Stiff-Board Vellum Binding with Slotted Spine

A Survey of a Historical Bookbinding Structure*

A type of stiff-board vellum binding, with a tight-back structure, slots cut in the spine cover and alum-tawed skin patches protecting the sewing supports, has been examined through the examples surviving in the National Library Marciana in Venice (Italy). This binding is found in the 16th and 17th centuries and presents typical Italian characteristics. This paper analyses the main features and variations of construction techniques and materials such as sewing supports, shapes of alum-tawed patches and vellum slots, quality of the covering, in the general evolution of bookbinding practices. The survey was limited to a few hundred volumes from a restricted geographical area and therefore it has been possible to identify some matches and combinations. Since this model had always been replaced by the more common bollow back Dutch vellum binding, special attention has been given to conservation outcomes of the different elements.

Ein besonderer Typus des Ganzpergament-Einbandes mit festem Rücken wurde an den noch vorbandenen Exemplaren der National Bibliothek Marciana in Venedig (Italien) untersucht. Kennzeichnend für diesen Einbandtyp sind im Buchrücken eingeschnittene Aussparungen, die mit alaungegerbten Lederstreifen unterlegt sind, welche die erhabenen Bünde schützen. Diese Bindeweise ist im 16. und 17. Jahrhundert anzutreffen und weist typisch italienische Charakteristiken auf. Der vorliegende Artikel analysiert die Hauptmerkmale und Variationen der Bindetechnik und der verwendeten Materialien, z.B. der Bünde, die Form der Aussparungen und der alaungegerbten Lederstreifen sowie die Qualität der Einbandmaterialien im Hinblick auf die allgemeine Entwicklung der Bindepraktiken. Die Erhebung war auf ein paar hundert Bücher aus einem begrenzten geographischen Gebiet beschränkt. So konnten einige Übereinstimmungen und Kombinationen identifziert werden. Da dieser Typus schon immer durch den bekannteren Niederländischen Pergamenteinband mit hohlem Rücken ersetzt wurde, wurde der Rolle der verschiedenen Elemente bei der Konservierung besondere Aufmerksamkeit gewidmet.

In bookbinding studies the main effort is usually applied to the analysis of decoration, i.e. gold and blind tooling on leather covers, trying to research a binder's style or to get clues of geographical and chronological provenance.

However it should not be forgotten that in Italy printed books bound in leather are actually a minority of the vast holdings of libraries, and that important works have been handled with less attractive covers made of vellum or paper. These bindings also present specific characteristics of historical periods or geographical areas and can reveal the social status of the owner as well as the history of collections by more "structural" means.

In this paper a vellum binding structure found on books of the 16th and 17th centuries will be investigated through the examples surviving in the Manuscript and the Rare Printed Collections of the Marciana National Library in Venice (Italy). They amount to 318 instances [1] and to these are to be added 42 more covers: in the recent past they were detached from their textblocks for rebinding within the Library and—fortunately and strangely—not thrown away. A database has been therefore set up to record and then process the analytical description of each volume.

The starting point for this research and the definition of the binding itself—stiff-board vellum binding in which the covering has been slotted across the spine to accommodate raised bands—are in a paper presented some years ago by Christopher Clarkson. He designed a modified version with a "casing-type hollow" to meet conservation purposes (Clarkson 1999). A historical approach has been tried here, aiming to understand a typology which is no longer adopted, or even recognised, but presents some interesting features for local

libraries. In fact it is usually said that the manufacture of this kind of binding is typically Italian. In our case it is confirmed by bindings on both Italian and foreign text editions, which bear definite local characteristics in materials and style of execution.

It is important to stress the fact that the results presented here are based on the holdings of an important, but single, library, and that one should consider a broad number of books from different places in Italy, as well as the examples found abroad, to get a clear and complete picture of the evolution and variations of a model, especially for its earlier development. Venice is a significant location for study, because of its importance in the 16th century as a market and a centre of book production. The city has often played a leading role in

The first (1496, right) and last (1670, left) stiff-board vellum bindings with slotted spine recorded in the Marciana National Library collections. [2].



technical innovations of this industry and its market and exchange activities drew in foreign craftsmen and clients [3]. On the other hand the geographical restriction of this survey offers the possibility of identifying groups of books bound by the same binder or for the same purchaser.

