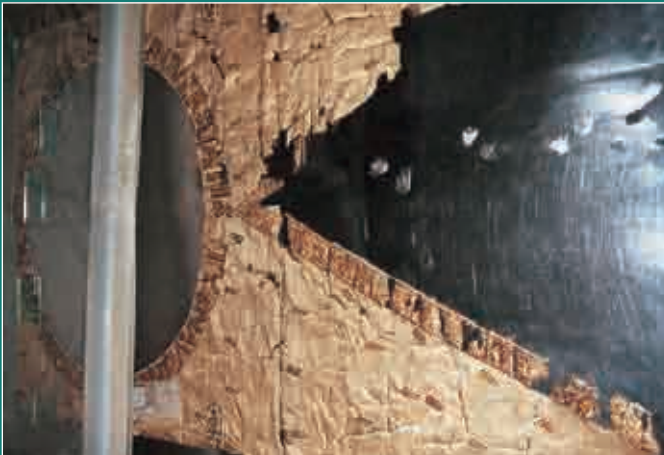


FIGURE 10 Face 2 of the seventeenth century banner after cleaning, with the empty space where the original painting was



FIGURE 11 Face 1 of the banner after cleaning, with the painting made in 1905

thickness and texture. The gaps of the cleaned base fabric were ‘completed’ with silk of a similar shade sewn with an edge seam. The silk insertions were dyed to the faded shade of the flag with natural dyes (green tea and aqueous walnut mordant). The glue residues in the base made the silk of the flag more rigid than the dyed silk insertions. Therefore the dyed silk was soaked in starch, then ironed after drying, so it became as stiff as the base. The gaps were completed with patches cut to size from the silk, which had been prepared as outlined above, and thereby the aesthetic reconstruction of the base was completed. The inserted patches were secured with sewing stitching (‘sewing conservation’).

### Completion of missing parts from the painted base fabric

The side of dyed silk which was to be fastened to the reverse of the flag and which was dyed to the shade of ornamental decorations running along the edges and of the inscription was coated with a grey elastic paste. After this preparation, the silk was identical in colour and strength with the painted surface it was intended to ‘complete’. After the gaps of the base fabric had been ‘completed’, the patches and the painted surfaces were fixed with ‘gluing conservation’ through crepeline spread over the face.

### Sewing conservation

The completed sheets of the flag were put between

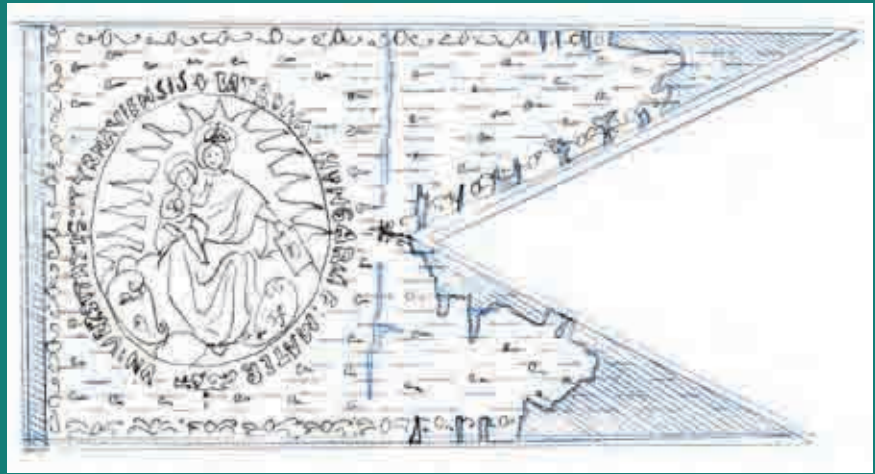


FIGURE 12 Detail of the lower swallow-tail with the reconstruction of the missing decoration (upper part) and the conserved original decoration (lower part)

FIGURE 13 The schematic drawing of the banner conserved in 2000, stitched between two crepeline layers, with the painting made in 1905

two layers of crepeline and sewn together along the direction of suspension on the whole surface with ‘sliding’ tacking stitches so that the weight of the flag would be evenly spread. The spacing of the tacking lines, carried out with silk thread, is 4 cm; the seams are approximately 25 cm long. The deep stitches of the seam were perpendicular to the ‘completed’ gaps and tears but the distance between the lines is 3 mm. The spacing of stitches is determined by the condition of the flag’s material. The direction of stitches and the very thin silk threads are hardly visible and do not stand out from the fabric of the flag.

### Aesthetic completion of painted surfaces

During the aesthetic completions and reconstruction of the completed and supported flag, the shabbiness of the existing painted surfaces was taken into consideration. The peeled-off paint was completed with diluted, tinted grounding paste which was applied onto the surface with brushes. Due to the different styles on the face and the reverse of the flag, the aesthetic completions were carried out in two different ways, according to the original state from the seventeenth century and the repainted condition from 1905.

We applied the diluted, tinted grounding paste in the silk ‘completions’ of the face and in the swallow-tails, as well as in the missing painted strip near the pole according to the missing patterns and the seediness of the existing ornaments. The distinctive retouching applied on the grounding was made with water-colour and shell gold. The retouched surfaces

were brushed with the same consolidant that was used to protect the painted surface. (Fig. 8)

The grounding of the painted surfaces on the reverse was implemented in a similar way; the only difference was that the continuous grounding was made in the style of the repainting. The continuous grey background of the ornaments at the edges was retouched in distemper and shell-gold, due to the volume of the painted decorations to be ‘completed’. The surface was brushed with the same consolidant as the face.

