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## **Investigation on the collation of the first Fight book (Leeds, Royal Armouries, Ms I.33)**

Fanny Binard, Lugdunenses, binard.fanny@gmail.com

in collaboration with Daniel Jaquet, Max Planck Institute for History of Science,  
djaquet@mpiwg-berlin.mpg.de

**Abstract:** This paper investigates the collation of the first Fight Book, the Leeds, Royal Armouries, Ms I.33. It critically reviews previous hypotheses about the composition of the quires and the identification of the material lacuna, and proposes a new hypothesis. This investigation is based on observation of the original after restoration (2012) and the simulation of the previous hypotheses with a working document composed of laminated sheets into which reproductions were inserted. Bifolia were physically attached, forming quires by successive folds. This simulation phase allowed us to analyse textual and pictorial content according to the various postulates and to propose identification of the material lacuna. The pivot point allowing a new argumentation are the two counterfoils of the two flying leaves (fol. 19 and 26), which were not taken into account by previous researchers. Several synoptical diagrams of the representation of the quire are enclosed for the reader to follow the developments.

**Keywords:** Fight Book, Ms. I.33, Liber de arte dimicatoria, tower fechtbuch, Walpurgis fechtbuch, codicology, collation, manuscript studies.

The manuscript kept in the Royal Armouries of Leeds with the shelf mark I.33 is the first witness of the corpus of the Fight books<sup>1</sup>. As such, and for its many significant particularities, it has already received the attention of several researchers<sup>2</sup>, as well as several editions and translations<sup>3</sup>. The manuscript is a unicum that has circulated among different owners; however, whole swathes of the history of its conservation remain obscure<sup>4</sup>. The researchers therefore questioned the current state of the object<sup>5</sup> (irregular quire construction and two half-sheets) compared to a hypothetical original state. Indeed, besides the current state of the composition of the quires (structural aspects), the content analysis suggests that it lacks material (textual aspects). Jeffrey L. Forgeng, James Hester, Franck Cinato and André Surprenant have all made assumptions about the composition of the manuscript, the current order of the quires, and possible material lacuna. It must be added that all studies conducted prior to the restoration in 2012 have been made on a manuscript that was tightly bound, implying difficulties for the codicological investigations.

Having reviewed the different hypotheses and confronted these to an analysis of the organisation of the content of both text and images, as well as with phases of practical interpretation, the necessity of further research on that matter became obvious. This article thus proposes on the one hand a critical description of the different hypotheses put forward by researchers; on the other hand, the exposition of our own hypothesis, relying both on observations made on the original and on our experiments with a working document allowing us to test the different possible configurations of re-organisation of the quires. Our work is accompanied by synoptic diagrams allowing to view the composition of the manuscript with the layout of the quires (Fig. 3-8), as well as a table

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<sup>1</sup> Leeds, Royal Armouries, Ms I.33. The manuscript is also associated with alternative titles, including: Walpurgis Fechtbuch, Ms. I.33, Lutegerus Fight Book, Liber de Arte Dimicatoria.

<sup>2</sup> See the bibliography of Forgeng, *The Illuminated Fightbook*: vol. 2, p. 121-127. The following articles are not included in the cited bibliography: Cinato/Surprenant, 'L'escrime scolastique du *Liber de Arte Dimicatoria*' and ead. 'L'escrime à la bocale comme méthode d'autodéfense'.

<sup>3</sup> Forgeng, *The medieval art of swordsmanship*; id., *The Illuminated Fightbook*; Cinato/Surprenant, *Le Livre de l'art du combat*. Many translations self published online, including in German, Czech, English, and Italian, the latest one being published (Morini/Rudilosso, *Manoscritto I.33*).

<sup>4</sup> Forgeng, *The Illuminated Fightbook*, p. 4-6, Cinato, *Le livre de l'art du combat*, p. xv-xxviii. Descriptions of half-sheets that have circulated independently feed the debates around the material lacunas, without succeeding in attesting, because of lack of sources. It should be noted here the manuscript's passage in private hands between years 1936 (exhibition at the Berlin Olympic Games, then kept in the library of Gotha) and its purchasing in 1950 by the Royal Armouries in a sale at Sothebies.

