Unexpected fame: Conservation approaches to the preparatory object. Proceedings from the International Conference of the Icon Book & Paper Group, Oxford 1–2 October 2018

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Spotlight on newly identified drawings in albums: Piranesi and his studio at the Staatliche Kunsthalle Karlsruhe

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To cite this article: Victoria Button and Jane Rutherston, 'Spotlight on newly identified drawings in albums: Piranesi and his studio at the Staatliche Kunsthalle Karlsruhe' in *Unexpected fame: Conservation approaches to the preparatory object. Proceedings from the International Conference of the Icon Book & Paper Group, Oxford 1–2 October 2018* (London, The Institute of Conservation: 2020). https://icon.org.uk/unexpected-fame-conservation-approaches-to-the-preparatory-object (accessed date).

Victoria Button and Jane Rutherston

'By me, James Leman': reinterpreting an album of eighteenth-century designs for woven silk at the Victoria and Albert Museum

Abstract
The Leman Album: an enhanced facsimile, is one of the V&A Research Institute's (VARI) first 'named' projects. Containing some 97 vibrantly coloured designs for woven silk by the second-generation Huguenot émigré James Leman (b.1688), the designs were produced between 1706 and 1716. They are the earliest known dated designs for woven silk and at some stage in their lifetime were collected together and adhered to support pages. These were bound to form an album on more than one occasion. Drawing on different expertise, this paper will discuss the multifaceted issues addressed by a project team comprising conservators, scientists and curators who have been researching and interpreting the physical evidence of these designs and that of an equally spectacular corresponding woven silk, also in the V&A collection. Designs are complex objects. Representing just one part of the creative process, they can be made of a material that bears no relation to the end product. With a greater demand for access to the designs balanced against less physical access, a digital facsimile will go some way to protecting the designs whilst providing the means with which to deliver both visual & intellectual access to all the research that has been gathered.

Keywords
Leman; design; research; silk; media; technique

Introduction

Acquired by the V&A in 1991, the so-called Leman album contains a collection of the earliest known English designs for woven silk.[1] Produced by James Leman between 1706 and 1716, their importance and therefore fame also lies not just in their rarity but in the complex nature of the information they contain: such as the evidence of silk weaving techniques and early eighteenth-century London taste and fashion.

Of the 100 designs housed in the album, 91 were produced by James Leman, a second-generation Huguenot designer and Master weaver in the east London district of Spitalfields.[2] Authorship and date of production, often unknown or questionable in many artworks, is not in doubt with these designs. One of the wonderful things about them is the inherent presence of Leman himself, not only in his vibrant patterns but also because of the date and often flamboyant signature found on the backs of most of the designs, with numerous inscribed, 'for my father Peter Leman by me James Leman'. What's more, they explicate the process of weaving to a level not seen in any other near contemporary sources.

Leman was born in 1688 into a family of weavers. In 1702, at the age of 14, he was apprenticed to his father, Peter. The designs in the album span his age from 18 to 28 and illustrate through his astonishing talent as a designer and a weaver (an unusual combination in early eighteenth-century England), a deeper understanding of the processes required to translate the paper design into a woven silk. As preparatory objects that function in a particular way, each design embodies important historic and technical information and therefore has shaped not only the way we have investigated them and digested the findings but also how we will conserve and ultimately house them.

This paper discusses Leman's designs for woven silk in the context of a multi-disciplined collaboration, but with an emphasis on the conservation approach to this type of preparatory object.

Setting the project in context at the V&A

At the time of writing this, *The Leman Album: an enhanced facsimile* is one of a series of live projects underway at the V&A Research Institute (VARI).[3] Piloted in 2015 and launched in 2016,

Fig. 1 An example of Leman's flamboyant signature. © Victoria and Albert Museum London.

1 V&A museum number: E.1861:1 to 106-1991, accessed online on the V&A collections portal, https://collections.vam.ac.uk/

2 There are a number of anonymous designs dating from the 1730s, including museum numbers: E.1861:2/55/85/101/105-1991.

3 See more about VARI projects here.

with generous funding from the Andrew W. Mellon Foundation, VARI hosts a programme of research and teaching partnerships with the aims to enhance access to the V&A's collections, develop new approaches to research, training, display and interpretation and to connect with academic partners and art/design practitioners.