A 10-cm wide, grey, plain-weave cloth was sewn onto the pole edge of the flag; this cloth was folded back and the flag was fastened to the pole via this strip.

## Summary

As a result of our work, the original flag of the university (which can be considered as part of our cultural heritage) came to light and became visible from its previously covered state and was returned to its place of safekeeping. (Fig. 9)

## Endnotes

- 1 Sinkovics, I. (ed.) 1985. *Az Eötvös Loránd Tudományegyetem története 1635-1985* [The History of the Loránd Eötvös University], Budapest, p. 21.
- 2 Diószegi, I. (ed.) 1989. *Az Eötvös Loránd Tudományegyetem Bölcsészettudományi karának története 1635-1935* [The



FIGURE 14 The banner after conservation

history of the Faculty of Humanities of the Loránd Eötvös University], Budapest, p. 26.

- <sup>3</sup> Papp, J. 1982. *Hagyományok és tárgyi emlékek az Eötvös Loránd Tudományegyetemen. Fejezetek az Eötvös Loránd Tudományegyetem történetéből* [Traditions and relics from the history of the Loránd Eötvös University], Budapest, p. 89-94.
- <sup>4</sup> The conservation of the banner was initiated by the previous and current Rectors, Dr Miklós Szabó and Dr István Klinghammer.
- <sup>5</sup> Using the original, 17th-century method.
- <sup>6</sup> Papp, J., op. cit., p. 91.
- <sup>7</sup> Lakiné, Tóth, I., 1988. 18-19. *Századi magyarországi festett, illetve hímzett hadizászlók művészettörténeti és restaurálási problémái* [The problems relating to the history of art and conservation of dyed and embroidered military flags in the 18<sup>th</sup>-19<sup>th</sup> century Hungary], ELTE BTK Dissertation, Budapest, p. 4.
- <sup>8</sup> *Egyetemi Levéltár Gazdasági Igazgatóság Iratai* [Documents from the Economic Directorate of the University Archives] 1905, p. 256; Papp (op. cit.) mentions two reconstructions, one in 1899 and the other in 1905. The documentation quoted obviously proves that the conservation in 1905 was the first one.

'Budget: for the Hungarian Royal University. An old, torn university flag in bad condition, made from white silk, gilt dyed ornamentation on both sides all around, in the middle of both sides Mary, the patron saint of Hungary is depicted, there is a painted Baroque shield around her, one of them is with 5 red and 4 silver stripes and the other is with three green hills on a red base, the hill in the middle is with a crown and a double silver cross emerges from it. The circular inscription of the image is gilt and reads: Universitas Tyrnaviensis Patrona Hungariae Mater. The pole of the flag was made of soft-wood, it is painted black at the bottom, with a red globular decoration above on which there are red and white painted stripes. The spear is wrought-iron, IHS and there is a cross gilt with real gold over it.

The reconstruction of the above-mentioned flag: The base of the flag is made from new white silk, and the old flag

will be fastened on it. The new face of the flag will be artificially aged to produce an effect of the colours similar to the old flag. The next stage is to repair the ornaments, figures and inscriptions similar to the old flag. The old flag will remain on the reverse and the missing parts will be completed according to the old methods. The pole will be left intact. The whole budget of the reconstruction, including any expenses and materials is 570 koronas. The deadline is 6 weeks from the date of the order. Yours faithfully, Budapest, 13<sup>th</sup> March 1905, Viktória Flag and Decorations Manufacturing Company. Rumbold s. R.'

- <sup>9</sup> Szentpéterffy, I. 1935. *A Bölcsészettudományi Kar története 1635-1935* [The History of the Faculty of Humanities], IV. Budapest, p. 372.
- <sup>10</sup> See Note 8.
- <sup>11</sup> Lewis, G., Muir, N. and N. Yates, 1983. Festmények és festett textíliák közötti kapcsolatról [The connection between paintings and dyed textiles]. *Múzeumi Műtárgyvédelem*, 12.
- <sup>12</sup> Jedrzejewska, H. 1982. Textilkonzerválási problémák: tű, vagy ragasztó [Problems in textile conservation: needles or glue.]. *Figyelő*, 303-11.
- <sup>13</sup> Szederkényi, N., 1996. *A cébzászlók jellemzése, konzerválása és restaurálása* [The description, stabilization and conservation of guild flags]. Degree Thesis, The University of Visual Arts, Department of Conservation, Budapest, p. 17. Here I would like to say thank you and commemorate Ágnes Timár-Balázs who was the initial supervisor of my thesis, and then later kindly helped me with my work with her friendly advice and expertise.
- <sup>14</sup> *Regnál* is very flexible and lightfast. It resists animal and vegetal fats, oils, acids and alkalis. The dried coating can be melted at 90-100 degrees.
- <sup>15</sup> Timár-Balázs, Á., 1992. *Múzeumi textíliák mosása* [Washing historic textiles]. *Műtárgyvédelem* 21: 153-192.
- <sup>16</sup> I would like to say thank you to Györk Mátéfy, who kindly offered his help with some problems that I had during conservation.
- <sup>17</sup> The composition of the elastic ground paste is: Bolognese chalk, triple mixture: 1 part Venetian turpentine + dammar dissolved in turpentine + 1 part linseed oil, coletta, honey.