<sup>5</sup> For a material description of the manuscript, see Forgeng, *The Illuminated Fightbook*, p. 23-24.

presenting the different hypotheses discussed including pictures of the detail of the quire spine of the manuscript (Fig. 9).

## I. METHOD

The working document used to test the hypothesis of re-organisation is composed of laminated sheets into which are inserted an A4 format reproduction of the manuscript, folio by folio. The sheets composing the original bifolia were physically connected (except for the half-sheets ff. 19 and 26, which were sewn on the quires) and placed in the order of the current state of the manuscript, forming different quires by successive folds. With this working tool, it is thus possible to experiment the different hypotheses regarding the place of the folios in the manuscript, the possible re-organisations of the composition or the order of the quires, and to determine the locations of potential material lacuna.

With the hypotheses simulated physically with this tool, it is possible to assess their relevance, based on the physical folding and sewing, as well on sequences of text and images, and on the beginnings of plays (*frustum*), marked with crosses<sup>6</sup>. In addition to objective criticism of the assumptions made, we were able also to formulate new hypotheses related to material lacuna, and even for some of those, to hypothesise the potential content missing.

## II. DESCRIPTION OF THE CURRENT STATE OF THE MANUSCRIPT

The manuscript has five quires in its current state. The binding was restored in 2012 with conservation studies<sup>7</sup>, prior to the production of the facsimile<sup>8</sup>. Various descriptions of the manuscript were offered, some with more and some with fewer details<sup>9</sup>. Table 1 presents the quires with diagrams of their state before and after restoration:

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<sup>6</sup> Frustum are technical sequence of gesture, known as “plays”, marked internally with crosses. See Cinato, *Le livre de l'art du combat*, p. 325: “Frustum: pièce, morceau, division du discours iconographique balisé par un signe de croix et jouant un rôle équivalent à celui d'un chapitre...”

<sup>7</sup> Unpublished report of the conservation studies conducted prior to the rebinding (Leather Conservation Centre, University of Northampton, 2012), consulted with permission of the Royal Armouries library.

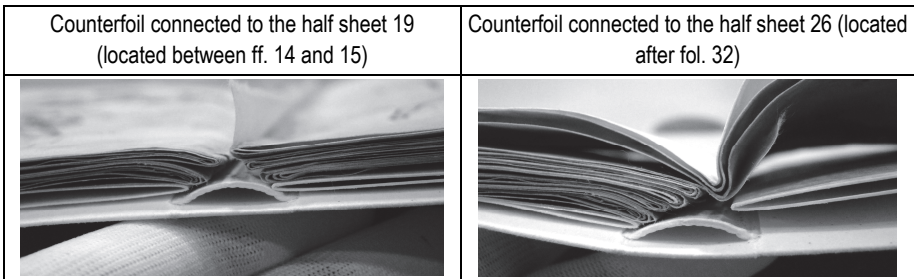
<sup>8</sup> Forgeng, *The Illuminated Fightbook*, p. 23.

<sup>9</sup> Forgeng, *The Illuminated Fightbook*, pp. 23-29. Cinato, *Le livre de l'art du combat*, p. xv ; Leng, *Katalog der deutschsprachigen illustrierten Handschriften*, pp. 124-126 (n° 38.9.8).

