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# Binding or Rebinding at St Catherine's Monastery of Sinai

**Abstract:** The monastic library of St Catherine's is known to hold one of the largest collections of early and undisturbed bookbindings from several different East Mediterranean bookbinding traditions, including Greek, Arabic, Georgian, Ethiopic and Slavonic. How have these books survived to date, what was their use and how does their use relate to the need for bookbinding renovations in the monastic environment? This paper examines the major bookbinding tendencies in the monastery and discusses the relationship between manuscript production, bookbinding and the renovation of manuscripts by binders at St Catherine's monastery throughout the centuries.

## 1 Introduction

The monastery of St Catherine in Sinai, Egypt, is regarded as the world's oldest active Christian community and one of the most important centres of early monasticism.<sup>1</sup> Throughout fourteen centuries, it has also been famed for its exceptional library, having accumulated manuscripts and been a pillar of manuscript production, holding today one of the most important collections of Eastern Mediterranean manuscripts to survive.

The history of the library runs parallel to that of the monastery itself. According to tradition, Emperor Justinian sent gifts to the monastery upon its foundation in the middle of the sixth century, including many books for its liturgical needs. The famed *Codex Sinaiticus* is allegedly one of these gifts.<sup>2</sup> Nowadays, the monastic library collection comprises approximately 3,300 bound manuscripts, most of them written in Greek. However, a great number

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<sup>1</sup> The first references to the Sinaitic land are from one of the earliest pilgrims, St Sylvia (or Etheria), who mentioned the existence of a small chapel next to the biblical Burning Bush, allegedly built by St Helena, the mother of the Roman-Byzantine Emperor Constantine the Great. However, the main church, the settlement and the fortification of the monastery of Sinai were founded in the sixth century by Emperor Justinian. For the history of the monastery, see Manafis 1990, 12–13.

<sup>2</sup> Clark 1953, 25.

are also in Arabic and several other languages, such as Georgian, Syriac, Slavonic and Ethiopic, displaying the enhanced multilingual and cross-cultural nature of the monastery.

These manuscript traditions are unsurprisingly accompanied by a corresponding bookbinding tradition. What is of particular interest to us is that it holds one of the largest collections of original or early Greek bindings,<sup>3</sup> which have preserved their features undisturbed, making it unique for research on the archaeology of their structures.

Bookbinding within the context of Greek monastic libraries is directly linked to the overall history of manuscript production and preservation, as it was the monastic communities that had been responsible, to a large extent, for their accumulation, use and circulation. As such, the production of new books as well as the repair and preservation of older manuscripts were both practices that have been well recorded for Greek Orthodox monastic communities, including, of course, the monastery of St Catherine.

However, what is of particular interest and the focus of this paper is the relationship between the production of manuscripts as a need to provide usable texts for the community, either new or reused, with the activity and purpose of bookbinding within the monastery. A parallel observation of these linked operations can offer an insight into the overall tendencies in manuscript production and circulation, while quantitative and qualitative evidence has helped to answer a number of questions regarding the activity and intentions of the binders who were active at St Catherine's monastery in Sinai throughout several centuries.

## 2 Manuscript production and provenance

Local manuscript production at St Catherine's has been more or less continuous since the first centuries of asceticism in the Sinai Peninsula the creation of the monastery and at least since the eighth century when more concrete evidence from surviving manuscripts is available, a practice that seems almost never to have stopped. What is equally significant is that the core of the collection of the St Catherine's manuscripts initially consisted of works by ascetics of the Sinai

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<sup>3</sup> Greek bindings are a bookbinding entity that is generally used to describe bindings that carry features such as unsupported link-stitch sewing, a round and smooth spine, a text block that is cut flush with the wooden boards, endbands that extend over the edges of the boards and are sewn into them, and occasional V-shaped grooves that run around the edges of the boards.

desert or by monks and abbots of the monastery, who have been responsible for the production of manuscripts from as early as the fourth century, copies of which survive in the Sinaitic library. Hosios Nilos, an ascetic from the fourth century, Hosios Nikon (fifth century) and the monk Anastasios (sixth–seventh century) are the earliest known scribes of Sinai.<sup>4</sup> The most important of all was undoubtedly John Climacus, a monk of the Sinai monastery during the seventh century, who, following the request of the abbot of Raithos in Sinai, produced the important ascetical treatise the *Ladder of Paradise*.<sup>5</sup>

Reference should also be made to manuscripts that were offered as gifts from emperors, patriarchs and highly esteemed people<sup>6</sup> as well as those collected or commissioned and dedicated to the library by archbishops and monks of the monastery and its dependencies. Archbishop Arsenios in the thirteenth century was a characteristic example of a scribe and copyist himself, but he was also a collector of manuscripts, which he eventually donated to the monastery.<sup>7</sup> Archbishop Ioasaph (1617–1661) was also occupied significantly with the care and the gathering of manuscripts and has left several inscriptions testifying his involvement with the accumulation and care of books, and many notes written to remind the reader not to remove the manuscripts from the monastery. He is also known to have been involved with repair work and the rebinding of a number of volumes.<sup>8</sup> Several other notes in individual manuscripts indicate that monks from the dependencies of the monastery, either in Sinai, Cairo or from further away such as the dependency in Crete, would often bring books with them upon their return to the monastery in Sinai, which may be the case for the majority of the books that arrived in the monastery during the sixteenth century.<sup>9</sup>

### 3 Evidence of bookbinding activity

Having such a prolific and undisturbed scribal activity, it would be rather impossible to imagine a parallel bookbinding activity not to have taken place at the monastery. Indeed, evidence of bookbinding activity is rich, perhaps even

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<sup>4</sup> Digbasani 1992, 569.

<sup>5</sup> Sinai Monastery 1979, 12–15; Tsami 1988, 162.

<sup>6</sup> Amantos 1953, 42–66.

<sup>7</sup> Digbasani 1992, 569.

<sup>8</sup> Boudalis 2004, 113.

<sup>9</sup> Sarris 2010, 517.

richer than the scribal activity itself, as the numerous surviving bindings become unquestionable testimonies of such work.

Bookbinders' notes or notes referring to the repair of books have survived from as early as the fifteenth century and, more particularly, from the seventeenth and eighteenth centuries.<sup>10</sup> Certain abbots or monks who were related to a prominent binding activity have taken particular care to leave their notes. The latter are valuable sources to help us identify local bookbinding production. Nevertheless, binders' notes are not very frequently found in manuscripts from this collection.