A short outline of the binding will be given first to give an idea of the basic features which made it widely used among the types of bindings available on the market at those times. A full description of the main steps of the binding will then follow in the order of execution, focusing on variations and peculiarities found in the Marciana group. The actual condition of the volumes ranges from very good to poor, so special attention will be given to the elements which did or did not contribute to preserving the bindings over the centuries.

Finally, the inquiry has also left a tangible impact (the last one, hopefully) on this collection, giving the occasion for in-situ repair of some volumes and extensive boxing.

General outline

Description of the binding technique

The textblock is sewn on raised supports and the slips are then laced through the boards as for other in boards bindings. The spine is slightly rounded and lined, accurate endbands are sewn on the head and tail, and then, to keep the cover close to the spine, slots are cut in the vellum, a sort of buttonhole exactly fitting the sewing supports protruding on the spine. In fact the sewing supports have been previously covered with patches of alum-tawed skin ending on the outer side of the boards. This protects the sewing thread and highlights the sequence of bands on the spine. It also makes the binding immediately recognisable on the shelves, especially when associated with reused manuscript parchment for the cover. Very often ties were added, whereas other decorative elements such as coloured edges or tooling of the cover were not so common (fig. 1).



The two volumes (1546 and 1549, [4]) come from different collections but present the same construction and materials: three alum-tawed double sewing supports, endleaves and endbands type, velvety alum-tawed bands, large slots on the spine, washed manuscript fragment for the cover, two alum-tawed ties.

16th century vellum binding techniques

From a general point of view, among the bindings where vellum is the main material at the beginning of the 16th century, we first of all find the economical limp binding. It goes back to a medieval tradition and turns out to be an optimal solution from the conservation point of view (Clarkson 1982; Fitzsimons 1986), together with a number of variations (Pickwoad 1995). Bound in boards we find the full vellum with tight-back, which is not so well known but widespread in Italian libraries until the 18th century. Here the vellum is moulded on the sewing supports and a large amount of adhesive is put on the spine, giving a solid and plain binding for large formats. It however presents a certain stiffness and rigidity in the opening, especially when the rounding is pronounced. I will leave aside the most common solution in the 17th and 18th centuries, the laced-case binding with stiff-boards (the so-called Dutch binding, in Italian "all'olandese"), because it appears later and with its hollow back it falls into another

We could assume that the model for a tight-back structure with raised supports on the spine was the leather one. This was then copied using vellum, a material of a high standard of manufacture in Italy. Despite its greater stability and endurance it displays a completely different behaviour when is rigid, stretched and glued. On the contrary when alum-tawed pigskin is used, such as for wooden board bindings of the German tradition (Montelatici 1992), or in the few existing examples of reverse alum-tawed skin in boards (chamois, with a very elegant appearance), the tight-back still keeps its function.

In case of this slotted spine technique, an original structure was created assembling two materials with a long tradition and widely available in the bookbinderies of the country, to get a refined and easily flexible product. The alum-tawed skin patches protect the raised supports; besides, the vellum with its slots cut to measure can follow exactly the shape of the spine and does not need to be heavily glued or stretched, especially when rounding is not pronounced.

Text editions ranging from 1569 to 1596 bound at the same moment with the same style [5]. For full description of the variations of patches material see p. 99.



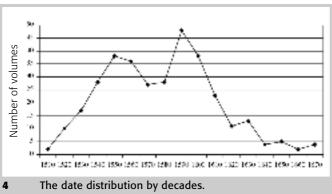
Moreover, if we imagine the bound book just issued by the shop, the alternation of white and cream colours on the spine must have been very attractive to customers. Sometimes this alternation is also underlined by putting out the flesh side of the alum-tawed skin, or slightly sanding the grain, so that its smoothness contrasts with the polished surface of vellum. Another possibility is the use of brown tanned leather instead of alum-tawed skin (fig. 2 and 3).

Dating, format and content

With twenty manuscripts on a total of 360 volumes, the large majority of the texts are printed ones, distributed over almost two centuries. If we only consider the edition dates, in fact, we have the first entry on an incunabulum dating 1496, and the last on a Venetian imprint of 1670 (see fig. 1).