Quire description	Before restoration	After restoration
Quire I: 4 bifolia (ff. 1-8)		
Quire II: 3 bifolia (ff. 9-14)		
Quire III: 2 bifolia (ff. 15-18) and 1 half-sheet with counterfoil (fol. 19)		
Quire IV: 3 bifolia (ff. 20-25)		
Quire V: 3 bifolia (ff. 27-32) and 1 half-sheet with counterfoil (fol. 26)		

*Figure 1: Table of the quires, with diagram of composition before and after restoration, realised after the conservation studies of 2012, with permission of the Royal Armouries Library*

This collation is not consistent with Forngeng's description, which places half-sheets 19 and 26 respectively in quires IV and V, reflecting the state of the manuscript before restoration. He argues toward an original gathering of those, which he would locate in the quire IV (see below). The counterfoils of folia 19 and 26 are not reported in any previous description, but they might have been difficult to see in the state before restoration. Moreover, their folding may have been reversed compared to the current state (Fig. 2). We believe that they are crucial in the analysis of the collation of this manuscript and the identification of the material lacuna.



*Figure 2: Details of the two counterfoils (ff. 19 and 26)  
Pictures by F. Binard, with courtesy of the Royal Armouries Library.*

### III. DISCUSSION OF PREVIOUS HYPOTHESES

In their 2009 edition, Cinato and Surprenant suggest a reshuffle of the current state of the manuscript to create what they believe to be a more satisfactory thematic organisation, allowing an outline in seven parts following the sequences of the guards. They propose to keep the first two quires as they are, then to form a ternion with folia 26, 15 to 18 and 19, followed by the quire V, returned on itself by the fold, and finally the quire IV, but in the fifth position (Fig. 3)<sup>10</sup>.

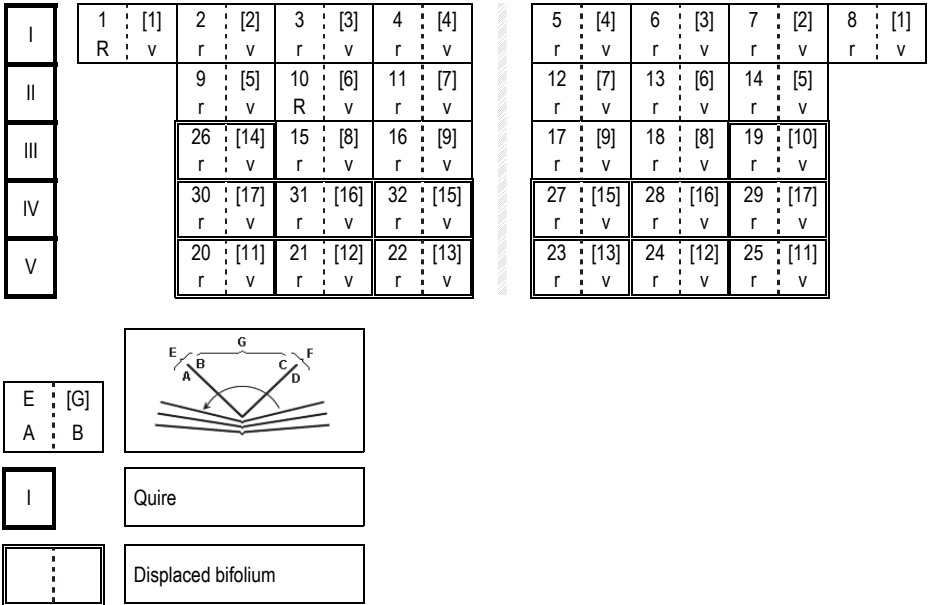


Figure 3: Synoptical diagram of the collation, according to the Cinato hypothesis (2009), with turnaround and relocation of the quire III to V.

The proposed reshuffle is disputable because of material contingencies, as indicated below. Even following this hypothesis, some discrepancies concerning textual and pictorial sequences can be observed when simulating the hypothesis.

At the end of the quire II, folio 14 ends with the beginning of a play, concerning the third guard opposed by the half-shield. The text ends with a note: “You will find here everything you had before, up to the next mark of the cross”<sup>11</sup>. The next folio of the new ternion (fol. 26) begins with the text: “The one who binds and the one who is bound are contrary and irate; The one who is bound flees to the side; I seek to pursue”<sup>12</sup>, followed by the beginning of a play concerned with the opposition of the fourth guard to the special

<sup>10</sup> Cinato, *Le livre de l'art du combat*, p. XXXIII-XXXIV.