My research studying the Sinai bindings focused on the finishing tools from the decorated bindings of the monastery and the identification of bookbinding 'workshops'. A workshop could be any structure of a bindery, either organised as a group of binders working together, or even as individual binding activity executed by someone who could have been binding books as a *diakonema* – a monastic occupation of obedience – with the minimum of equipment and materials. It is also the case that a workshop could be an establishment or personal activity which could involve the work of one person passed on to another after a certain number of years, along with the decorative finishing tools, the equipment and the bookbinding knowledge. Different workshops at the monastery occasionally also worked during the same period producing groups of bindings with different styles and features. Not having a distinct professional entity or any archival evidence to inform us on how these workshops were structured, it is impossible to understand whether the binders working in these workshops were related or collaborated under one workshop. Under these circumstances and for reasons of consistency, an identified binding group that used a particular set of finishing tools and/or style of bookbinding is perceived to reflect the work of one workshop.

This method, which has provided a much greater source of evidence on the existence and role of local binders. By means of the comparison of decorative and structural features, it was possible to group similar bindings among them and cross-reference the information contained within.

A total of 1,195 of the 3,307 manuscripts in the library have been decorated by means of impressing finishing tools on their leather covers. These decorated bindings provided the main material for examination since the aim was to create some order out of the bookbinding collection. Additionally, an attempt was made to identify the different binding workshops that had connections with the monastery, and which produced bindings that can be grouped by means of

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<sup>10</sup> Boudalis 2007a.

decorative and structural similarities. Having accomplished that, it was possible to attribute provenance and dates and establish links between the bindings that fell within a particular group.

This research method took into account the entire collection of manuscripts of Saint Catherine's monastery library, making no distinction between bindings of different artistic qualities and significance, or of specific periods of interest. It was, therefore, possible to represent the widest possible range of binding types and qualities within both monastic and commercial bookbinding production and offer an opportunity to investigate the whole variety of the bindings that formed the Greek Orthodox monastic library at different periods.

As a result of this research, seventy-one binding groups were formed with distinct links between the bindings within each group. Some groups may be comprised of only two bindings, while other more prolific ones have up to ninety bindings.

Out of the seventy-one groups, twenty-three relate to the work of binders from the monastery of St Catherine, fourteen consist of imported bindings, while it was not possible to identify the origin of the remaining thirty-four groups (see Table 1).

The twenty-three Sinaitic groups, a total of four hundred bindings, represent a great part of the history of the library of St Catherine's monastery. They demonstrate that bookbinding has been a vivid tradition and activity in the monastery as nearly five centuries of bookbinding are recorded and mapped. This activity often followed the overall involvement of the monastery, its political circumstances, the presence of monk-scribes and the interest of specific archbishops of the monastery towards books.

**Table 1:** Origin of bindings in St Catherine's monastery

Origin of binding	Number of binding groups	Number of bindings
St Catherine's workshop(s)	23	400
Imported	14	125
Unidentified	34	99
Total	71	624

The wealth of the grouped bindings is significant and has provided enough evidence to be able to explore the tendencies of binders and the need for functional books at the monastery, which is one of the main issues I aimed to address within the context of this paper. I was particularly curious to under-

stand what the main concern of binders has been, what books they preferred to bind and how that relates to the production of new books as opposed to the need to rebind older manuscripts. The answers to these questions are not linear, as we see different tendencies and evidence in different periods.

## 4 New books or rebindings?

We should attempt to understand what the need for new books or to repair older ones was. Manuscripts at the monastery cannot be seen as a central collection of one library housing all books, at least not until the seventeenth century when the efforts of Archbishop Nikiforos Marthales<sup>11</sup> gathered all books together and formed a central monastic library. Before that, we know that books at one point in the early days were kept in different chapels, particularly in the *katholikon* (the main church), in different cells or even in rooms within the walls of the monastery. The library was completed in 1734.

It is evident from several ownership notes that we read within the manuscripts that monks often owned their personal manuscripts for which they cared and used personally. This may partly explain the fact that, in certain cases, we find two or more books of the same content having been bound or rebound during the same periods, which is evidence that several copies of the same text must have existed in good condition for use at the monastery. On another note, it is also the case that the monastery has had the need for several copies of the same liturgical contents to be used at its different chapels or dependencies, therefore, this would also justify the need to have many good copies of the same text during the same period. It is very likely that their accumulation within one central library may have come at a much later date.

Today, we find these copies gathered in one library, and unless we look at the specific provenance notes within them and deduct the information from the bookbinding groupings, it is difficult to explain what the need for these books was and to understand where and when each of them was used.

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<sup>11</sup> Nikiforos Marthales was archbishop of the monastery between 1728 and 1747 and one of the most influential figures for the library, who had also served as abbot of the monastery's dependencies in Constantinople and Wallachia before that. He was a scribe and copyist himself and wrote a number of manuscripts surviving today in the library. Upon his election as archbishop, he gathered all the books that had until then been scattered through the monastery into one place which he restored to form a dedicated library. See Digbasani 1992, 575–578.

## 5 Bookbinding workshops

What is the evidence we have regarding new bindings or rebindings? Bookbinding has been a major activity at the monastery, however, rebinding has occupied a large part of that activity since early medieval times. It is necessary to look closer into the relationship between the newly bound books from each workshop and the older manuscripts that each group repaired, in order to determine the exact nature of the work of the Sinai binders/restorers. Accordingly, we have to look at each particular workshop and see what their work involved and observe the patterns formed at particular periods.

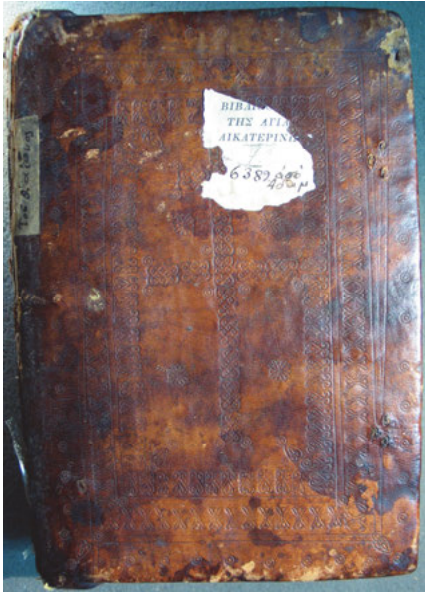
### 5.1 Thirteenth-century workshops

The bookbinding activity in the monastery for which there is sufficient evidence is concentrated mainly in the period between the fifteenth and eighteenth century. Only a few examples of earlier work survive.