Initially included as part of the VARI pilot project, the Leman album was chosen because it was object-focused and, as a topic for numerous multi-disciplinary workshops, it proved to be an ideal candidate for a more comprehensive collaborative research project. Furthermore, it was also an opportunity to continue conservation work on the album that had started and stalled in 2002, as other museum priorities took precedence.

Drawing on different expertise, this three-year project has brought together a core multi-disciplinary team made up of V&A conservators, curators and scientists, each bringing a different perspective.[4] In addition, we have consulted with external historians, makers, academics and others with related knowledge to build on and share findings.

4 Clare Browne, formerly Senior Curator, Textiles; Lucia Burgio, Senior Scientist, Object Analysis; Victoria Button, Senior Paper Conservator; Olivia Horsfall Turner, Senior Curator, Design; Jane Rutherston, Principal Book Conservator.

Commencing in 2016, the V&A Leman team have been researching and interpreting the physical evidence provided by the album, the designs within it and a recently acquired corresponding silk woven from one of them. In this way, the research is drawing out comprehensive information about these objects. Taking into account the practical challenges of providing public access to these unique, fragile, light-sensitive and in some instances, toxic objects, the ultimate aim of the project is to conserve and digitally reproduce the album contents, making it and the findings available to a wide audience.

Methodology: the collaborative approach

The methodologies offered by the different disciplines of curator, conservator and scientist and their analysis of subsequent findings has shaped our approach as conservators to the binding and its contents, as well as framing our treatment decisions.

A conservator examines an object in a particular way, asking themselves a series of questions regarding its composition, wondering how it was made, what its purpose was and why it looks the way it does now. With the latter in mind, rather like diagnosing a patient who cannot communicate, the conservator has to glean information from the appearance of the artefact, noting its materials, its condition, signs of use that may be indicative of its function and mapping any deterioration or damage in order to come to some conclusion about the current appearance of that object. It is also important for the conservator to distinguish between damage from signs of use or restoration and, if possible, original appearance.

Looking at an object such as this album of silk designs and being able to 'read' it in this way deepens our understanding of how it may have functioned. In conserving, displaying and re-housing these designs, it is important to understand and retain evidence of signs of use and their integrity as preparatory objects. But how do we 'read' an object such as this album that is in one respect singular, but also a set of multiples, as reflected by its contents? The answer to this lies in asking certain questions and using a combination of research methods, such as those offered by the triumvirate of curator, conservator and scientist. This combination of disciplines not only provides a more holistic approach, but also helps to build a more comprehensive picture of the album and its contents, aspects of which will be described as this paper takes you on a tour of the binding, the album's contents and some of the discoveries.

Examining the physical evidence: materials and techniques

With a focus on the materials and techniques of the designs and binding, this section will discuss how these in turn relate to their function. For a conservator, knowledge of the materials and techniques used to produce an artefact are important for numerous reasons. As well as providing an understanding of an artist or craftsman's working practice, they influence our approach to treatment, storage and display decisions.

Characterisation of materials and techniques, whilst taking into account condition and signs of use, enables links to be made between the appearance of the designs and their probable function. The function of Leman's designs can be inferred not just from the subject matter and in relation to another object such as an existing woven silk, but also through a combination of research methods that capture multiple viewpoints of the designs and their former housing. This has included investigating Leman's pattern sources, deciphering the annotations and in-depth visual and scientific analysis of the papers, dyes and pigments, the salient results of which will be included in the digital version.

Understanding the function of these designs is important in interpreting them. A design is one part of a working-out process to bring an idea to fruition and lack of survival of

some parts means that it is not always clear at what stage of the process the design may be at. Translated from one media to another, Leman's designs on paper had specific, demonstrable functions with the end result being a woven silk. For example, the designs have a clear sense of the repeat in the pattern, they note the names of mercers as well as colour ways and technical instructions to the weavers, and bear gridding that indicated the number of dezines (the proportional units for the length of the pattern), all of which make their function clear. The technical information aided the transfer to a point paper, an essential step in woven silk design, enabling the drawn design to be enlarged enough for the individual threads to be distinguished in a line-by-line breakdown of the pattern so that the design could be translated to the draw loom. A point paper resembles a present-day draft paper with spaces between the lines corresponding to the warp and weft threads of the woven fabric.