<sup>11</sup> Trsl Forgeng 2013, p. 74: *Que omnia prius habuisti inuenies hic, usque ad proximum signum crucis.*

<sup>12</sup> Trsl Forgeng 2013, p. 97: *Ligans-ligati contrarij sunt et irati; Ligatus fugit ad partes laterum, peto sequi.*

guard of the Priest. However, we know that when the author states, on folio 14, that the actions are already covered above, we find them here until the next sign of cross<sup>13</sup>, he refers indeed to binding (*religatio*), and to the shield-strike (*Schiltschlach*). These two actions are generally shown with three images<sup>14</sup>, and not only one as proposed here, which depicts binding and pursuing. In addition, by moving folio 26, a play is pulled out of a set where the author starts by discussing the special guard of the Priest (*specificata custodia sacerdotis*) opposed with various guards. Finally, folio 26 ends with the beginning of a play. Yet, folio 15, attached just after, begins with another play.

Folios 12 to 14 relate to the fourth guard. The end of folio 14 is about the fifth guard, then folio 26 discusses the fourth and fifth guard. Folio 15 and the beginning of folio 16 focus on the fifth, then on the first, folio 17 on the sixth, and folia 18 and 19 on the seventh.

The end of the quire III (consisting of a reordered ternion) is followed by the quire V, upturned. Folio 19 is therefore followed by folio 30, with the beginning of a play that still concerns the fourth guard, but opposed with the special guard of the Priest. Folio 31 follows, with the same guard and the same opposition, then folio 32 with the second special guard of the Priest (*specificata custodia secunda sacerdotis*), still opposed by the special guard of the Priest. Next are folia 27 and 28, both describing the fifth guard opposed by this very same special guard. Finally, on folio 29, the author states: “two illustrations prior to this, the Student executed a thrust”<sup>15</sup>. Yet, checking previous images, no such thrust is to be found. Finally, the quire V (composed of the quire IV in the original order) continues with the seventh guard, followed by several specific guards.

This very important reshuffle implies several changes in the order of the guards' sequences and their internal development. Several inconsistencies are observable in textual and logical patterns. These assumptions were part of an ongoing research work and were made without having consulting the original; the author himself abandoned his hypothesis in his latest article (see below, Fig. 6).

In his contribution, Hester proposes another collation diagram with up to 10 material lacuna identified, which he places according to the following diagram (Fig. 4)<sup>16</sup>.

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<sup>13</sup> Ibid.

<sup>14</sup> For example, fol. 13v to 14r, see *ibid.*, pp. 72-74.

<sup>15</sup> Trsl Forgeng 2013, p. 103: *Prius quam superius in tertio exemplo ymaginum fixura quedam ducta est per scolarem.*

<sup>16</sup> Hester, 'A Few Leaves short of a Quire'.