A printed text could receive a binding many years after its printing, and it could also be the case that a cover would be added at some point to an earlier sewn textblock. Considering these possibilities, the incunabulum actually shows some quite "archaic" characteristics in comparison with the other early examples (the second one twelve years later, in 1508) and it could be assumed that it was covered not a long time after it was printed. For the next three decades there are a moderate number of findings, but we see that this typology became more common from the 1540s and undoubtedly reached its peak of popularity in the 1580s, with one out of seven books coming from this decade. Then it gradually decreased and rapidly dropped after the beginning of the 17th century, even if one should consider that other historical events like the pest epidemic of 1630 caused a general economic crisis. In the meantime other binding structures, especially the Dutch binding, developed and came into fashion (fig. 4).

The format is usually the folio (72 % of entries), but even three small sextodecimo editions got this cover. Another point is the kind of texts contained in the volumes; law and theology were two best-seller subjects because of University and Church, but they are not the predominant ones. In the first place there is literature: Latin and Greek classics, Italian authors, grammars and rhetoric texts. Next in order, and almost at the same level, we find theology, then philosophy, and then law. But there are also many medicine and history authors, so that it is not possible to put this binding style in relation with a particular discipline or the kind of customers.



Sewing

The first thing to be noticed as an indicator of accuracy in the execution of this kind of binding is the sewing structure. It is always and with no exceptions an all along sewing, even in the later examples. A common trend in book production by the second half of the 16th century is speeding up this crucial step by means of alternate or bypass sewing. This refers to sewing two or more sections together (with the additional result of saving thread) or skipping one or more stations while sewing every section (Pickwoad 1994).

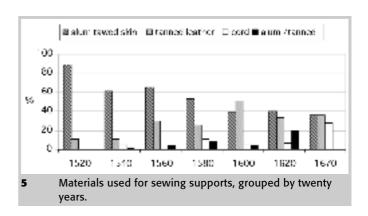
At this date this phenomenon is widely found in low-cost bindings, such as limp vellum or paper bindings and bookseller's wrappings, and also in decorated full leather bindings. In our collection this tendency is not evident even in later editions. On the contrary we even found a few examples with all along sewing carried out with double thread, probably with the intention of creating a more consistent, more protruding support on the spine. The effect of protrusion is intentional in this model of binding.

In other examples the binder produced this result by sewing on double supports made of alum-tawed skin. The double supports are present only in one volume out of five, the single rolled sewing support being the most common solution adopted. Some observations can be made about the decline of this medieval tradition, which had for so long guaranteed a resistant material and a sound sewing structure, and its effect on the functionality and durability of books. The last double alum-tawed sewing support was found on an elegant German print dating 1596, but apart from this late example, this ancient typology extended over the three decades, from 1530-1560. A variation with two rolls of alum-tawed skin side by side, instead of one strip with a central cut as sewing support, was in use for a few more decades.

Material of the sewing supports

The single supports in rolled alum-tawed skin were predominant only before 1550. After this date we found one example out of three, and tanned leather became the main material (fig. 5).

Leather was easier to find on the market, but it did not offer the same durability as alum-tawed skin. The rolled supports often broke in pieces on the spine—even thick ones—



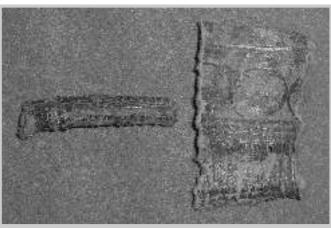
and almost always at the joints, giving a weaker structure especially when associated with partial lacing through the boards. Sometimes this deterioration offers interesting findings, as in two large folios of 1642. They have been sewn on five single 8 mm thick leather rolls, which are now in very poor condition: the front boards are completely detached from the books, the sewing thread is torn and the sewing supports are broken in several pieces. By unrolling a fragment of them it is possible to obtain a leather strip of approximately 5 by 3 cm with gold and blind tooling, which had clearly been taken from the leather cover of another book (fig. 6). The idea of unrolling all ten of the strips could be tempting even for a conservator.