1. The binding

On acquisition, the album comprised a half-leather binding with buff paper sides and blind tooling. An original label from a previous binding is adhered to the upper board and a further label and stock number label on the back board. The bookblock comprised 23 bifolia with single-fold sewn-in endpapers, sewn through five 30-mm-wide strips. We know the binding itself is not contemporaneous. This is evidenced by numerous physical signs such as the repair guards that are added to the outside of the bifolia and a section being sewn in upside down. It is also indicated by the endpapers having a watermark identified as being a Barcham & Green paper dating from about 1900 to no later than 1974, which sits far outside the date of the designs' production.[5] Furthermore, a letter in the V&A registered file dated 1959 makes reference to the recent binding of three albums belonging to the Vanners Silk Weavers Company, who are still based in Sudbury; one of these was the Leman album and another of textile samples dating from 1820–1850.[6]

The support sheets are handmade, unwatermarked rough brown wrapping paper, believed to be eighteenth-century, each full sheet folded in half to form an untrimmed bifolium.[7] Each of the designs is adhered with a variety of adhesives of different quantities directly to these support leaves.[8] Prior to pulling the album in 2002, each page was photographed, giving a detailed record of position and condition of the designs.[9] The decision to pull was taken in order to facilitate in situ conservation treatments and with the intention of modifying the binding structure to achieve better opening characteristics.

At the start of the VARI project some 14 years later, each support page with the designs still adhered was comprehensively re-examined and assessed, with the findings recorded on a spreadsheet. Information gathered included: dimensions of support leaves and the designs; evidence of previous sewing stations; museum numbering and historical page and design numbering sequences; thickness of support paper and design paper; presence of watermarks; design format, such as fold-outs and numbers of joins in the paper; media; inscription; points of adhesion; condition; notes of interest; and so on.

The assessment highlighted not only the extraordinary craftsmanship of the designs but also the damage caused to them by a number of factors, both mechanical and chemical. These included the structure of the binding and its opening characteristics as well as the friable areas of substrate caused by certain colourants. The tight-back leather binding and linings restricted the leaves from opening flat, the arched leaves causing damage when trying to unfold the designs. In addition, a large number of designs were adhered too close to the gutter margin, resulting in creasing at the outer edges. There was damage caused to the designs by historic handling such as attempts to lift the designs for access to the inscriptions. The larger designs were folded to fit on the support page, resulting in tears, detachments and weaknesses along the fold lines where they had been repeatedly opened. Furthermore, there was chemical degradation, for example from the copper-

5 E-mail correspondence with paper maker Simon Green, dated 25 September 2017.

6 This was confirmed in a letter to G. Kipling Esq, Director, Messrs. Vanners & Fennell Bros. Ltd, from Victoria & Albert Museum, dated 9 April 1959.

7 Verbal communication with forensic paper historian, Peter Bower.

8 Some designs were adhered with spots of animal glue at intervals around the edges, others have larger areas of later gluing.

9 'Pulling' is 'The process of reducing a bound book to individual sections' (Matt T. Roberts and Don Etherington, *Bookbinding and the Conservation of Books* (Washington DC: Library of Congress, 1982), 207.

Fig. 2 Image showing problems of format for housing the designs when still bound. © Victoria and Albert Museum London.

Fig. 3 Damage caused by necessity to fold designs to fit on support page. © Victoria and Albert Museum London.

containing green pigments, fracturing the paper support. The quality of the papers has no doubt aided their longevity. However, the papers also reflect their storage and handling history with many of the designs having regularly spaced and strong fold lines: an indication of how they were most likely stored prior to being housed in the album.

These types of damage, along with the need to access some of the hidden inscriptions, resulted in the decision to remove the designs from their support leaves. Removal would facilitate treatment where necessary, provide greater access to each design and negate damage from future handling. Perhaps more controversially, it was decided not to rehouse them in a binding. This decision was not taken lightly. It was the result of a thorough examination, detailed research and discussion with stakeholders and other experts. No acceptable rebinding solution could be found that would retain the original support leaves, whilst allowing access to the verso and accommodating all the different unfolded design sizes. Furthermore, the idea of housing the designs in a customised binding was not a solution, again due to the quantity and varying dimensions of the designs as well as the future access and handling issues. There was consensus that the designs stood alone as single designs as well as a collection and that the previous housing in an album could still be facilitated in the digital version as well as reflected through storing them in their original grouping.