Costumes are commonly known to be a fabric of interwoven symbols built one layer upon another. They express gender, age, social standing, and nationality through form, ornamentation, quality, and – most prominently – colour. In different times and places, some colours carried an identical message while the meaning of others changed diametrically. All shades of colour found a vividly descriptive role in Hungarian folk dress, with each detail filling in a blank on life journeys from the cradle to the grave.<sup>1</sup>

[ LILLA TOMPOS ]

## The symbolic meaning of red in seventeenth-century clothing

**A** centuries-old convention holds that emotions are expressed by white, red and black. Of course, the question arises as to whether or not the colour of a piece of cloth held any symbolic meaning within the complex system of symbols current in the seventeenth and eighteenth centuries, the period under examination. By no means can all the colours be addressed here, so red has been chosen for the purpose of the present study, as it appears most often and in the widest variety of shades and carries the most variegated symbolic messages. We aim to uncover the source of the symbols that became attached to the colour, and see how a reading of pieces of cloth in the aristocratic code of dress reflects colour symbolism. Given the scarcity of extant articles of clothing, we have also relied on written and illustrated sources, as well as the results of ethnographic scholarship<sup>2</sup> and Hungarian literature, which are rich with allusion to the subject. Chemical dye analysis will also be summoned as an aid in identifying the colours.<sup>3</sup>

Next to its name and material, inventories of estates, lists of clothes belonging to aristocrats and invoices will most often note the colour of a cloth. Inventories of various types of broadcloth kept in stock for military uniforms or servants' livery would sometimes be recorded by clerks on the basis of its colour. Not only does a vivid, colourful world unfold on perusal of these written records, but they also enable one to follow changes over the centuries. Red and its various shades, such as skin colour, carnation or garnet, were the clothing colours found most frequently in the sixteenth century, but people also wore blue, green, publican-colour (green), yellow, orange, purple-blue, blond and black. Silks were often enriched with gilt silver, or drawn silver wire called *scofium*. In such instances, one reads of a 'drawn gold' or 'drawn silver' textile, an allusion to the manner of preparation. A decided change in the use of colour in the wardrobes of Hungarian aristocracy took place in the first few years of the

seventeenth century. As the Spanish court style gained dominance along with adopted formalities and particular types of clothes such as the Spanish gown and the janker, the colour black also came into fashion. The two sorts of garment that appear in the records in huge numbers, the mantle and the cloak, were most likely worn on festive occasions, and were sewn from dark, frequently black, material.

Apart from the new emphasis on black, the names given to colours also changed. Terms compared the shades of colours to natural phenomena, plants or animals. In this way, colours could become more familiar to perception, and their clearer definition also became possible. To give a few examples, one can mention: hair colour – brown, sky or sea colour, wild saffron, ash, or pigeon colour, the colour of liver, peach blossom or turf. In some instances, finding the exact definition might cause the twenty-first-century reader some difficulty. Some colours where this might be the case are: pink, body colour or blush of dawn (Aurorafarb). Yet the plight of a husband going to market and being puzzled by the shopping list was not unknown in the seventeenth century, either. To illustrate this situation, we quote a letter of Tamás Nádasdy, in which he asks his wife, Orsolya Kanizsai, to define ‘lion colour’:

...and the scholar Balázs says that you would have silk of lion’s colour for the buttons, and some of a fine red, but we do not understand even the lion colour. So do write it down in a more obvious fashion, and send also some model, from which it can be told what kind of colours both are<sup>4</sup>

The colour palette brightens up in the second half of the seventeenth century and the terminology for the colours also goes through a change, as shown in the bills of the court tailors of Prince Pál Esterházy (1635-1713), written in German. Frequent variants in these are Näckher farb (bone colour), Perl farb (pearl colour), Zidronfarb (lemon colour), Bierfarb (beer colour), Veiglfarb (fig colour), along with the hues of flowers, the Apfelblie (apple bloom), Lauendl (lavender), Violet (violet), and Anzelin (gentian).<sup>5</sup>

The brightest among the shades of red in an everyday context was an orange hue mentioned in late seventeenth-century inventories as ‘coral colour’, the colour of red coral so popular in the embroideries and goldsmiths’ works of the age.<sup>6</sup> Skin colour was a red colour in the seventeenth century, as a poem by Péter Bornemissza makes clear. He imagined that the stones of heaven sparkled in a tone of red skin-colour as well as green and blue. This probably meant an orange shade of red, for which the other term for skin colour, nacracolour, referring to the painting technique, must have also been used.<sup>7</sup> We are led

to believe that both shades were identical with, or very similar to vermilion.<sup>8</sup> The colour of dawn is difficult to describe: while Romans saw the colour yellow in it, Bálint Balassi and Miklós Zrínyi sang about a beautiful red dawn. Prince Pál Esterházy had clothes made by the tailor from fine broadcloth, the colour of dawn (Aurorafarb), both for himself and the youths staying at the court.<sup>9</sup> They were aware of paler and darker hues of two popular flowers, the carnation and rose.<sup>10</sup> The royal colour was like scarlet, and there was also a flaming red,<sup>11</sup> and a darker hue found in cherry red, and a more bluish hue in purple.<sup>12</sup> The darkest among red colours with a tint of pink was crimson.<sup>13</sup>

All shades of red had exceptional status among the colours. Reds symbolized both positive and negative feelings: they might express love and passion; a crimson version symbolized wealth and power; while another shade represented nobility and bravery, but also the tragic death of a hero. Negative feelings and traits might also have been attached to certain shades. Judas is often a red-head in medieval paintings, and prostitutes have a bright red head of hair, while both Satan and a murderer were coloured the same in the visions of John the Evangelist.<sup>14</sup>

Hungarian folk tradition and folk verse hold that red is the colour of blood and fire, and magical properties were attributed to both. Red clothes later became the apparel for mourning as a result of this connection, replacing blood as man defended against harmful spirits with the blood of life. Folk beliefs said that a red ribbon, pearl or kerchief protected a pregnant woman or ill person from the evil eye, because they bore apotropaic magical powers.<sup>15</sup>