It is interesting to note a similar change in the quality of the material used to support the sewing in another typical Italian structure, the limp paper binding. This structure was very common on books from the 16th to the 19th century, even if it was intended for a completely different purpose (Cloonan 1990). A glance at the external lacing of the supports through the cartonnage cover gives a clue to their evolution from alum-tawed skin to leather, ending up in cords.

Other options are cord or a combination of alum-tawed skin with leather in the same volume, which could be evidence of the inconsistent introduction of a new method, or simply of the fact that in a bindery is practice of using the first material to come to hand.

Number of sewing supports

In opposition to the commercial search for cheapness, and associated to the general change in decoration of books, the increasing number of sewing supports is to be considered, regardless of the size of the volumes. From the widespread presence of three supports, uncontested until 1540 in octavos as in folios, we gradually and very clearly shift to four and five, with a few six and seven. From the 1590s onwards no example is found with less than four supports. Together with other indicators, such as the watermark in endleaves, and the material of the supports, it contributes to date a binding, for example a Neapolitan imprint of 1535 which has been sewn much later on seven double cords [6].



Unrolling a fragment of a sewing support made of a decorated strip of leather. [7].

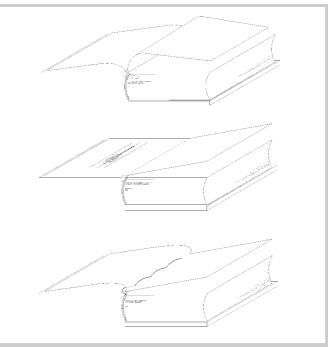
As one can imagine, it also puts this binding on the same level of execution as the other contemporary in boards bindings found close to it on the height-based shelves of the Library, whereas limp neighbours usually present a lower number of supports.

This is again confirmed by looking at the volumes lined on the shelves. But in a couple of cases we found some strict examples of this practice. The first is the second tome of an octavo edition, printed in Venice in 1563 [8], and sewn on four single supports of alum-tawed skin; its first tome, dated 1549, has been bound in a limp vellum binding with only three supports. The second case is a mathematics text printed in Venice in 1589 [9], with five expected alum-tawed supports and crowning core in the endbands; next to it there is the same text printed one year before in Pesaro, bound again in limp vellum, but only on three leather sewing supports, and without crowning core.

Endleaves

In the group of bindings examined there is not a great variety in endleaf formats, with two main categories—if we consider the time spent to sew them. The first, and definitely most common (present in one out of two books), is a single sheet folded with a stub and hooked around the first and last gatherings, which avoids any extra sewing. Moreover it hides completely the inner side of the binding at the joints and the thread is sewn through a good number of folds. This last feature prevents an easy tearing of the paper caused by the thread pulling when the binding is opened. The second format is a separate gathering made of one folded sheet, sewn as the other gatherings of the textleaves (fig. 7).

Within these two formats there are a few variations which



Endleaves types: the most common hooked single fold (top), the single fold without sewing and high incidence of the three mounts watermark (middle), and the single fold sewn as a separate gathering (bottom).

cover a restricted number of examples. The more interesting one is represented by a group of twenty books with text editions ranging from 1529 to 1576. It is again a single folded sheet, which is neither hooked nor sewn: the outer leaf is simply pasted onto the board, and there is no sign of holes or sewing thread. This structure in other words is not connected to the textblock, and its interest lies in the high incidence of the same watermark, three mountains in a circle with a long cross on the central one, found in books dated 1536-1551. We found very similar watermarks in papers produced in the area of the Lake Garda (Mazzoldi 1990: vol. II, no. 787). In those times it was part of the Venetian Republic and the main supplier of the primary resources to Venetian printers [10].

If we consider this combination of endleaf format/watermark in relation to other features common to these volumes—titling on the tail edge of the textblock with a heavily inked pen, signs of heavy use, water stains, and in general a plain and neat execution—it is possible to argue an attribution of these volumes to the library of Melchiorre Guilandino. He was a botany professor who taught at the nearby University of Padua and died in 1589. In his will, his 2200 books were bequeathed to the Marciana Library (Zorzi 1987: chapter VII), and they represent the oldest core of printed volumes to enter the Library. Unfortunately an identification of these books among the rare collections of the Library has not been accomplished yet, and it would be quite difficult, as he did not mark his holdings with any ex-libris or possession note. Only in a few cases there are autograph annotations, and when present these marginal notes confirm the material elements mentioned before. This leads us to presume that he used a binder who bound in a specific style the text editions bought by the professor during a particular period of time. He added endleaves made of paper from the Garda papermills and his bindery might have been located for example in Padua or Venice. We also find that these Guilandino volumes frequently lacked endband secondary sewing, they have four alum-tawed skin ties, or they have covers composed of three pieces of vellum one for the spine and two on the boards. This confirms the theory that Guilandino asked for simple and practical models.