2. The designs

The method for investigating the designs was instrumental in understanding Leman's drawing processes. Examining each design in terms of layers from the substrate up, this approach incorporates the size of the paper, its tone, texture, weight and watermarks and then the media and the sequence of its application and where possible, the method of application. It also takes into account any physical signs that indicate their function as well as previous storage, evidence of use, alterations to the designs and historic repairs.

In brief and as a means of an overview, Leman used white or off-white laid writing papers; graphite or black chalk was employed for the initial design, followed by watercolours made from pigments or organic dyestuffs. Over this he applied a grid, mainly in iron gall ink but sometimes in graphite, or, in one instance, red chalk. Ink was also used for any grid numbering or annotation on both the fronts and backs of the designs. The way in which Leman prepared the papers, drew the patterns, used colour and annotated the versos with instructions reflect their purpose as preparatory drawings for the resulting woven silk.

3. The designs' papers

In early eighteenth-century England only a few paper mills were attempting to make fine

white papers, so their availability was limited. All the papers used by Leman for his designs were imported from both Holland and France, as evidenced by the ten different watermark types. Relatively strongly sized with gelatine and plate glazed, these papers were generally used for writing and printing, providing Leman with an appropriate surface for drawing, painting and writing.[10]

Joining pieces of paper to suit his needs, the designs vary in length, depending on the pattern and the repeat. A design from 1707 is the longest at 915 x 615 mm and is made up of two pieces of paper, as are the majority, with some made up of three and one a complex combination of six.[11] Although the lengths may differ considerably, the widths of the designs are more consistently the same because they were drawn as a side-by-side repeat, known as a 'comber'. The paper designs are therefore around half the size of the width of the finished woven silk, which was typically 48 to 53 cm in England. This style of repeat was most popular in the first decade of the eigtheenth century and illustrates that size is often in relation to function.

Leman's mastery of materials is evident in the way he joined the papers together prior to applying any media. The overlaps of paper joins are discreet and often hard to decipher unless viewed in transmitted light and rarely interfere with the overdrawn and painted design. His craftsmanship and manipulation of paper is also demonstrated by the alterations Leman made to some of his designs: for example, Fig. 4 of design E.1861:25-1991 shows a shape cut and inserted into a corresponding cut-out in the sheet, creating a seamless, in-filled alteration.

Fig. 4 Image illustrating the inserted paper design alteration from verso. © Victoria and Albert Museum London.

4. Media

We have already touched on the potential lack of survival of any interim workings-out on paper and it seems sensible and likely that Leman sketched out some preliminary ideas before he reached the level of finished designs we now have. In fact, a gridded sketch, drawn in graphite and signed by Leman, that was found stuck to the underside of one of the anonymous, later designs of 1730, may indicate such a missing link. We can only really comment with any authority on what has survived.

Once Leman had prepared his papers, the design needed to be drawn. Leman had to have a great sense of scale, proportion and finished design in mind in order to set it out. Although it is often hard to find evidence of the preliminary drawing, Leman invariably used either graphite or a black chalk to initially map and define his pattern. It is barely decipherable with the naked eye, but under magnification and with evidence from multispectral imaging, it can sometimes be seen. The dry drawing media selected to mark out his initial design are used lightly; this would prevent any dark and potentially friable medium dominating the contours or muddying the watercolours that were subsequently overlaid. Sometimes there are annotations or over-drawing in graphite, which perhaps indicated potential changes.