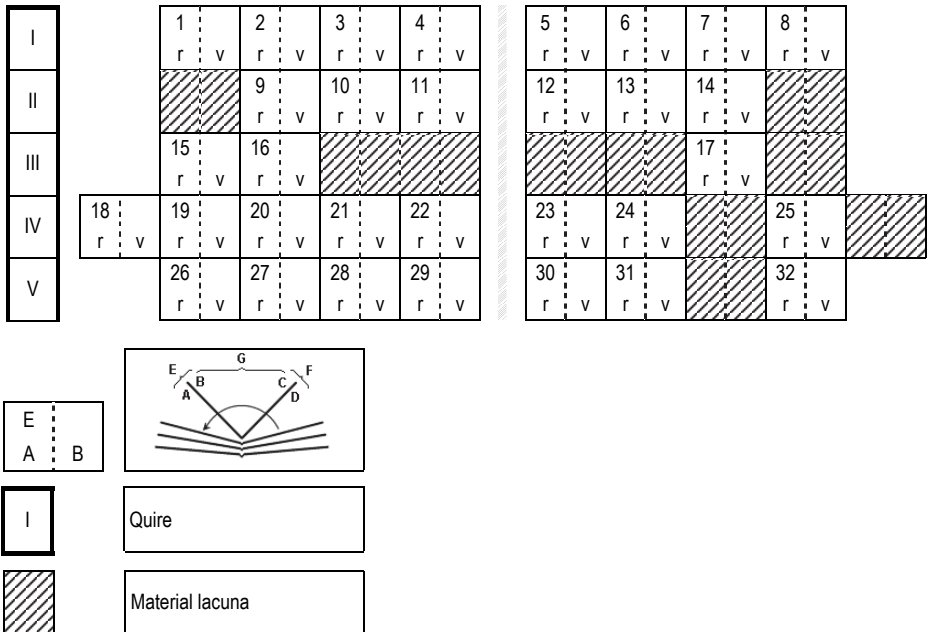


Figure 4: Synoptical diagram of the collation with location of the material lacuna, according to Hester hypothesis (2012)

The first quire is a complete quaternion. The second one is a quaternion consisting of the original ternion with the addition of a bifolium at the beginning of the quire (before fol. 9 and after fol. 14). The third quire is a quaternion, composed of only 3 original folia (fol. 15-17) with a missing folio attached to folio 15, which would be placed between folia 17 and 18. One more bifolium would be added to this quire, after folio 16 and before folio 17<sup>17</sup>. The fourth quire is a quinion composed by folia 18 to 25 with two missing folia, respectively between folia 24-25 and 25-26. The fifth is a quaternion composed by folia 26-32 in the present order, with a missing folio placed after the folio 31.

Before discussing the textual patterns after the hypothesis simulation, it is necessary to note physical contingencies that make this collation questionable. First of all, the author considers that a material lacuna sits between folia 17-18. This assumption is physically not possible, since folia 15 and 18 form a single bifolium (observable in the spine, the seam of the quire being between folia 16-17). Therefore, he also places folio 19 in the following quire (IV), while this half-sheet with a counterfoil is, according to our opinion, attached to the third quire. This assumption makes him consider the fourth quire as a quinion, the seam of the quire being situated between folia 22-23. He thus artificially adds two folia to the fourth quire. Finally, for the fifth quire, he considers that the missing folio lies between

<sup>17</sup> He justifies this reshuffling by assuming that the material lacuna would contain the fifth guard and the beginning of the sixth. Secondly, he proposes to substitute folio 17 to folio 18 in the quire order because the text of folio 18 is concerned with a bind (*ligatio*), which is represented in folio 17. Ibid., p. 23.

folia 31-32 after observing that the second bifolium would be incomplete. However, as the reader can see on the picture of Fig. 7, it is the first bifolium which is incomplete, the material lacuna will therefore follow folio 32, since the seam lies between folia 29-30.

The technique depicted in folia 24 and 25 appears to be rather complicated to the author, so that he implies that this might be a potential location for a material lacuna. As to the folio missing after folio 25, he therefore suggests that the illustration on folio 25r is a continuation of another technique that is missing<sup>18</sup>. By simulating this hypothesis, it is possible to observe the following points concerning the textual patterns (limited here to the analysis of quires IV and V).

Folio 24v ends with the special guard of the Priest opposed to the half-shield (*halbschild*), which, for the guardian, consists of falling under the sword and buckler to come to the binding. The solution proposed after this technique is to make a shield-strike (*schildschlag*) with a blow toward the head<sup>19</sup>. The text accompanying the image reads: “Here the Priest sets to the Student, as has often been seen before.”<sup>20</sup> The next technique (fol. 25) comes with the following text:

Note that the Student here delivers the common blow that all ordinary combatants are accustomed to deliver in this situation, namely that when the one who binds and the one who is bound are wrangling, then the one who binds, who is above, goes toward the head and omits the Shield-Strike, leading to a blow; but the Priest enters as shown here.<sup>21</sup>

The author therefore explains simply that the student omits the shield-strike; he goes directly from the binding to the blow to the head, which is quite possible, without guarding himself from the Priest’s sword. Thus, the Priest executes an entry, and thrusts the student in the face. The two images and the text therefore form a coherent set, and seem to form a very single play, contrary to the assumption of Hester.