Though green represented new love in the culture of gallantry, the evidence of works of literary fiction and quotes taken from folk poetry, as well as artefacts in our possession go to prove that red was the colour of love in accord with Christian colour symbolism.<sup>16</sup> ‘Will you send a letter with a beautiful red stamp? Will red words of love cover it all over?’ Love and tokens of love were red in poetry, but poets would often even see the faces of their loves as red, comparing them to the colour of flowers, and to jewels and angels for that matter.<sup>17</sup> A red kerchief, or a red boot, or one that was sewn over in red were gifts of love, and also represented a pledge as sung by so many unknown poets. A skirt is more than a mere lover’s gift, it is a proposal, as shown by the lines of a folk-song:

The carrier sent me a message that said:  
Would my rose have cloth that’s red?  
I want no clothes of a colour red,  
And nor will I the carrier have.

In another song, red skirts are mentioned:  
Send me doom my dear Greek lord, for  
Never will I have a true lord,  
Would I've ever had a true lord,  
A red skirt for me he'd have bought.<sup>18</sup>

In seventeenth-century aristocratic tradition, the gift of a red skirt, whether royal, cherry, lace, embroidered, silk or velvet, was an engagement gift. The engagement gift Imre Thurzó gave his bride-to-be, Krisztina Nyáryi, was a carnation skirt bedecked in flowers and drawn in gold, along with the *bomeza* (a sleeved shirt braced with baleen [‘Fischbein’: whalebone] called ‘Wams’ in German), and the small shoes and gloves ornamented with pearls that went with it.<sup>19</sup> Pál Esterházy also gave his fiancé, Orsolya Esterházy, a diamond-studded pendant and a red skirt with gold ornamentation.<sup>20</sup> The more precious materials were stored in a secure place and the notable event would even be memorialized in estate inventories: the registrar of the estate left by Mihályné Majthényi Barbara Pakay, who died

around 1640, records a red velvet skirt that had been an engagement gift.<sup>21</sup> A register of Borbála Ostrosics’s belongings gives an insight into the manner of making the gift, when it speaks of a ‘skirt of royal colour that was borne after the lady’.<sup>22</sup> A similar event was described by János Nemes in his diary: ‘the bride’s gift was taken to her after the ball at four o’clock’, seventh in a row of gifts, he remarks ‘a velvet skirt of cherry colour with fine pearls, stones and rosettes, as well as silver lace: worked in a rather beautiful German way’.<sup>23</sup>

The premise that the crimson velvet skirt, sewn with gilt and genuine pearls, which belongs to the Museum of Applied Arts (Budapest) and was taken from the Esterházy treasury, had once been an engagement present is based on the sources quoted above.<sup>24</sup> (Figs. 1-2.) The embroidery is missing in many places, with mends and replacements that are twentieth-century work by a conservator. The piece of clothing was disassembled, so it is not possible to ascertain how deep the pleats had been. Embroidery



FIGURE 1 Red velvet skirt from the Esterházy Treasury (detail)

FIGURE 2 Red velvet skirt from the Esterházy Treasury (detail)



of a somewhat reserved character decorates the edges that close in front, harmonizing well with the bottom edge embroidery. The design on the corner piece differs from that on the edges, as clearly articulated in the contour reconstruction made by the conservator. Posies of flowers and single stems of flowers alternate symmetrically at about mid-height on the skirt. The posies are composed of acanthuses, open and closed pomegranates placed vertically one on top of the other with stalks bending outwards, with tulips, tendrils criss-crossing and leaves that imitate heart and spear-head shapes. Above these are stalks and leaves forming ogee arches that end in lilies. The flower stem next to the posy is rooted in a heart, and a tulip floats on a pointed stalk above the closed pomegranate canopied in tulips, leaves streaming

from it. A tulip growing from an acanthus blooms among crescent leaves in the front of the skirt, crowned by a closed pomegranate and an acanthus bending to each side with the tendrils. A posy of flowers with a vertical axis, and stalks bending in arches to either side, was a typical Renaissance motif, appearing frequently on Hungarian canvas embroideries, the so-called ‘genteel’ embroideries of the late Renaissance. A similar alignment of pomegranates on a vertical axis with tendrils bending to either side can be found on a bed cloth with the Thököly coat of arms, which was also acquired from the Esterházy treasury.<sup>25</sup> Tulips, pomegranates and carnations were the staple flora of the Renaissance art of embroidery. The skirt would have belonged to the wife of István Esterházy, Erzsébet Thurzó, who died in 1641.<sup>26</sup> The richly ornamented, embroidered piece of clothing was delivered, along with a number of other clothes, to Esterháza, for the ‘bright’ celebration of Miklós Esterházy, the feast of Esterháza. It is probable that its bodice was lost and the embroideries damaged at this point, because the register drawn up for its transportation in 1778 mentions the piece of clothing barren of its bodice, and embroideries damaged or unstitched.<sup>27</sup> An inventory made in 1858-59 holds that the red velvet skirt as well as the blue and brown velvet skirt is bridal wear.<sup>28</sup> A number of Esterházy family ladies were portrayed in festive attire similar to the velvet skirt with pearls, among the paintings housed in both old family galleries of the Austrian town Forchtenstein and Hungarian Pápa. The first wife of Pál Esterházy, Orsolya Esterházy, perhaps wore her mother Erzsébet Thurzó’s dress for her portrait. She wears a so-called ‘Hungarian bodice’ with a laced stomacher decorated with pearls, a puff-sleeved bodice striped with ribbons, and an apron.<sup>29</sup> Ferencné Esterházy née Kata Thököly had a similar costume. (Fig. 3) Éva Thököly, the second wife of Prince Pál Esterházy, also wore a red dress set with pearls for her portrait. Her lace-trimmed apron is transparent, and one can glimpse a trace of the pattern decorating the borders of the folds that meet in front of the dress.<sup>30</sup>