The majority of Leman's designs sit within what is referred to as the 'bizarre style' of 1700 to 1712, which is characterised by setting—for example—flowers, fruits and architectural elements within the same context, often in abstraction or dramatic scale to one another.[12] Leman's pictorial elements often referenced flowers, exotic fruits and birds or ornamental touches, such as a Dutch chandelier, featured in design number E.1861:52-1991, as well as Chinese and Japanese figures, motifs and architectural components. Leman was an educated and curious man, as instructions in his will for his wife to distribute the following items amongst his children illustrate:

> ... my paintings, drawings and all my collection of prints, my reading books, my musick and picture books and my collection of copy books, my musical and my mathematical instruments of all sorts, my collection of reptiles in spirits, my collection of medals and coins, with several odd things.[13]

His pattern sources and resulting designs clearly illustrate how fashionable he was and how wide his net was thrown. Research has revealed one probable source that is of particular in-

10 Verbal and written communication following examination of the papers with Peter Bower.

11 Museum no: E.1861:71-1991.

12 The phrase 'bizarre style' is not a contemporaneous term. It was first coined in relation to 18th century silks such as these in the late 1950s by Dr. Vilhelm Sloman in the title of a book, *Bizarre Designs in Silks*, published in 1953 in Copenhagen.

13 Natalie Rothstein, *Silk Designs of the Eighteenth Century in the Collection of the Victoria and Albert Museum*, London, p. 33, quoting P.C.C. (Seymer) fol. 303, 1745, will dated 5 October, proved 12 November.

Fig. 5 Image illustrating the inserted paper design alteration from verso. © Victoria and Albert Museum London.

terest given its contents relate to the design for which we have the silk: it is a book entitled *A Treatise of Japanning and Varnishing*, published in 1688 by George Parker and John Stalker. Not only was it a comprehensive account of lacquering techniques, it also included pattern illustrations for copying.

Once Leman had drawn out his design, next in the sequence of composition was the application of colour. Examination and analysis have shown that Leman filled in the contours of the drawn design with a brush using watercolour made from pigments or dyes. Colour was often applied in layers, with darker pigments added last in order to prevent a weaker colour being sullied by the stronger one. The contours of the motives usually have a more intense application of the initial blocked in colour, ensuring any under-drawing is hidden and more importantly, creating a crisp, precise edge, almost as if stencilled, thereby making the pattern particularly easy to read.

His vivid pictorial imagery aside, the colours of Leman's designs are one of the most striking things about them. Some are executed in one colour only; others may incorporate two and many a cornucopia of colour. On a design dated 1706, Leman's colour notes include the term 'Modena', apparently to indicate a dark reddish pink.[14] The earliest citation known for it as a colour term, indicating a deep reddish-purple colour, is from 1822, which means that Leman's inscription predates this by more than a century.[15]

Following in-house Raman and X-ray fluorescence (XRF) analysis, a successful application to IPERION secured the project team the services of MOLAB, a European network of facilities providing portable scientific equipment for further in situ non-destructive analysis.[16] For this purpose a number of designs were chosen for the characterisation of materials.

The primary aim was to analyse the colourants and any link between the dyes used in the silk industry and those of the designs, a topic that is still being investigated. Results would also support and guide treatment, as well as future handling, storage and any display requirements. Instrumental analysis confirmed our visual examination and speculation regarding the presence of organic dyestuffs and inorganic colourants. It reinforced our views that some are extremely sensitive, being either fugitive and/or susceptible to fading, with or without exposure to light. Analysis also highlighted the presence of several toxic elements such as mercury and arsenic, as well as lead whites that have discoloured and copper-based pigments that have degraded, causing fractures and losses to the paper. An exciting and unusual discovery was the identification of arsenic sulphide glass in the orange pigments that substituted for naturally occurring pigments such as orpiment and realgar.[17] Such extensive use of this artificial pigment is not commonly recorded in the literature despite it being found extensively in the Leman designs and on other Spitalfield silks designs from the same period. Leman indicated on the verso of his designs that the orange colour was to be woven in gold.[18]

5. The grid

One of the last additions in the sequence of drawing was the addition of the grid, present over most of the designs. The size of the grid was significant in transferring the design to a point paper.[19]

None of Leman's point papers from this period survive as they were used in setting up the loom and remain a missing link in the process. Draw looms were complex to set up, taking five to six weeks for a complicated weave, which could mean a foot of woven silk taking a week to achieve. The silks themselves were therefore extremely expensive to produce but would only stay at the height of fashion for a single season—a true statement of wealth and position.

6. The annotations

Along with the gridding, we can speculate that the annotations were added after the design

14 Museum number E.1861:23-1991

15 As discovered by co-researcher, Clare Browne.

16 With thanks to the teams from MOLAB who carried out the analysis over a period of many days.

17 'The Orange Colour to Be Gold,' V&A Blog, posted 7 May 2019, https://www.vam.ac.uk/blog/caring-for-our-collections/the-orange-colour-to-be-gold.