The earliest identifiable workshops at the St Catherine's monastery are probably *Group 61* and *Group 73*. These are two groups of five and two bindings, respectively, both of which are also roughly dated to the thirteenth century. Interestingly, both groups include bindings only of Arabic manuscripts, containing lectionaries, canons, Sayings of the Fathers and New Testament, exclusively of theological content but quite diverse.

The fact that all of the manuscripts involved are Arabic, bound in purely Greek style, adds weight to a Sinaitic provenance, since the places in the Arabic-Christian world with Greek binding influences are somewhat limited outside the Sinai Peninsula. However, solid evidence of their local provenance is unfortunately not available and further research on these groups and the possible identification of matching bindings from other collections would be necessary to reinforce this speculation.

Three out of the five manuscripts in *Group 61* are first bindings of thirteenth-century manuscripts (Fig. 1a), while the remaining two are rebindings of ninth- and twelfth-century manuscripts, respectively. *Group 73* includes only two bindings (Fig. 1b), which are both the first bindings of their thirteenth-century manuscripts. Unfortunately, the evidence from the thirteenth century is rather small and it is hard to draw any solid conclusions from such exceptional groups.



**Fig. 1a:** Sinai, Monē tēs Hagias Aikaterinēs, Ar. 72 (*Group 61*).



**Fig. 1b:** Sinai, Monē tēs Hagias Aikaterinēs, Ar. 178 (*Group 73*).



## 5.2 Fifteenth- to early sixteenth-century workshops

Curiously, there are no groups surviving from the fourteenth century, which makes the earliest two groups appear as an even more exceptional case. There are a few isolated bindings from that period of what can be described as 'orphan bindings', which are those that do not fit any identified group. However, these instances are difficult to analyse and put in a broader context.

There are two distinct groups identified from the fifteenth to early sixteenth century: *Group 27* and *Group 31* (or 'Antioch' workshop).<sup>12</sup>

*Group 27* comprises eight bindings, which were identified from the finishing tools bearing motifs with a bird and a quadruped animal present consistently in all eight covers. What is more, they are all bound in the same style, with many identical structural features in a clear Greek binding style. They are all rebindings of earlier texts on five Arabic, two Syriac and one Greek manuscript dated from the eleventh, twelfth and thirteenth century. It is characteristic that several of the manuscripts bare the same donation inscriptions by Iohanna, archbishop of Sinai.<sup>13</sup>

The bindings of this group (Fig. 2a) are dated between 1486 and 1510 based on a note in Arabic<sup>14</sup> on an added folio in Sinai, Monē tēs Hagias Aikaterinēs, Gr. 742 (Diktyon 59117) (Fig. 2b) that helps to attribute the repair and completion with missing parts of the book to the time of Markos III archbishop of Sinai, whose ordinance was between 1486 and 1510.

<sup>12</sup> The group was referred to as 'Antioch bindings' by Boudalis 2004, 69–94, based on the provenance of a small number of manuscripts from the city of Antioch. However, evidence from fifty-one more bindings examined during the work for my doctoral thesis confirmed that the workshop clearly operated within the monastery of St Catherine.

<sup>13</sup> Sarris 2010, 121. A note in Arabic that appears repeatedly in some of the group's manuscripts is the following: 'I speak, I am the humble Ioanna bishop of Sinai. This book was dedicated for the church of Mount Sinai. In the name of God, the Son and the Holy Spirit' (e.g. fol. 1<sup>r</sup> in Sinai, Monē tēs Hagias Aikaterinēs, Ar. 275 and fol. 1<sup>r</sup> in Sinai, Monē tēs Hagias Aikaterinēs, Ar. 331). I am indebted to Father Gregorios, monk at the Holy Monastery of Sinai, for his assistance in identifying and translating these notes in Arabic.

<sup>14</sup> fol. 1<sup>v</sup> 'This was made in the time of Archbishop Mark'.



**Fig. 2a:** Sinai, Monē tēs Hagias Aikaterinēs, Ar. 77.



b



c

**Fig. 2b–c:** Bird tool (b); quadruped animal tool (c); full scale.



Fig. 2d: Sinai, Monē tēs Hagias Aikaterinēs, Gr. 742 (Diktyon 59117), fol. 1<sup>v</sup> with a note in Arabic.

*Group 31* consists of sixty bindings created c. 1469–1543. It is the earliest safely identified group attributed to the monastery, which was responsible for binding and mostly renovating older manuscripts in Arabic, Greek, Syriac and Georgian containing a variety of theological texts, New and Old Testaments, liturgical texts, services, sayings of Fathers, etc., bound exclusively in a Greek bookbinding style (Fig. 3a). It is certain that at least two different bookbinders worked in this workshop simultaneously and/or sequentially, which would also explain the long time-span of the workshop's activity for more than seventy-four years. This workshop is also characterised by the use of forty-nine different finishing tools (Figs 3d, 3e, 3f and 3g), many of which passed on to be used by later Sinaitic binding workshops. Apart from some indisputable inscriptions in a number of manuscripts, clearly supportive of the local origin of the workshop within the

monastery,<sup>15</sup> is also the discovery of two original finishing tools (Figs 3b and 3c) that were used to decorate the leather covers of these bindings.<sup>16</sup>



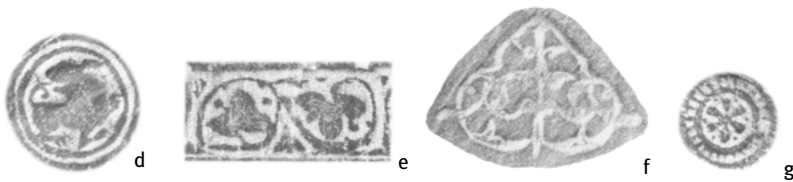
**Fig. 3a:** Sinai, Monē tēs Hagias Aikaterinēs, Gr. 561 (Diktyon 58936). Representative example of binding work from *Group 31*.

<sup>15</sup> A characteristic note in Arabic that confirms the local origin of this workshop is found in Sinai, Monē tēs Hagias Aikaterinēs, Ar. 561, a composite manuscript consisting of more than ten different text blocks. The note reads: 'It [the manuscript] belongs to the monk Abba Paisios who gathered the leaves which were scattered and bound them and then the bishop of Sinai Lazaros gifted it to him, and no one should have the right to take it from him and this was on Thursday 6 [or 16] June [\*]977 [?]' . The date is perhaps 6977 according to the Byzantine calendar which would correspond to the year September 1468 – August 1469. This note was identified and translated by Father Gregorios, monk at the Holy Monastery of Sinai.