In 1662, an unknown painter portrayed Baroness Borbála Wesselényi along with her splendid engagement gifts, befitting her groom Prince Simon Kemény.<sup>31</sup> (Fig. 6) Her gala dress was composed of a scarlet red ‘Hungarian bodice’ with gilt lace decorating the front, and ribbons to lace up the front, along with a bright red skirt. Sleeves sewn from a diaphanous veil-like material are drawn over her baggy sleeves, which bear a decoration of pomegranate patterns running criss-cross all over it. She holds the symbol of her high birth, a pair of gloves sewn with gold and pearls in her right hand, while a rose alluding to love is held



FIGURE 3 Unknown Artist: Countess Ferenc Esterházy

in her left. She wears a Hungarian girl's head-dress with pearl and flower ornamentation upon her dark hair, while the décolletage of her dress is emphasized by a high-lobed collar with strings of pearls sewn on. A jewel assembled from a number of pieces sparkles upon her bosom, as a metaphor for the flames of love: a rosette shape encrusted with red and white rubies, and diamonds, called *másli* (a bow) in the language of the day, from which hangs a flaming heart shot through with an arrow and held in hands folded over one another. From the cuffs of the hands are hung chains formed from linked rosettes, upon which rides cupid, the messenger of love's goddess Venus, with wings extended and bow and arrow trained upon the heart of the intended victim.<sup>32</sup> (Fig. 6)

Not only young brides, but their grooms also often donned the colour of love, a shade of red,

on the occasion of their weddings: 'The archduke – Zsigmond Báthory – wore clothes of red velvet, and the archduchess of blue velvet for the festive ceremony.'<sup>33</sup> Though the bourgeoisie of the eastern part of Hungary preferred an array of blue hues (dark blue being the most popular), on the occasion of taking a wife, János Csatári received a red pair of trousers, a red mink fur hat and a hussar's green dolman lined with fur from the throats of foxes.<sup>34</sup>

The only crimson-coloured stain dolman of the Esterházy treasury must surely have been made for a similar occasion. Sumptuous decorations, the trimmings (guipure) of various gilt and silver threads, envelop the whole dolman. (Figs. 4-5) Its rich, baroque ornamentation is unique in terms of both the Hungarian and the European world of artefacts. The dolman fastens with enamelled hooks and eyes.



FIGURE 4 Red satin (atlas) dolman from the Esterházy Treasury



FIGURE 5 Red satin (atlas) dolman from the Esterházy Treasury (detail)



Following the horses caparisoned in red velvet emblazoned with the Esterházy family coat of arms were men with red flags bowed to the ground, after which they led the horse of Lászo Esterházy in a covering of red velvet. Mourners with torches in hand bore the coffins covered in red upon their shoulders. The church itself had been modified; its decorations were covered according to the Jesuit chronicle ‘everything had been dressed in red, in clean silk or gilt broadcloth’.<sup>42</sup>

The accepted norm in Transylvania is that the red coffin of a man with a family was covered in black or cherry-coloured velvet.<sup>43</sup> A description of the burial of György Lázár reinforces and adds to the above statement:

In the year of our Lord 1661, and the month of January ... After having returned to Saint Demeter in the evening, we brought the corpse of my poor brother-in-law, György Lázár to Gyulakuta. We covered the coffin in red velvet, nailing the coat of arms upon it, which had been prepared as a fitting upon red taffeta, and the preacher of Gyulakuta gave his sermon over the body. The coat-of-arms symbolising the deceased was painted upon red taffeta as well.

Not only the burial accessories appeared in red, but the bier was also decorated in the same colour; the deceased was taken to the bier in clothes of red; the four Esterházy brothers were dressed in red, and also the poet Miklós Zrínyi, who had died a violent death in 1664. Péter Apor mentions that those who died in battle were buried in red high caps of Pozsony, as a tradition accepted all over Transylvania.<sup>44</sup> János Kemény reminisces about the testament of Gábor Bethlen, in which he prescribes, that his mourning be held in red clothes, and burial be decorated by the same colour.<sup>45</sup> Imre Thurzó, who had died at the young age of twenty four, was also dressed in a red tunic.<sup>46</sup> The deceased had been pictured upon a burial flag dressed in red clothes, as we are informed by the letter of Pál Perényi to Kata Perényi, the widow of Simon Kemény. He requests his sister to order the flag from the painter, a crucifix with Mary and Joseph on one side, and Simon Kemény on his knees, and dressed in a skin-coloured robe in front of them.<sup>47</sup>

The enumeration clarifies that the colour red gained a new meaning in its funereal role, it could represent a heroic, sacrificial death, or the pomp befitting the deceased. Two lines of an eighteenth-century folk song express this with pithy simplicity:

My Lord is gone he's gone to battle, he's gone to battle  
And now I'll mourn him in purple, I'll mourn him in purple.<sup>48</sup>