18 Museum no E.1861:51-1991, verso

19 Measured grid sizes ranged from 22 x 22mm to 33 x 33mm, but on average in the mid-20s range.

was complete. Annotations often relate to a certain language of weaving and therefore directly link to the design process and the function of the design as a preparatory object. The language of weaving reads like code to the uninitiated. For example, the text below is a transcript of the notes written on the verso of design number E.1861:52-1991:

> This pattern for an orrace tishue brocaded with gold & silk
> 400 cords nr 8 & 10
> 150 dezines in 6 symples
> drawn a few dezines longer than it should bee to make it as if ye rule paper was 8 & 11
> one lash in a dezine

This inscription illustrates perhaps how complex a transition it was from paper to loom to woven silk. From a technical and historical point of view, these notes are invaluable. For example, a 'Tissue' was a type of silk of complex weave. If it was an 'orrace tissue' it included metal thread. If it was 'brocaded', extra patterning wefts were incorporated (in this case gold thread and several colours of silk) in order to create specific design effects or motifs. So, an orrace tissue brocaded with gold was one of the most lavish types of fabric produced in the early eighteenth century.[20] Such specific calculations seen here would dictate how the loom was set up and enable the pattern as Leman had drawn it to be created in the correct proportions.

20 Written correspondence with Clare Browne.

Fig. 6 Example of alteration to design using a paper overlay. © Victoria and Albert Museum London.

A number of designs have the addition of small paper overlays, with alternative patterns. Some are stuck down on all edges, but where the adhesive has failed, it is possible to access parts or all of the original composition the overlay is hiding. It is not clear at what stage these changes were made since some of the hidden sections and the overlays have gridding (usually applied last) and some don't. It is also not clear why these changes were made or who instigated them: the mercer, who most likely commissioned the silk, or Leman, because the initial design did not quite work either in the visual sense or technically in terms of translation to the loom. What they do illustrate is part of the design process.

The design's link to the woven silk

The question of the function of colour with these designs is an interesting one. It was incredibly serendipitous that at the start of the project two joined lengths of Leman-designed woven silk were discovered by a dealer and then acquired by the V&A in 2016. Not only is it a rare survival of an eighteenth-century silk that directly relates to a preparatory design, but its condition and colours are breathtaking and near perfect. Before its acquisition it was thought that the only surviving example of a Leman woven silk was a small and very faded piece of brocaded silk now in the collection at the Art Gallery of South Australia. Placing the silk and the design side by side for the first time in 300 years was thrilling but it also raised significant questions about the design and the silk's manufacturing process. Looking at the design next to the woven silk it can be clearly seen that the colours of the silk do not follow those of the original design, which begs the question about Leman's use of colour in relation to the woven silk. Although there could have been another woven version of our design, the comparison between the two illustrates how the ground colour could be chosen by the weaver, mercer or client and therefore the colours in the designs do not always reflect the woven cloth. There are annotations on some of the designs reflecting the desired colour combinations or type of thread for the woven silk, but we do not know if the silks were ever produced in these colours or who made the final choice.

The inscription illustrated in Fig. 8 demonstrates that Leman's use of colour was not always prescriptive but representative of either a certain metal thread to be used ('the "pail red" is plain gold; the orange is frost gold, the blue is frost silver'), or indicative of textures: for example, the green noted here indicates damask. This type of 'coding' simplified or negated the need to paint in actual gold or silver or to produce a more complicated technique to represent textures and finishes of the woven silk.

Fig. 7 Design and silk. © Victoria and Albert Museum London.