Regarding the missing folio between folia 25-26, he implies that the images show too many differences in the positions of swords and in the depiction of fencers for the folia to follow one another<sup>22</sup>. In fact, in folio 25v, the Student is on the left side, and the Priest

<sup>18</sup> Ibid., p. 23: “The last sequence on fol. 24v has the Student’s sword bound from below by the Priest. The sequence continued on fol. 25r shows the Student executing a failed upward cut toward the Priest’s head; a move that would take quite a bit of maneuvering to arrive at from where we left the Student in the previous illustration. Thus it would be likely that the illustration on fol. 25r is the culmination of a different, now missing, technique.”

<sup>19</sup> Trsl Forgeng 2013, p. 49: *Dum ducitur halbschild, cade sub gladium quoque scutum. Si generalis erit, recipit capud: sit tibi stichschlag. Si religat, calcat, contraria sint tibi schiltslac. Notandum quod ille qui iacet superius dirigit plagam post capud sine schiltschlag, si est generalis. Si autem vis edoceri consilio sacerdotis, tunc religa et calca.*

<sup>20</sup> Trsl Forgeng 2013, p. 94: *Hic sacerdos ponit se ad scolarem, ut sepius prius visum est.*

<sup>21</sup> Trsl Forgeng 2013, p. 95: *Notandum quod scolaris ducit hic plagam generalem, quam consueverunt ducere omnes generales dimicatores ex supradictis proxime tactis, videlicet quando ligans et ligatus sunt in lite. Tunc ligans, qui est superior, vadit post capud et obmittit schiltslac mediante quo subsequitur plaga. Sacerdos vero intrat ut hic.*

<sup>22</sup> See Hester, ‘A Few Leaves short of a Quire’, p. 23: “The same is true for the sequence spanning fols. 25v and 26r. At the bottom of fol. 25v we have the Student binding the Priest’s sword, whereas



on the right side. The Student is on the position of a right superior bind (*religatio*). On folio 26r, the Priest is on the left side, and the Student on the right side. This time, the Priest is doing the right superior bind. However, it is very simple to switch from one to the other, with a simple counterbinding. When analysing the text on folio 26r, it appears to be not specific to a peculiar sequence of technique<sup>23</sup>, and may therefore not indicate whether or not the two images follow one another.

Forgeng offers a codicological description of the current state of the manuscript after restoration (2012). He then discusses the possible changes and material lacuna, which he places according to the following diagram (see Fig. 5)<sup>24</sup>.