## Endnotes

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- Further reading: Erdélyi, Zsuzsanna. Adatok a magyar népköltészet szímszimbolikájához. [Data for the symbolism of colour in Hungarian Folk poetry.] *Ethnographia* 1961. I. Közlemény: 173-99, II. Közlemény: 405-29, II. Közlemény: 571-95. Hereafter: Erdélyi 1961.
- The doctoral dissertation of Ágnes Timár-Balázs under the title of ‘Dye Analysis of Textiles in Museum Collections’ was written in 1986. Apart from a comprehensive history of dyes and written sources of colouring for textiles, the subject is the testing of dye samples from textiles in museums. These analyses provided some insight into the time and place of the textiles’ origin.
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- Szádeczky, Béla. *Apafi Mihály fejedelem udvartartása* [Prince Mihály Apafi’s court]. Budapest, 1911: 615.
- ‘The city sparkles in the open with stones of brilliant colours, / Stones of green or purple-blue colour / Red skin-colour, ash, blue and columns of red skin-colour’ [Peter Bornemisza: A song about the city of God, the Heavens above 1567.] The shade of skin-colour was achieved by the use of nitric acid, by a method for which the term was ‘nacra’. Walter Endrei: *Patyolat és Posztó*. [Canvas and Cambric.] Budapest, 1989: 231; Canvas and silk were dyed ‘nacra’ colour in equal quantity, as shown by the invoices of the tailors working for the Esterházy court: *Näcrafarb*: 150, *Näcrafarb*: 163-4, Tompos 2000.
- The only source from 1621, and the rest dates to the 18<sup>th</sup> c. Means: red-coloured mineral, of Persian origin, adopted later in Greek, Latin, early French and by German around 1200. Mária Horváth: *Német elemek a 17. század magyar nyelvében*. [German elements in the Hungarian tongue of the 17<sup>th</sup> c.] Budapest, 1978: 52.
- A variety of red canvas was worn in the Esterházy court: crimson and aurora colour (Aurorafarb) was worn by young barons, pink by the pages of the younger lords, and aurora colour was worn by the Esterházy. Tompos: 2000: 20: 154.
- Pink appears in 1416 for the first time in written sources, and next in 1513. It means red, with its whitened signification coming to bear at the time of language reforms. [Lóránd Benkő chief editor: *The Hungarian Dictionary of Historical Etymology*.] Budapest, 1967, II: 453.