<sup>16</sup> Sarris 2008, 12–13; Sarris 2010, 32–110.



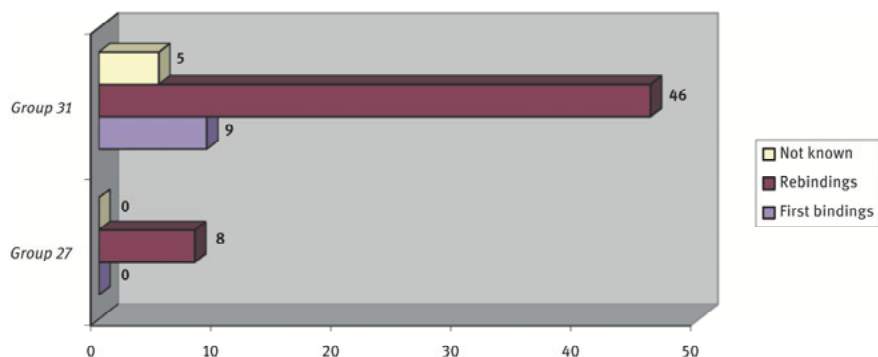
**Fig. 3b–c:** Two original finishing tools found at the monastery.



**Fig. 3d–g:** Common finishing tool motifs of bindings in *Group 31* (full scale): lion tool (d); vine-leaf tool (e); vegetation tool (f); rosette tool (g).

The workshop was involved in the making of nine first bindings for contemporary manuscripts and forty-six rebindings of older manuscripts that date from the ninth century onwards, with the majority dating from the thirteenth up to the fifteenth century.

The two workshops of the fifteenth century were consistent in the type of work they produced in terms of structural features and decoration, all of them complying with the typology of the Greek codex in structural and decorative features. In an equally consistent manner, they were involved mainly with re-binding work on older manuscripts (Fig. 4), and the fact that 76.6 % of the bindings of *Group 31*, are rebindings – a group with such a numerous bookbinding production – demonstrates that this was a common if not the main practice at the monastery from very early on.



**Fig. 4:** Number of first bindings and rebindings made by the workshops in the fifteenth century.

There are three surviving groups from the sixteenth century: *Group 30*, *Group 34* and *Group 71*, other than the workshop of *Group 31* which carried on its activity into the middle of the century.

*Group 30*, nicknamed the ‘Klimis workshop’, as Kurt Weitzmann, George Galavaris and then Georgios Boudalis identified it,<sup>17</sup> takes its name from the tool impression with the name Klimis engraved on it (Fig. 5c). The owner of this name is not certain. There are a total of nineteen bindings in this group, covering manuscripts from the tenth to the fifteenth century that contain a variety of liturgical contents written in Greek. It is exceptional that only one is a first binding, while the other eighteen of the group are rebindings. This workshop is dated c. 1560. The structures are Greek in every feature, yet, they carry impressions of tools in both Greek and Italian styles.

The Sinai, Monē tēs Hagias Aikaterinēs, Gr. 296 (Diktyon 58671, Fig. 5) of this group is an example of extensive bookbinding repair work on manuscripts within the monastic collection. The manuscript from 1454 containing a lectionary of the Acts was rebound by this workshop a century after its first binding, following which, it received an additional overback repair at an unknown date to keep it functional, which demonstrates that the manuscript was in use intensively for a long time.

Similar characteristics are observed in the bindings of *Group 34*, made by another sixteenth-century workshop at the monastery. It is a group of five bindings from the first half of the sixteenth century made in the Greek style (Fig. 6), with unsupported sewing and Greek endbands sewn on wooden boards, yet,

<sup>17</sup> Weitzmann and Galavaris 1990, 170–174; Boudalis 2004, 95–110.



they carry blind tooled decoration with characteristic Italian motifs. It becomes evident that the binding work involved with the workshop had been executed by a binder trained to bind in the Greek tradition but who also had access or was able to procure finishing tools of Italian origin and inspiration. Some of its tools, however, are taken from those available at the monastery that have already appeared on earlier Sinaitic bindings, such as from *Group 31* ('Antioch workshop'). The five bookbindings are all rebindings on very early Greek manuscripts from the tenth and eleventh century, containing saints lives, Sayings of the Fathers, as well as one *Menologion*.



**Fig. 5a:** Sinai, Monē tēs Hagias Aikaterinēs, Gr. 1793 (Diktyon 60168) of *Group 30* ('Klimis workshop').



**Fig. 5b–f:** Dragon tool (b); Klimis inscription tool (c); floral tools (d–f); full scale.

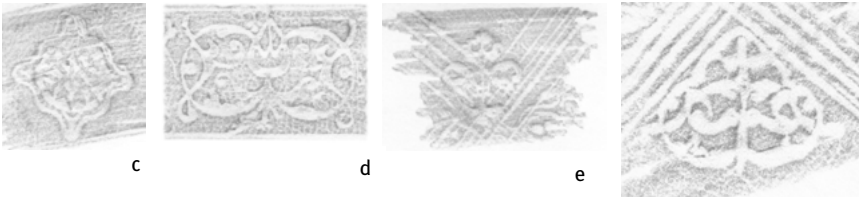


**Fig. 6a:** Sinai, Monē tēs Hagias Aikaterinēs, Gr. 341 (Diktyon 58716) of Group 34.





**Fig. 6b:** Sinai, Monē tēs Hagias Aikaterinēs, Gr. 516 (Diktyon 58891).



**Fig. 6c–f:** Geometrically shaped tool (c); interlace tool (d); vegetation tools (e–f); full scale. <sup>f</sup>

The last group of the sixteenth century, *Group 71*, is linked to a workshop dated to c. 1520–1532 that includes only three surviving bindings on one Arabic and two Greek manuscripts, one of which is preserved in Oxford at the Bodleian Library, Barocci 141. These manuscripts contain saints' lives, an anthology of ecclesiastical texts and John Climacus's *Ladder of Paradise*. Barocci 141 was written during the thirteenth century by Elias, metropolite of Crete, as confirmed by its title note,<sup>18</sup> and also carries a note on its left endleaves placing the binding before 1532.<sup>19</sup> The bindings in this group are Greek-style with several similarities between them, carrying features that resemble Cretan bindings of the sixteenth century.<sup>20</sup> It is curious, however, that all three bindings have been tooled with a finishing tool that was discovered among the Sinai tools, thus, most probably implying a local Sinaitic provenance, perhaps made by a binder with knowledge of Cretan binding features. We cannot entirely exclude the possibility that these bindings were made in Crete and two of the books in the group moved to the monastery along with the finishing tool, as it was not uncommon for books to travel between the monastery and Crete. Yet, the fact that one of the bindings is on an Arabic manuscript would make the latter possibility all the more curious. These bindings are made both as first bindings on contemporary manuscripts (2) and as rebindings (1).