Particular of a board spine edge: a single piece of a laminated board folded at the centre [11].

One of the possible approaches to the study of his collection would therefore be that of surveying the materials and construction of volumes from a large private library which was mainly intended for medical research.

Spine

As stated before, the rounding of the spine is generally minimal and a great number of books have spines that are almost flat. The lining material we found most was parchment, often fragments of manuscript books. The less common paper linings began to appear in the late 16th century, and the only type is a transverse lining between the supports (Szirmai 1999: 195). It is made of strips that extend over the spine with straight edges and are pasted on the inner face of the boards.

Endbands

Endbands are always carefully executed, and even in the later entries they never loose their structural function, confirming that this type of binding, perhaps more than others, remained close to a tradition of high quality craftsmanship. The thread stitches in the textblock are numerous, and in many of the volumes they even pass through almost every gathering [12]. The thread is double or single with a back bead, and usually covered with secondary sewing in coloured silk [13]. More than half is also embellished by a crowning core.

Compared with the variety in material we found used as sewing support, for the endband treatment there is an unexpected fidelity to tradition. Over 80 % of the endbands are still in alum-tawed skin and only 10 % in leather, with a small number in cord and parchment, as if the binder knew that leather was weaker or perhaps because it was easier to make thin rolls with alum-tawed skin. Unlike normal in boards bindings, the core slips are not cut at the joints; instead they are laced through two or even three holes in the boards. They do not show outside as they would in Dutch bindings, and the board corners usually do not receive a special treatment.

Board treatment

A couple of notations regard the board treatment, legible because of the critical condition of some volumes. As far as one can see boards usually do not receive any bevelling on the spine edge. However in a handful of cases it is apparent that the board is formed by a single piece of laminated cartonnage folded at the centre. The fold is at the spine edge (fig. 8), while at the front edge the two parts separate to a deep extent, so that it is not even sure if some adhesive was pasted in the middle. This folding solution gives a gently rounded shape and an easy opening. If we consider that papermakers could use normal paper moulds to make layers for paste boards, it makes sense from an economical point of view. In this way the folio mould would have given a perfect piece to be folded and used on a folio volume, without any extra work.

On the other hand in two instances the boards are made of two thinner boards of different colours (creamy and blue) pasted together. The blue one is on the inside so that it does not show through the cover.

Covering

Use of fragments of medieval manuscripts

The use of manuscript parchment from books for lining (65 % of parchment linings) can be explained in the general attitude where waste materials were normally and exhaustively recycled, as seen in the gilted leather rolls used for sewing supports, or in the printed leaves sometimes visible under the pastedowns, or as pastedowns themselves. It finds its clearest correspondence in the covers made of reused manuscripts, which are thirty examples among the slotted spine vellum bindings. They range in date from 1519 to 1617, with a peak in the years 1530-1550. Manuscript leaves from books [14] were usually put on with the original fold along the spine and in more than half of the instances the ancient inks had been washed away. An unusual combination is that of a Paduan manuscript written around 1527; it is covered with a printed bifolio of parchment (fig. 9). All these examples have been phase-boxed to prevent contact and further abrasion by the other books on the shelves.

The habit of recycling comes from the medieval tradition, showing that even in the first quarter of the 17th century vellum was still an expensive material, and thus it was worthwhile to look for "second hand" sources. Incidentally, although all of these bindings lack fancy elements, such as the crowning core, or even the silk sewing in the endbands, they are carefully and traditionally executed. Ten of them have double alum-tawed sewing supports, and two out of three have alum-tawed ties on the edges—data above the average. Finally, the contrast of the written inks with the bright alumtawed skin evident from the slots makes these volumes particularly attractive.