- 11 The first occurrence of the word scarlet as flaming-red (1395), scarlet fabric (1448), the colour scarlet (1688). This is a migrant word, found in all languages in the same form. It was originally meant to identify a sort of dye extracted from a purple snail. In Hungarian, it is used both as a noun and as an adjective. It arrived in Hungary by way of the Mediterranean trade. Benkő 1967: III: 553.
- 12 Crimson can be found in written sources since the Middle Ages, from 1458 onwards. It is a bright, red-colour dye, cloth or leather with a slight tint of blue. It is a migrant word that came into use in Europe, adopted from the Arabic word 'kirmizí' meaning crimson red, but the way it has spread is unclear. Benkő 1967: II: 384. Using various mordants, a variety of bluish and purplish tints of the colour red were achieved; the use of kermes on the following mordants gave these particular tints: claret-red on alum mordant, bright red in alum with urochrome, carmine on tartaric and alum mordants, and purple on chrome and iron mordants. After the 'discovery' of America, the use of a new material became regular in the dyeing of cloth. A type of insect called cochineal (*Dactylopius Coccus cacti*) found in Mexico, Central and South America was available as a 'purple louse' in the Antwerp market from 1640 onwards. Timár-Balázs, Ágnes. Identification of dyes used on the Hungarian Coronation Mantle. *Magyar királyok koronázási palástja*. [The Coronation Mantle of Hungarian Kings] Budapest, 2002: 52.
- 13 The word turned up for the first time as 'bibura'; Bybur (1264); it meant fine linen if used as a noun (1395); material of red colour (1508); crimson coloured cloth (1585), cloth of flaxen material (1641). The origin of the word is uncertain. Due to its being expensive, the word is often listed next to velvet. Benkő 1967: I: 295. The colour was extracted from the purple snail. The material is colourless when inside the gills of this salt-water snail but becomes a dye of crimson colour when exposed to sunlight. Due to the cost of the dye extracted from the purple snail, dyeing with kermes became widely accepted in the 15<sup>th</sup> c. By a 1467 papal ordinance, the cloaks of cardinals had to be dyed with kermes. Timár-Balázs 2002: 52.
- 14 Revelation (6:4): And there came another red horse, and it fell upon him who rode upon it to take away the peace of the earth, and to make men kill one another; and he was given a great sword.
- 15 Erdélyi 1961: II. Közlemény: 405.
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- 21 The estate of Barbara Pakay, wife of Mihály Majthényi around 1640. In: *Történelmi Tár* 1897, p.136.
- 22 Lukinich: Inventory of Bethlen Farkasné Ostrosics Borbála's movables. In: *Történelmi Tár* 1908, p.12.
- 23 Tóth, Ernő. The diary of János Nemes from the years 1651 to 86. In: *Történelmi Tár* 1902: 237.
- 24 Quote: Inv. No. 62, 69 Dark red warp velvet, with an applied padded embroidery of appliqué on a canvas base, filled, laid, and for which gilt silver thread was used, also decorated with mother of pearl along the contours and wire. White pearls are stitched on the leaves, and strewn across the larger surfaces. The embroidery is missing from the front right part, while only fragments remain of many of the pieces. Length: 1035 mm, width: 3500 mm.
- 25 László, Emőke. Magyar hímzett és selyemkárpitok a 16-17. századból. [Hungarian embroidered and silk carpets from 16<sup>th</sup>-17<sup>th</sup> c.] *Ars Decorativa-Iparművészet*, 1992: 61-105.
- 26 Mol. Rep. 12. Fasc. Q. 633
- 27 The costume is recorded as having belonged to the treasury of Pál Esterházy in 1696, and the records from 1778 show: 'Ein roth Sammeneter Frauen Rock mit Gold und Perlen gestickt ohne Mieder. NB die Perlen sind von zwey Blettern abgetrennt worden'.
- 28 *Ein Kirschrothsamtenner Brautrock mit Gold gestickt*.
- 29 *Old Hungarian portraits*. An exhibition in Tata curated by, and catalogue compiled by Enikő Buzási: 1988. Cat. no. 12.
- 30 *Ancestral Galleries and Family Portraits from Aristocrats*. An exhibition curated by, and catalogue compiled by Enikő Buzási. Cat. No.: Plate. C. 30.63; Plate C. 36.72.
- 31 Borbála Wesselény (1648–1662) was the bride of Simon Kemény I, son of her stepfather, János Kemény prince of Transylvania. The painting portrays the young bride shortly before her tragic death.
- 32 Szilágyi, András. Az Esterházy-gyűjtemény Cupidós násfájáról. [About the cupid pendant from the Esterházy collection.] *Ars Decorativa-Iparművészet* 13. Budapest, 1993: 145-58.
- 33 The wedding took place on the 6<sup>th</sup> of August. The Prince donned red velvet clothes for the festive ceremony, while the Princess wore blue velvet. Szádeczky, Lajos. *Báthory Zsigmondné*. I. In: Századok. 1883: 57.
- 34 Zoltai, Lajos. A debreceni viselet a XVI-XVIII. Században. [Fashionable wear in Debrecen from the 16<sup>th</sup> to the 18<sup>th</sup> c.] *Ethnographia, Népelet* 1938: 96.
- 35 Fellows of the Museum of Applied Arts Budapest undertook their survey of the artefacts from the Esterházy collection, now part of the Museum's collection. The author summarized the results of the research in her doctoral dissertation in 1994: Costumes of the Esterházy family. The material, cut and decoration of Hungarian aristocratic costumes from the 16<sup>th</sup> to the 18<sup>th</sup> c. Twenty-five pieces of cloth have come down to us from the 16<sup>th</sup> and 17<sup>th</sup> c. The 21 pieces of costume from the Esterházy treasury are held in the collection of the Museum of Applied Arts, Budapest, while the dolman from the Bánffy treasury, and the rest of the pieces cared for by the Church as sacred objects have been placed in the care of the Hungarian National Museum. The Esterházy Palace situated in the Buda Castle was damaged by a bomb in the Second World War, and the treasures hidden in its cellar suffered damage from remaining there over the years that followed. Some of the textiles lost their original colour during this time, and became brown, while others stained each other. The 25 pieces were made of a variety of materials, which can be listed as follows: coloured floral Turkish silk (1), woven with gold (5), light green (1), dark green (1), purple (1), brownish-green (1), black (2). Dark-blue (1), a dark blue cloth that had worn away (3), while the remaining 9 pieces of cloth had been made in shades of red. Five of these had kept their original colour, four had changed to a brownish-yellow colour. To determine the original colours of the cloth and the type of dye used, a dye analysis had to be carried out. The analysis was indispensable to find out which pieces were being treated and their names in the inventories, while it also supported an exact dating of items. The dye analysis was conducted by Ágnes Timár-Balázs: the 16<sup>th</sup>-c. dolman faded to a yellow colour (Inv. No.: 52.2682) was mentioned as cherry red in the 19<sup>th</sup> c., and salmon red in the 20<sup>th</sup> c. The textile dye used is madder (*Rubia tinctoria*), known in antiquity, while the red damask strip sewn onto its lining has the dyestuff cochineal. This dye provides dating evidence: the dyed cloth cannot be earlier than the 16<sup>th</sup> c., since the dye extracted from the American insect was not used by European dye workshops before that date. The caftan attributed to János Sobieski (Inv. No. 52.2768) has faded to a yellowish colour; it had once been dyed with madder (*Rubia tinctorum*). The inventory from 1725 mentions it

as a skin-coloured garment. The dolman, now faded to a brownish colour, was originally light red in hue (Inv. No. 52,2379); its dyestuff is no longer detectable. Inventories record a skin colour in 1725, vermilion in 1858, and the custodial contract of 1923 describes it as brick red. The short, fur-lined coat (Inv. No. 52,2773) was seen as red in the inventory of 1722, and skin-coloured in 1725. The chain-mail shirt has kept its crimson colour (Inv. No. 52,2370). The groom's dolman was dyed with (Inv. No. 52,2804) *cozenil* (*coccus cacti*). The dye used for the red velvet dolman was not analysed. (Inv. No. 52,2377). The stock keeper of 1641 saw the skirt (Inv. No. 62.69) as bright red, another one saw it as red in 1766, and a cherry red colour was attributed to it in 1858. The dolman of a member of the Bánffy family is flesh-coloured; analysis of its dye has not yet taken place. (Inv. No.: 1954.666).