The workshops of the sixteenth century show a similar situation as during the fifteenth century. The work produced is fairly homogenous, while again consistently more is dedicated to the repair of old manuscripts, particularly of very early periods. By contrast, the production of manuscripts at the monastery during the sixteenth century seems to be at a low level, at least based on the palaeographical evidence and inscriptions that survive. This fact may have created a necessity to seek and reuse the older manuscripts to cover the daily

**18** fol. 1<sup>r</sup>: ἐξήγησις εἰς τὴν ἁγίαν κλίμακα εἰτοῦν τὰς πνευματικὰς πλάκας τοῦ ἁγίου Ἰωάννου τοῦ καθηγημένου τοῦ ἁγίου ὄρους Σινᾶ τοῦ λεγομένου σχολαστικοῦ, πονηθεῖσα τῷ εὐτελεῖ μητροπολίτῃ Κρήτης Ἡλία.

**19** ἀφ' ἑαυτοῦ, εἰς τὰς β' ἐγένετο σεισμὸς.

**20** Bindings produced by Cretan workshops are generally characterised by the common features of Byzantine bindings, yet, they carry certain features that are very particular to Crete, mainly in the making of endbands and the decorative motifs used. A compound endband with double-core primary sewing and a secondary weaving very often with red, green and white threads forming a chevron pattern is frequently seen on Cretan bindings. For details on this type of endband, see Boudalis 2007b, 37–40. Tooled decoration that has often been associated with Cretan workshops includes triangular-shaped dragon motifs, lozenge-shaped two-headed eagles and fleur-de-lis. On Cretan binding workshops, see Irigoin 1962; Hoffmann 1982; Boudalis 2004, 388–405; Sarris 2010, 318–462.

needs of the monastery. However, we should not neglect another piece of influential evidence. Looking at the groups of imported bindings to the monastery that can be dated to the sixteenth century, we observe a massive increase and inflow of books deriving mainly from Crete and southern Italy.<sup>21</sup> Numerous manuscripts produced and bound in famous or obscure workshops, were brought to Sinai through the dependency of the monastery in Crete. Such are the approximately forty bindings from the workshop linked with Michael Apostolis, erudite, teacher and scribe from Constantinople, who, after its fall in 1453, found refuge in Crete.<sup>22</sup> From there, Apostolis and his associates gathered, copied and produced numerous manuscripts, many of which were commissioned by Cardinal Bessarion to be sent to Venice. Although there is no archival or palaeographical evidence to suggest the existence of a bindery related directly to Michael Apostolis, as Martin Wittek first noted,<sup>23</sup> a link to a prolific bookbinding workshop is evident. Many of his manuscripts and numerous others not related to him, or even rebindings of older manuscripts, are bound carrying Cretan features with structural and decorative similarities that undoubtedly place them as products of the same workshop (Fig. 7).<sup>24</sup> At least sixty-nine bindings from different libraries have until now already been attributed to this Cretan workshop, which can be dated c. 1465–1514.<sup>25</sup>

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<sup>21</sup> Sarris 2010, 297.

<sup>22</sup> Wittek 1953; Cronier 2010.

<sup>23</sup> Wittek 1953. Wittek first identified the bookbinding workshop through nine bindings on manuscripts copied by Apostolis and arbitrarily named it the 'Michael Apostolis workshop'.

<sup>24</sup> There are several studies that refer to bindings that are attributed to the bookbinding workshop linked with Michael Apostolis. See van Regemorter 1954; Irigoin 1962; Hoffmann 1982; Grosdidier de Matons 1991; Tselikas 2003; Boudalis 2004, 48–68; Sarris 2010, 318–370.

<sup>25</sup> Sarris 2010, 318–370.



**Fig. 7:** Sinai, Monē tēs Hagias Aikaterinēs, Gr. 1251 (Diktyon 59626), in a representative book-binding from the Michael Apostolis workshop, late fifteenth century.

It is essential to see how this gap in monastic manuscript production in Sinai is either caused by or addressed with the importation of Cretan manuscripts. Based only on the grouped bindings, just under one hundred manuscripts were identified as having arrived to the monastery during the sixteenth century from Crete, which is far greater than the manuscript production or rebinding activity within the monastery of that period. What is more, there is sound evidence that

occasionally manuscripts written at the monastery for some reason left for Crete to be bound and then returned.<sup>26</sup>

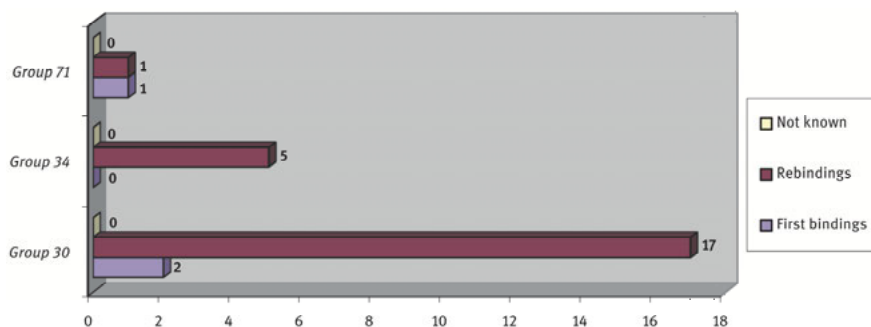


Fig. 8: Number of first bindings and rebindings made by the sixteenth-century workshops.

### 5.3 Seventeenth-century workshops

The seventeenth century is certainly the most prolific century in terms of the number of workshops that appear at or around the monastery. Thirteen different workshops have been identified, some of which overlap and may have coexisted at the monastery for short periods. Only three of these groups (*Group 15*, *Group 25* and *Group 36*) are confirmed to have worked in dependencies of the monastery and not within its premises during the same period.<sup>27</sup> It is also evi-

<sup>26</sup> Such an example is Sinai, Monē tēs Hagias Aikaterinēs, Gr.87 (Diktyon 58462), from *Group 28*; see Sarris 2010, 412.