Flesh or grain-side out vellum

The most popular cover material in the first period is however vellum with flesh outside. It gives a clear colour together with an elegant and plain look, and it seems to be characteristic of Italian vellum bindings. It is possible to date quite exactly the

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shifting from flesh side to grain side in the decade 1550-1560. Before that period, grain side out examples were sporadic, while from this point onwards the situation gets inverted with increasing evidence. After 1591 flesh side out cases are very isolated, one curiously on the latest surveyed binding of the 1670 edition, almost greyish/white in colour (Reed 1991).

Compared to vellum with grain side out, where the flesh is not so worked and polished, flesh of course is weaker and offers less protection. It is easier to find cracks or splitting along the joints and abrasions on the edges. As nowadays it is the main reason for critical condition, it is not to be preferred from a conservation point of view, especially when the spine has a good rounding.

Alum-tawed skin patches

In many cases of a vellum cover with broken joints, a firm attachment to the boards is supplied by the patches of alumtawed skin, which once more confirms it to be a long lasting and resistant material. These patches were presumably cut before putting them on the sewing supports. Anyhow their ends are often shaped in precise patterns, and some damaged covers have revealed the knife sign on the boards (fig. 10).

The ends are usually squared or pointed like an arrow, but they can also be rounded, irregular, or a combination of two or more patterns, or even not visible.

It looks as if the potential decorative element of the alum tawed patches on the boards was slowly exploited by binders and ultimately produced some beautiful examples, in particular when the number of sewing supports were high. The arrow profiles, underlined by a grain-side out vellum with an accurate pasting on the boards, were very rarely adopted before 1580 (fig. 11). Squared patches—the easiest—were more or less distributed all through the 16th century. Then they almost disappeared after the beginning of the 17th century. Rounded patches were likely to be more popular in the middle of the 16th century.

Slot cutting

In the slot cutting of the vellum cover we also find variations. The most common cases have squared ends. The first cuts were presumably the two ends, measuring the width of the spine or slightly over the joints, then the two long lines along the sewing supports were made.

The question whether the cuts were made directly on the

Board incisions from alum-tawed bands cutting.
[16].

The fragment for the cover comes from a book printed on parchment [15].

spine when the cover was already put on, or before this passage, is not completely clear. Of course it was easier to make the cuts before, and there was no risk to lance the alum-tawed patches underneath. I found only one binding with the long lines traced on both vellum and alum-tawed skin, and actually the mark on the alum-tawed patch is very deep. The few other cases of cuts in the alum-tawed patches are very visible, and confined to the short cuts at the joints. A possible explanation of these marks could be that the binder first cut the two long lines apart and at an approximate measure they are often much larger than the supports—and then made the short cuts once the cover was on. On the other side a deliberate extension of the slots over both joints is present in more or less half of the volumes, and somehow this interruption of the joint line facilitates the opening movement.

The other shapes of the slot ends are the rounded ones, which gives a more accurate fitting of the protruding sewing support, and the pointed one. The pointed shape is carried out with two cuts over the joints and it is mainly associated with arrow-pointed alum-tawed strips (fig. 12).

Variations of patches material

The binding model traditionally had alum-tawed skin patches, but this was not compulsory, and sometimes binders tried other materials. Parchment appears in later examples, not easily recognisable as it can look like thin and dirty alumtawed skin. Tanned leather on the contrary was a more definite choice and it gives a pleasant effect on the spine.

Even if it is not clear whether the binding is contemporary or not to the text, the oldest volume with slotted spine binding in the Marciana Library—the Venetian incunabulum of 1496—has its double sewing supports of alum-tawed skin patched by thick pieces of leather. It is tanned in a brownish purple colour (fig. 1). The large slots offer plain evidence of this alternation of cream cover and dark patches.