- 36 Csánki, Dezső. I. Mátyás udvara. [The court of Matthias the 1<sup>st</sup>] *Századok*. Budapest, 1883. XVII: 60.
- 37 Purchases made by Gábor Bethlen between 1615 ad 1627. In: Radvánszky, Béla.  *Holding Court and inventories*. Budapest 1888. I: 105. Red in the clothing inventory of Prince Pal Esterhazy: *Royal red coloured cloth with gilt silver cords* [Thaly, Kaman. A register of weapons, military equipment and assorted objects belonging in the packing case of Baron Janis Esterházy, Vice-General of Győr, and his son Ferencz (1700–1704)] In: *Történelmi Tár* 1886: 181-95. The description details saddles and tents but mentions only the colour of the clothes: 1. Black, 2. Royal colour, 3. Crimson, 4. Skin colour, 5. Cherry, 6. Violet, 7. Orange, 8. Apricot-bloom, 9. Poppy, 10. White, 11. Yellow, 12. Sky-colour, 13. Publican-colours, 14. Colour of grass, 15. Dark green.
- 38 Tompos, Lilla. Egy történelmi esemény tükröződése a viseletben. [Reflection of a historical event in the costumes worn] *Folia Historica* XXI, 1998–1999. 2000: 217.
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- 43 Szabó 1989: 38, 41, 45.
- 44 Apor, Péter. *Metamorphosis Transylvaniae*. Bucharest, 1978: 124.
- 45 Szabó 1989: 59-60.
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- 47 Kemény-Archives: Perényi Pál levele Kemény Simon özvegyéhez. [The letter of Pál Perényi to the widow of Simon Kemény] *Történelmi Tár* 1871: 18, 173.
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Ágnes Timár-Balázs

## Abbreviations

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ICOM CC = ICOM Conservation Committee

ICOM CC WGT = Working Group on Textiles

ICOM CC WGTR = Working Group on the Training of Restorers

MH = Museum Newsletter [in Hungary]

MK = Museum Studies [in Hungary]

MKF – IRT = Institute of Restorer Training, Object Restoration Faculty of the Hungarian Academy of Fine Arts

MM = Hungarian Museums

MMt = Protection of Museum Objects [in Hungary]

MRMK-T = Institute of Conservation and Methodology of Museums [in Hungary]

NRSZ = International Restorer Seminar– Veszprém, Hungary

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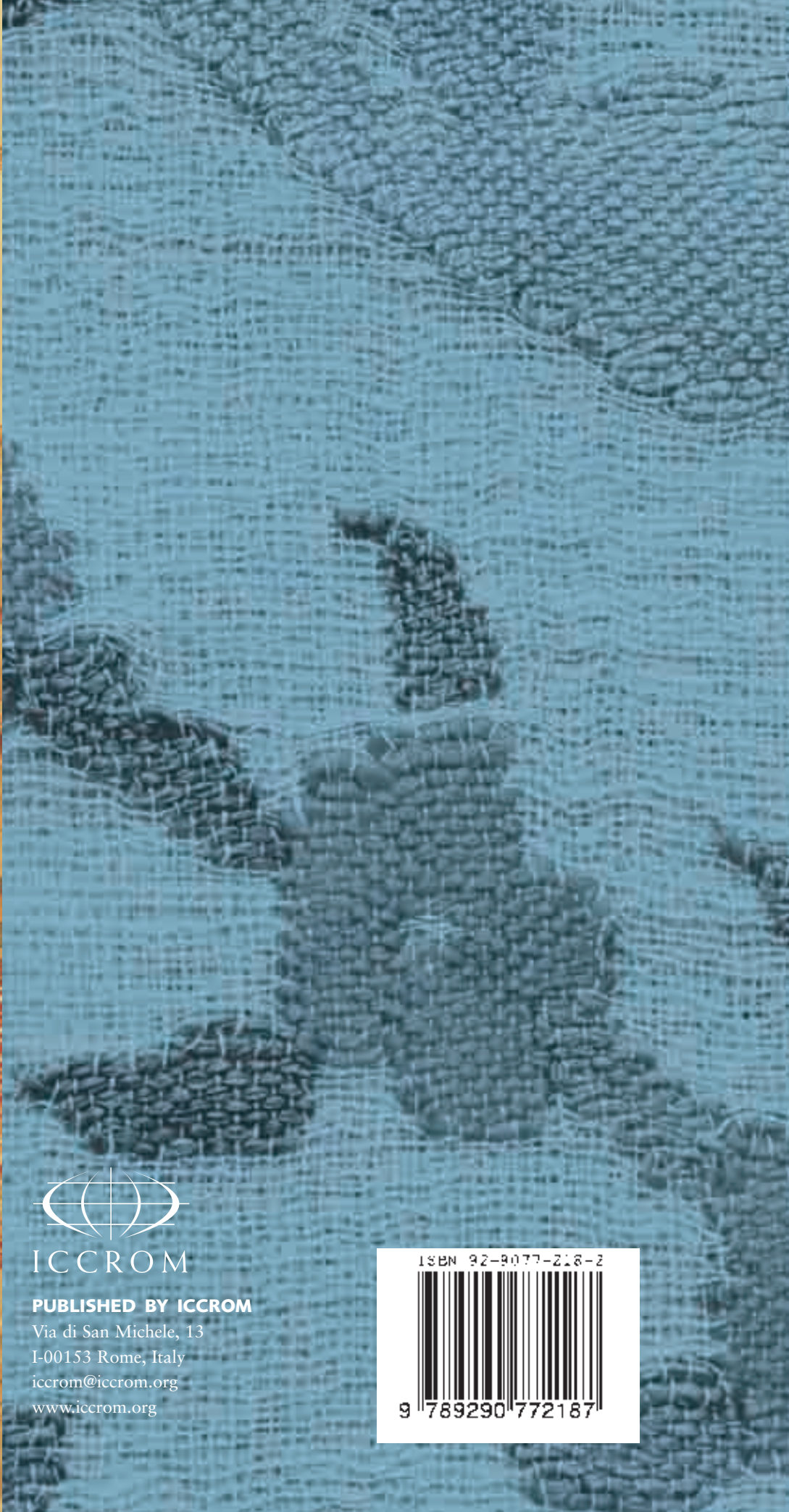
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