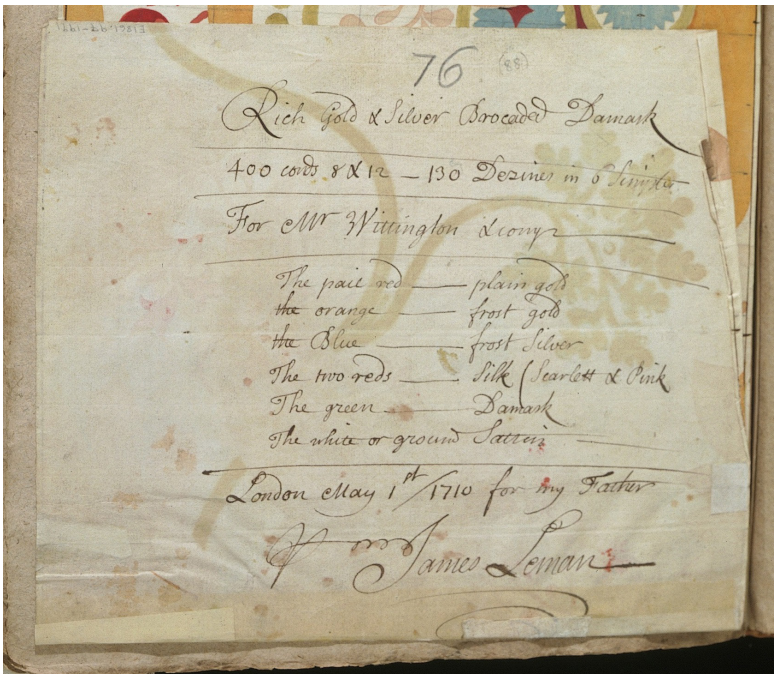

Fig. 8 Design E.1861:97-1991, verso, illustrating Leman's technical coding relating to the translation of design colour to silk colour. © Victoria and Albert Museum London.

The digital facsimile

The designs and results of the research will be accessible in a digital facsimile once the project has been completed. The materials of the designs as well as the silk make them light sensitive and fragile and therefore problematic to handle and display. The creation of a facsimile and the retention of the original support leaves goes some way towards justifying the decision to remove the designs from the album. The final decision on future housing of the designs is still in discussion but they will be kept together as a 'set' that was once housed on pages. Once the treatment of the designs is complete, the album support leaves, without their designs, will be re-sewn onto five tapes using original sewing stations and stored within the extant binding in order to retain the album structure and evidence of the designs' housing history.

The pilot for the facsimile will include just twelve designs selected to represent the entire contents of the album. Although we are only in the initial phase of what information the digital facsimile will provide, our aim is that it will allow greater access without handling and an opportunity to expand knowledge through a number of avenues, making it a tool for learning. For example, it will enable the designs to be manipulated in certain ways such as date order or original album sequence, and provide the means of repeating the designs in order to create a full length of silk. It will also offer the means to search for the inscriptions and information about pattern sources and motifs. Analysis of materials such as the colourants or the information on the papers, including watermark images, will also be available.

Conclusion

An educated, decidedly skilled designer and weaver, James Leman was highly regarded during his lifetime and his silks were much admired. Whilst perhaps not coveted in Leman's day in the same way, the designs held by the V&A are an impressive archive of his endeavours and without these it is probable we would not be able to identify any surviving silks or understand the workings of an eighteenth-century Spitalfields weaver. While the drawings were off value to him as an archive of designs and demonstration of his skills, Leman would be most surprised to find a team of conservators, curators and scientists some 300 years later scrutinising and drooling over them for their expression of craftmanship, colour and motifs, mining them for as much information as possible.

Biography

Dr Victoria Button ACR joined the Paper Conservation section of the Victoria and Albert Museum (V&A) in 1992 and has been a Senior Paper Conservator there since 1999. Her doctorate was awarded in 2013 and explored the function and use of Hans Holbein the Younger's portrait drawings through his choice of materials and techniques. The Clothworkers' Foundation funded Dr Button's training in the conservation of portrait miniatures from 2013 to 2016. She is the research coordinator for the Conservation Department and currently V&A Research Institute (VARI) project lead of a multidisciplinary team for the The Leman Album, an enhanced facsimile. Dr Button has been an accredited member of Icon since March 2000.

Jane Rutherston ACR has been Principal Book Conservator in the Paper, Book and Paintings Section at the Victoria and Albert Museum for the past twenty years, where she is responsible for managing the book conservation studio. Her interest in albums and their structures led her to research Victorian albums structures to better understand how they function. She is currently part of a VARI collaborative research project *The Leman Album: An Enhanced Facsimile* which involves the conservation and digital reproduction of the Leman Album. Jane has been an accredited member of Icon since March 2000.

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