A more refined result is that of the three bindings of fig. 3. Here again we find double sewing supports, this time made of cord, with the central groove nicely marked on the brown tanned leather patches. The books have been printed in different



Alum-tawed skin bands with arrow points [17].

places at different dates (from 1569 to 1596); two of them formerly belonged to the Jesuitical College in Padua, and the third comes from a Venetian private library. On further consideration, it is clear that the three volumes came out of the same bindery more or less at the same time. The sewing and covering techniques as well as the materials are exactly the same, from packing of the sewing thread to partial lacing of double cords (one slip out of two cut at the joint), endleaves construction, endbands style and colours, and vellum cover texture. The text subjects are also similar, theological controversies between Catholics and Lutherans, so it is possible to argue that the oldest text, edited in 1569, received its final cover almost thirty years later.

Somehow these patches could be considered as a sort of "complementary" lining before the final covering. They involve the areas which have not been secured by the spine lining on the spine itself, that is over the sewing supports, and on the outer side of the board. This creates a sort of sandwich where the board is the central layer. An odd solution is a single large band of thin alum-tawed skin pasted onto the complete spine, that is running from the tail to the head, instead of different patches covering only the support areas. It is clearly visible under the vellum cover and it is significant that it was tried in the last stiff-board vellum binding with slotted spine, found up to now in the Marciana collection, dating 1670

As said before the alum-tawed patches keep the board attachment when the vellum cover and the slips of sewing supports are already broken along the joints. Moreover in this arrangement the stress at the opening does not concentrate on the vellum cover at the joint, as this line is interrupted by the alum-tawed skin tracts. It means, for example, that the opening is easier than in in boards full vellum bindings with tight-back, with their straight joint line and heavily glued spine. In fact in the slotted spine model the vellum panels between the patches are not very stretched, and also not so firmly adhered to the spine; quite often they slightly lift away.

Decoration and fastenings

The last features to be considered are the decorative elements of these bindings, as not all of them present a plain cover. The findings are rare, but quite varied. There are blind or gold toolings; elaborate drawings of coats of arms; edges which are coloured in blue, red or purple, hand drawn or even gauffer-

Fastenings, another tradition going back to medieval structures, are very common—almost 50 % of volumes—



12 Variations in alum-tawed bands shape and in cover slots

and a few of them date from the 17th century. The great majority are pairs of ties of alum-tawed skin on the front edge, often with two more placed on the head and tail edges. There are also a good number of silk ribbons in alternate colours, a few in velvet, and even metal clasps. One of them is worth noticing as it has been made with an elaborate punch of a lion within a laurel crown; another one with exactly the same figure was found somewhere in the Library in the past and ended up in the "lost clasps collection" of the Conservation Department.

This small particular recalls the forty-two slotted spine vellum bindings among the hundreds which where detached, approximately in the years 1950-70, by the internal Library binder. They were all found by chance years later still with the shelf mark indication, piled up and hidden behind some shelves, and allowed a privileged observation of the binding techniques. The point I would like to focus on is that the original textblocks were of course never rebound in the same way, but almost all of them are now in Dutch bindings.

Conclusions

The slotted spine technique was quite soon replaced or abandoned in favour of other in boards vellum bindings, probably because of the complexity of its construction. This structure remained close to its tradition of high quality, which made it less competitive in the contemporary market.

A set of folio volumes about the traditions of the New World inhabitants, edited in Frankfurt over a long period of 35 years, exemplifies this historical evolution and destiny (fig. 13): the first three volumes from 1590 to 1594 have been bound according to our model. Then a volume was bound in limp paper sewn on a smaller number of supports, then in 1602 a volume was bound in an in boards, full vellum with tight-back. Finally, in 1624, a Dutch binding was used. When rebound in the 17th century, an in boards vellum binding with a hollow back would have been chosen, and there are a couple of examples of this choice in editions of various volumes that had suffered some early damage.



Different choice of binding models for a text issued over 35 years [18].

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Given that binding practices have never been entirely consistent, a misunderstanding of the importance and role of this uncommon binding style has probably led to inappropriate choices and eventually to loss of information in recent restoration practices. For example in an octavo volume's new cover the slots have been cut without putting any alum-tawed patches, because they were abraded in the original binding. As a result, the thread passages around the sewing supports are now exposed.

Within the limits of the Marciana collection the survey has therefore defined the main features of this kind of binding—the sewing and sewing supports, the kinds of endbands, the variations in covering patches as well as slot cutting, and cover materials—and traced some variations that occurred during two centuries in a structure we have found to be quite complex and slow to change. This makes it possible to understand better now the books function and to produce the same structure with some conscious modification.