<sup>27</sup> It is evident from these three groups that binders practiced bookbinding at the dependencies of the monastery in Raithos and Cairo. *Group 15* was identified first by Boudalis 2004, 151–155, with four bindings and expanded in Sarris 2010, p. 4, App. I-5 with eighteen more bindings. A binder's note on the right endleaves of Sinai, Monē tēs Hagias Aikaterinēs, Gr. 356 (Diktyon 58731) leaves no doubt that this binding was made at the dependency in Cairo: Τω ζρμα' κατά μήνα μάιο ο παρόν εξαήμερος εμετασταχώθι υπο σωφονίου ιερομοδ(ιακόνου) του κυπρέου εν μετοχίω της αιγύπτου ('In 7141 [AM = 1633 CE] in the month of May, the present *Hexaemeron* was rebound by Soph(r)onios hierodeacon from Cyprus in the metochion of Egypt'). *Group 25* is a group of twenty-two bindings, discussed by Boudalis 2004, 183–208, and Sarris 2010, pp. 16–17, App. I-9, that were produced by a workshop at the monastery's dependency in Raithos, Sinai, as testified by several colophons and two binder's notes in Sinai, Monē tēs Hagias Aikaterinēs, Gr. 654 (Diktyon 59029) and Sinai, Monē tēs Hagias Aikaterinēs, Gr. 931 (Diktyon 59306) by binder Akakios. *Group 36* is a group of only four bindings, three of which have clear notes that they were written and/or belonged to Raithos. One of these was also

dent from the table below that the monastery had a bookbinding workshop at almost all times throughout the century.

**Table 2:** Groups of Sinai bindings during the seventeenth century, arranged chronologically

Group	Date	Location	Number of Bindings
Group 14	c. 1622	Saint Catherine	15
Group 16	c. 1622–1655	Saint Catherine	55 + 4 printed volumes
Group 15	c. 1633–1635	Cairo	22
Group 30	c. 1637	Saint Catherine	19
Group 39	c. 1640	Saint Catherine	4
Group 36	c. 1647	Raithos	4
Group 25	c. 1648–1689	Raithos	22
Group 42	c. 1659	Saint Catherine	3
Group 67	c. 1664 to early 18th c.	Saint Catherine	5
Group 44	c. 1664–1666	Saint Catherine	17
Group 13	c. 1665	Saint Catherine	3
Group 34	Possibly c. 1617–1661	Saint Catherine	5
Group 68	Before 1675	Saint Catherine	2

*Group 16* ('*giglio* workshop') is one of the most prolific workshops of the seventeenth century (Fig. 9) that have been identified at the monastery, consisting of fifty-five manuscripts in Greek and Arabic from the tenth to the seventeenth century, as well as four printed volumes. It has been named as such by Boudalis, who first described some of these bindings,<sup>28</sup> based on a fleur-de-lis (*giglio*) finishing tool.

This group demonstrates very vividly the aforementioned evidence on the need for multiple copies of the same text. Characteristically, four manuscripts containing the *Kyriakodromion* (Sunday sermonary) were made within a span of a few years, as well as five books with the liturgy of John Chrysostom and four

tooled with a finishing tool discovered among the tool finds at the monastery (Sarris 2010, 68 [Tool 17]).

<sup>28</sup> Boudalis 2004, 113–164.



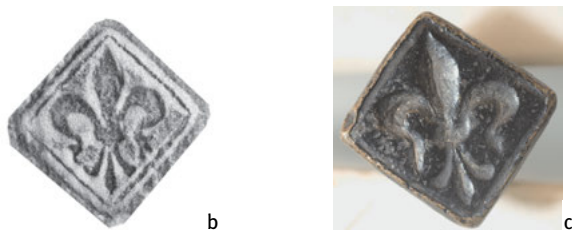
books of *Triodion* and *Pentikostarion*, all of which are books needed mainly in daily church services.

It is also distinguished by the fact that although we know of quite a few manuscripts from the group that are testified to have been written at the monastery, they are still outnumbered by what have been rebindings. There are also a few bookbinding notes denoting the existence and parallel work of at least seven different binders, including Archbishop Ioasaph himself, a clear indication that he encouraged rebinding work and the care of books.

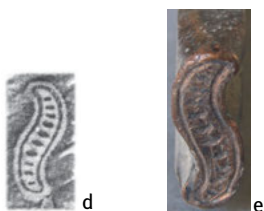
Three original finishing tools from those discovered at the monastery were used on numerous bindings of this group, including the *giglio* tool itself, confirming further the local provenance of these bindings.



Fig. 9a: Sinai, Monē tēs Hagias Aikaterinēs, Gr. 408 (Diktyon 58783), Group 16 (*giglio* binding).



**Fig. 9b–c:** *Giglio* rubbing, full scale (b); *giglio* tool (c).



**Fig. 9d–e:** *Chenille* rubbing, full scale (d); *chenille* tool (e).



**Fig. 9f–g:** *Interlace floral motif* rubbing, full scale (f); *roll with an interlace floral motif* (g).

Another prolific group from the seventeenth century is *Group 14*, which consists of fifteen bindings (Fig. 10a) on Greek manuscripts, made in both Greek and Western-style structures, sometimes combining features of both styles, which



shows that influences from the West had begun to appear by the seventeenth century, even in the remoteness of Sinai. It also shows that the binder(s) of this group was (were) able to switch from Greek unsupported sewing structures to Western supported structures with ease and certainly trained to do both.

Only one of these bindings is the first binding on a contemporary manuscript (Sinai, Monē tēs Hagias Aikaterinēs, Gr. 1158, Diktyon 59533). The remaining fourteen are rebindings of older manuscripts that date from the eleventh to the early sixteenth century. Several scribal and ownership notes survive in these manuscripts to indicate that they were made locally, including a binding note from a monk named Laurentios from Crete, who testifies that he personally bound Sinai, Monē tēs Hagias Aikaterinēs, Gr. 445 (Diktyon 58820, left endleaves): το παρόν βιβλίον εσταχόθη δια χειρός [Λαυρεντίου;] και μονάχου του κριτός.<sup>29</sup>

The Sinai, Monē tēs Hagias Aikaterinēs, Gr. 1336 (Diktyon 59711, Fig. 10b) is a particular case of an excessively used book from this group. It is a manuscript of the Old Testament written in 1564 by a Sinai monk, justifying further the presence of a locally made binding for it. However, the manuscript had to be rebound in the following fifty to seventy years following its completion and most elements of its original structure were removed. Unless this book was intensively used and worn, this would appear to be a very short period to for it to require rebinding. It must have also been heavily used during a later period as the rebinding was damaged too and a parchment manuscript waste wrapper was placed to protect it, which has also consequently been torn. This is unusual for an Old Testament manuscript: however, three layers of bindings, rebindings and repairs have not made it through intact to our day, demonstrating the extent of use to which books from the Sinai library were often exposed.