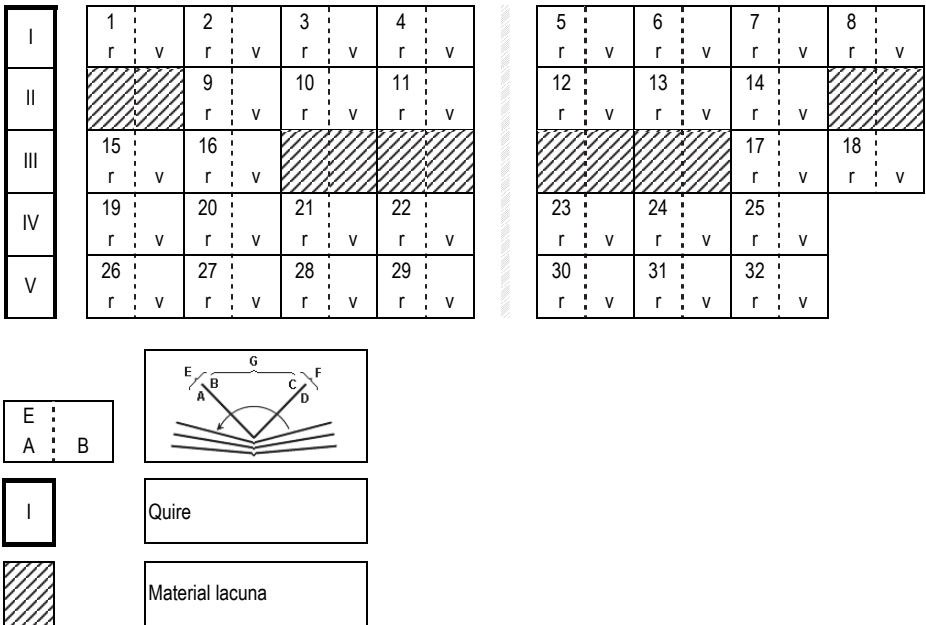


Figure 5: Synoptical diagram of the collation with location of the material lacuna, according to Forgeng hypothesis (2013)

The first quire is a complete quaternion. The second is a quaternion consisting of the original ternion with the addition of a bifolium at the beginning of the quire (before folio 9 and after folio 14). The third quire is a quaternion, composed of two originals bifolia

in the next illustration on fol. 26r it is the Priest who appears to be binding the Student. In both of these cases, the addition of currently missing content between these spaces would most likely make these sequences flow better and more sensibly.”

<sup>23</sup> Trsl Forgeng 2013, p. 97: *Ligans ligati contrarij sunt & irati; Ligatus fugit ad partes laterum; petro sequi.*

<sup>24</sup> Forgeng, *The Illuminated Fightbook*, pp. 23-29. Here the collation is represented as described, corresponding to the original state. However, his hypothesis of the gathering of folia 19-26 are not represented on the diagram, since the author did not include it in his “V” diagrams (see Fig. 9), but discussed this re-organisation in the body of his text.

(fol.15-18) and two missing bifolia (between folia 16 and 17). The fourth quire is a quaternion formed by the original ternion (folia 20-25), wrapped by the two half-sheets with counterfoil (19 and 26) forming one original bifolium. The fifth quire is a ternion composed by folia 27-32 in the present order.

He suggests that folia 19 and 26 were originally a single bifolium, which belongs to the quire 4. This bifolium would have been separated in half during an unknown time in its conservation history and one folio would have served as a model in the faithful copy found in the compendium of Wolfenbüttel<sup>25</sup>.

Applying this reshuffle (folio 26 being sewed to quire V), the quire V forms a ternion. This final structural irregularity seems plausible to the author. He assumes that no material lacuna could have been placed after folio 32, eventually in the middle of quire V, but not at the end. This assumption is based on the observed damage on folio 32v (indicating that the manuscript, or at least this quire, would have circulated for a long period of time as is) and on textual elements on this folio (the outcomes of this situation have already been covered)<sup>26</sup>. The end of folio 32 indeed marks the end of a play; not because he said earlier that everything that is seen here has already been processed in the first quire<sup>27</sup>, but because the play ends on a shield-strike and a blow to the head, as in the first quire. Even following this argument, there is finally little evidence supporting that the treatise would end here, allowing us to hypothesise a potential lacuna after fol. 32v (see below).

Also, if the two half-sheets (19 and 26) formed originally one bifolium, it would be interesting to put this hypothesis to the test by checking if the counterfoils would match. Our preliminary observation let us doubt this hypothesis (see detailed pictures on fig. 1), but further research is to be done on this matter, with permission of the curator, since it would imply dismantling the quires.