Many questions remain, such as the origin of this model and the incidence of its use in other Italian libraries. To discover whether it was used beyond its Italian area, a broad number of examples in foreign libraries should be investigated. Another interesting point would be the contemporary terminology used to describe it, if ever there has been one. For these research directions, this survey of the Marciana collection would like to be a sort of springboard.

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Annotations

- * This contribution was held as a lecture during the Parchment Conference of the Austrian State Archive from 20th to 22th November 2002 at Vienna, and is revised for print.
- [1] Zorzi 1987 for the history of the Marciana Library and of the donations which built up the actual collections.
- [2] Joseph de Gibalin, *Scientia canonica et hieropolitica*, Lyon: Laurent Arnaud et Pierre Borde, 1670 (left); Priscianus Caesariensis, *Habes candide lector ... Volumen maius [et] volumen minus*, Venezia: Octaviano Scoto, 1496 (right).
- [3] Interesting but limited to decorated leather bindings, Hobson 1999: in particular the chapter "Venetian sixteenth-century bookbinders".
- [4] Fortunio Affaitati, Ad Paulum III Phisycae ac Astronomicae considerationes, Venezia: Niccolò Bascarini, 1549, bound with other works (top); Niccolò Martelli, Il primo libro delle lettere di Nicolo Martelli, Firenze: 1546 (underneath).
- [5] Iosé De Acosta, De Christo revelato libri novem, Roma: Giacomo Tornieri, 1590 (left); Thomas Stapleton, Triplicatio incohata adversus Guilielmi Whitakeri ..., Antwerpen: Jan van Keerberghen, 1596 (middle); Nicolas Durand de Villegagnon,

- De Consecratione, mystico sacrificio, et duplici Christi oblatione adversus Vannium ..., Paris: Sébastien Nivelle, 1569 (right).
- [6] Tiberius Claudius Donatus, In libris duodecim Aeneidos quae antea desiderabatur absoluta interpretatio, Napoli: Giovanni Sultzbach et Mattia Cancer, 1535.
- [7] Mario Bettini, Apiaria Universae Philosophiae Mathematicae, Bologna: Gianbattista Ferroni, 1642.
- [8] Marsilio Ficino, *Delle lettere tradotte per Felice Figliucci senese*, Venezia: Gabriele Giolito de' Ferrari, 1563.
- [9] Pappus Alexandrinus, Mathematicae collectiones a Federico Commandino in Latino converse, Venezia: Francesco de Franceschi Senense, 1589; and Pesaro: Girolamo Concordia, 1588, both folios.
- [10] Other watermarks from this area are easily found, for example the cardinal hat, and when identified in catalogues all the end-leaves papers proved to be of North-Italian origin.
- [11] Flavio Torti, Annotationes seu lucubrationes ad statuta inclytae civitatis Papiae, Pavia: Pietro Bartoli, 1617.
- [12] On the other side, always in combination with this accurate passages, I found the few single thread with no back bead, until 1550. The last packed tying down is not much later, in a 1562 edition.
- [13] In one single case, an Ambrosius Calepinus *Dictionarium* of 1579 with cord supports and endbands core in parchment, the primary sewing has been carried out with silk thread directly and very few tie-downs.
- [14] One instance is interesting as it is in three folio volumes, where three complete folds from the same manuscript with an elegant humanistic writing have been used. A documentary origin of the manuscript is more rare, or at least more difficult to find out, as it was usually hidden in the inner side of the cover.
- [15] Venezia, BN Marciana, Cod. Lat. VII, 50 (= 3570), containing lectures on medicine given at Padua University around 1527.
- [16] Iohannes Grammaticus Philoponus, In tres libros De Anima Aristotelis breves annotationes ..., Venezia: Eredi Girolamo Scoto. 1581.
- [17] Giovanni Talentoni, *Variarum et reconditarum rerum Thesaurus*, Frankfurt: Collegio Musarum Paltheniano, 1605.
- [18] Thomas Harriot, Admiranda narratio fida tamen, de commodis et incolarum ritis Virginiae ... pars prima – pars duodecima, Frankfurt am Main: Theodor de Bry, 1590-1624.

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