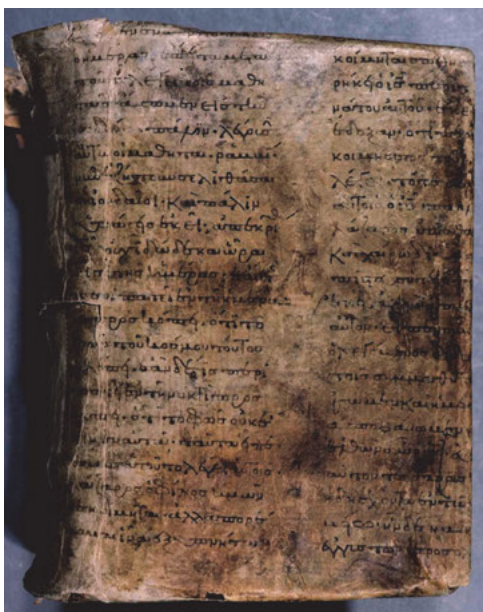
It is worth observing that the majority of the workshops have not left us with evidence to demonstrate long periods of bookbinding activity, but possibly only for a few years or a couple of decades each. With the exception of two fairly active workshops, one of which was the '*giglio* workshop', the majority of them were involved with rebindings (113 bindings) more than with original first bindings on new books (forty-eight bindings).

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29 'The present book was bound by [Laurentios?] monk from Crete.'



**Fig. 10a:** Sinai, Monē tēs Hagias Aikaterinēs, Gr. 72 (Diktyon 58447) (binding *Group 14*).



**Fig. 10b–c:** Sinai, Monē tēs Hagias Aikaterinēs, Gr. 1336 (Diktyon 59711) with parchment wrap-  
per.

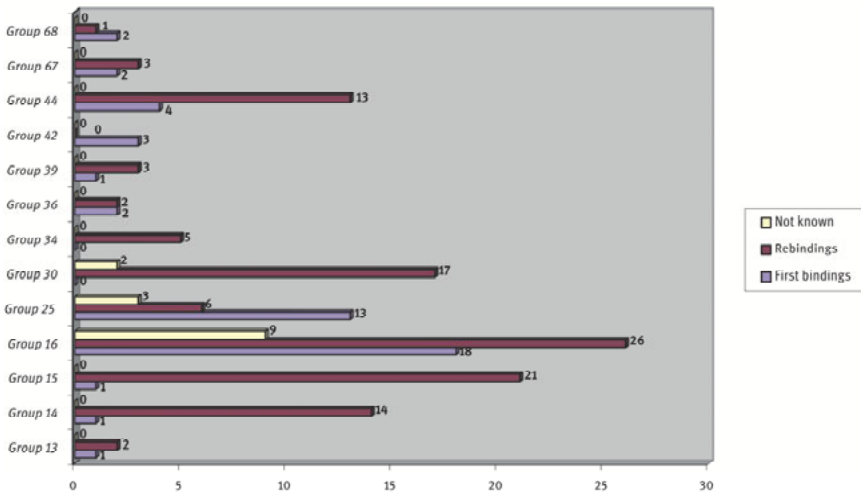


Fig. 11: Number of bindings and rebindings of the seventeenth century.

## 5.4 Eighteenth-century workshops

The eighteenth century was almost equally prolific in bookbinding production at the monastery as the seventeenth century, yet, fewer workshops were responsible for this production. There are five main workshops identified from this period that produced a total of 114 bindings that still survive today.

*Group 18* (or the ‘New Library workshop’)<sup>30</sup> is the most important workshop with the largest number of bindings surviving at the monastery. There are sixty-seven bindings on manuscripts and at least another twenty-seven bindings on printed books that have been identified. Considering that the majority of post-seventeenth-century printed books have not yet been researched systematically, it is likely that there are many more printed books that will fall within this group. The bindings of *Group 18* are dated between c. 1711 and 1790. They are bound on sewing supports and feature Western binding elements in most respects. It is also evident that at least three different binders worked together and/or consecutively in this workshop. In further support of the Sinai origin of the workshop is the use of two original finishing tools from the tool finds at the monastery (Fig. 12).

<sup>30</sup> The group was first identified through fourteen bindings by Boudalis 2004; seventy-nine more bindings were attributed to it in Sarris 2010, pp.10–14, App.I-7.

This group is historically vital for the library as it is linked closely, at least during its early stage, with Nikiforos Marthales, archbishop of Sinai, who, aside from being a scribe and a very learned man, was also responsible for gathering the books from the chapels, crypts, cells, and cabinets around the monastery to form the core of the monastic library.



**Fig. 12:** Sinai, Monē tēs Hagias Aikaterinēs, Gr. 1338 (Diktyon 59713) from *Group 18*, with an original finishing tool next to its impressions on the leather cover.

There are eighteen Greek manuscript bindings and three printed volumes that belong to *Group 57* that were bound by two monks at the monastery between 1704 and 1727.

*Group 4* is the next most productive workshop, counting twenty-one bindings of Greek and Arabic manuscripts and one printed volume bound between 1757 and 1777, a period of vigorous bookbinding production. It also coincides with the ordinance of Archbishop Kyrillos II (1759–1790), who is renowned for his great scholarly and publishing activity and his contribution to the acquisition and gathering of

manuscripts and printed books for the monastery.<sup>31</sup> Fourteen of the bindings are original to their text block and seven are rebindings on older manuscripts. These bindings follow a style which had been fashionable both in Western and in Eastern European bookbinding in the eighteenth century, using a combination of different types of tools to achieve their decoration, including several centrepieces, corner-pieces and rolls (see Fig. 13). Although these books were bound within a Greek monastic community, possibly by a Greek binder, their features do not resemble traditional Greek structures, but fit under the transition of Greek bookbinding of the time as they carry predominantly Western features. Three out of the tools<sup>32</sup> impressed on their covers were discovered among the finishing tool finds, a correlation which undoubtedly allows us to attribute these bindings to a workshop at the monastery or one of its dependencies. It is also apparent that this workshop must have coexisted for a number of years with *Group 18*, as it is also the case that several tools were used in common by the two workshops.

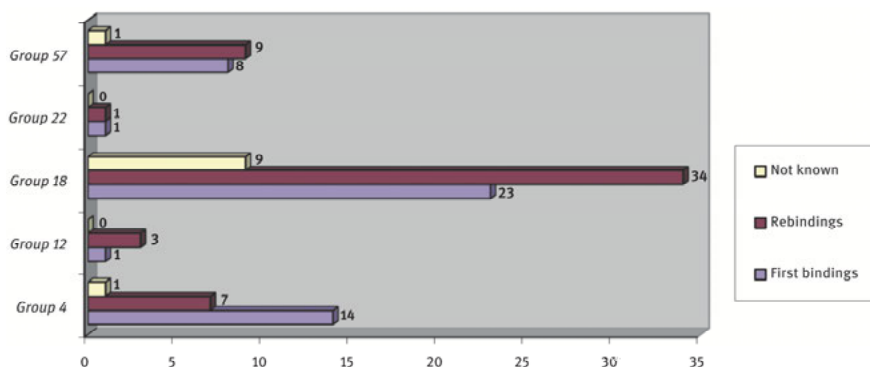


Fig. 13: Sinai, Monē tēs Hagias Aikaterinēs, Gr. 1270 (Diktyon 59645) from *Group 4*.

<sup>31</sup> Digbasani 1992, 578–579.

<sup>32</sup> These are rolls Tool 24 and Tool 25, as well as corner-piece Tool 33, see Sarris 2010, 248–295.

The relationship between new and renovated bindings is more balanced during the eighteenth century. Fifty-four rebindings were made against forty-seven first bindings, which may lead to the suggestion that there was probably a greater scholarly activity during the eighteenth century compared to earlier periods, without noticing a significant change in the contents of the manuscripts chosen to be repaired or produced. It may also be explained by the fact that perhaps the large-scale renovation work of the seventeenth century had covered much of the need for restoration of the worst damaged older manuscripts that were still in use.



**Fig. 14:** Number of bindings and rebindings of the eighteenth century.

The following chart (Fig. 14) demonstrates a summary of all the bindings that were identified to have been produced by the Sinai workshops between the fifteenth and the eighteenth century. Overall, 63.9 % of these bindings were restored, 27.8 % were first bindings and the status of 8.2 % is not known.

It is evident that more bindings were restored in these four centuries than were newly bound. However, this may also be explained by the fact that the manuscripts written at the monastery would perhaps not always be sufficient to cover the needs of the monastery and that repairing older ones and often imported manuscripts would be needed to supply the deficiency.

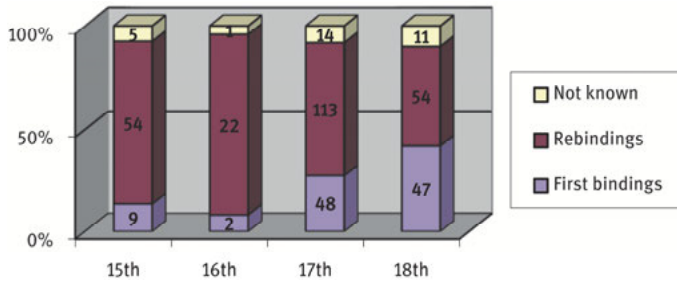


Fig. 15: Summary of first bindings and rebindings.

## 6 Conclusion

A question that arises from the presentation of the Sinaitic workshops is how to explain the lack of binding groups prior to the fifteenth century, particularly considering the very large number of tenth- to fifteenth-century manuscripts that survive at the library of St Catherine's monastery.

There are four likely hypotheses for this, though it may be the case that all four are valid and that, to a certain extent, they occurred simultaneously.

1. The bindings that were made before the fifteenth century cannot be easily dated. Binders' notes in what appeared to be bindings made earlier than the fifteenth century are entirely absent, which makes the process of identification and dating of early workshops extremely difficult. Grouping them has also proved incredibly difficult, so what remains of them are usually classified as orphan bindings.
2. The bindings before the fifteenth century were less decorated, and if they were so, they omitted the use of representational finishing tools and preferred simple tools, such as concentric rings, straight lines, small rosettes and crosses, that cannot be used for definitive identification and grouping. This is the case with the majority of the prominent early bookbinding traditions that are related to and influenced by Greek bookbinding, such as the Syriac, Georgian and Armenian traditions. There are numerous such bindings in the collection, which have not been possible to identify within a workshop.
3. The earlier bindings with tooling have frequently been so distorted and damaged that the rubbings taken from their impressions could not be of any use and, therefore, their identification was impossible. Only indicatively, about 8 % of the total number of tool impressions that were recorded from

the 1,200 bindings were more or less unusable due to poor quality impressions. This figure demonstrates a relatively high degree of damaged covers.

4. The original bindings of the earlier manuscripts have been replaced by newer bindings made by the workshops of the fifteenth to the eighteenth century, in order to renovate the manuscripts when they were needed for liturgical and personal use. This last observation is probably the most influential factor for the small number of earlier bindings that survive.

Finally, it is also interesting to see what the purpose of rebinding was for the Sinai binders. Naturally, the need for functional manuscripts must have been a fundamental reason. It was not rare to notice rebinding sprees or renovation periods in European libraries, often executed for purely aesthetic reasons or to create a sense of uniformity within a collection. However, the Sinai library does not fall into this category. Examining the bindings of the seventeenth century, the most vibrant bookbinding period at the monastery, the evidence is striking. Out of 108 rebound manuscripts, ninety-one of them have had old repairs to their text block (84 %), carried out at the time of their last rebinding, with the vast majority including spine fold repairs. This is a feature that demonstrates that the rebindings did not aim to address external binding damages or damages to the cover and the appearance of books, but were elaborate efforts to repair the manuscripts thoroughly after having suffered damage to the text block leaves.

Whether the goal was to make them usable again or purely to repair them with a sense of care and preservation, is not very clear. However, looking at the multiple copies of particular liturgical texts accumulated and rebound or repaired within the monastic library by the seventeenth century, it is natural to suggest that the latter was also the case.

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All the images of bookbindings, manuscripts and finishing tools included in this paper have been reproduced with the permission of the Synaxis of the monastery of St Catherine.



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