Finally in his most recent article<sup>28</sup>, Cinato proposes two new assumptions about the composition of the manuscript (Fig. 6). His first conforms broadly to that made by Forgeng, as discussed above (Fig. 5). However, he shared our doubts as to the location of folio 26, placing it in at the beginning of the quire V, thus aligning with our hypothesis and forming a quaternion and not a ternion as suggested by Forgeng. His second hypothesis is similar to his first, with the difference that he adds two material lacuna, bringing their number up to 10 (as Hester assumes)<sup>29</sup>, thus turning the supposed

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<sup>25</sup> Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 125.16 Extrav., fol. 45r. Noted by Forgeng, *The Illuminated Fightbook*, pp. 5 and 28. Also noted by Cinato and Hester.

<sup>26</sup> Forgeng, *The Illuminated Fightbook*, p. 28. See conclusion for the discussion about the absence of damage on the counterfoil.

<sup>27</sup> *Ibid.*, p. 109: *Et ex hiis generantur omnia que habentur de prima custodia, de quibus habetur in primo quaterno.*

<sup>28</sup> Cinato, 'Development, Diffusion and Reception of the Buckler plays'.

<sup>29</sup> He places a missing bifolium in the quire V between fol. 26-27 and after fol. 32, see *ibid.*

quaternion into a quinion. Due to lack of further evidence to support his first or second hypothesis, he left them open for discussion.

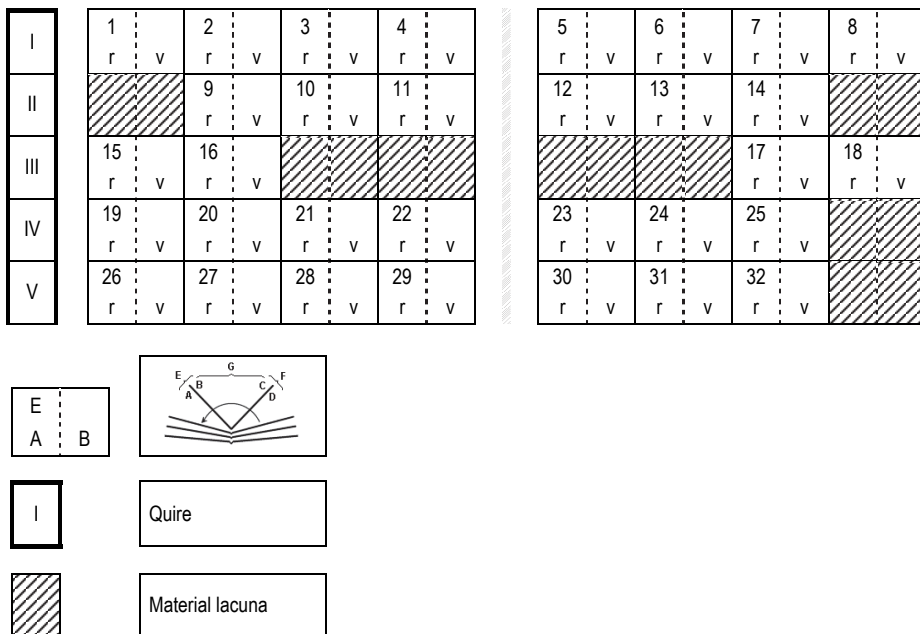


Figure 6: Synoptical diagram of the collation with location of the material lacuna, according to Cinato hypothesis (2016). *Nota bene*: the author did formalise a second hypothesis about quire V implying 2 more material lacuna, forming a quinion (this second hypothesis is not represented in the diagram).

#### IV. INTERPRETATIVE HYPOTHESIS OF THE QUIRES' LAYOUT

Our interpretation follows Forgeng, Cinato and Hester on the construction of the first two quires, but differs for the other quires. In the next section, we argue that previous researchers all locate fol. 19 and 26 incorrectly, which implies disputable hypotheses for the construction of quires 3-5 and the location of identified material lacuna.

We follow the postulate, according to which, the manuscript was originally composed by five quaternions, each quire being originally formed of 8 folia, as 4 bifolia folded in two, inserted into each other and sewn together. We therefore follow the actual order of the manuscript, realised after the restoration report of 2012. We then propose an identification of other potential material lacuna, crossing structural and textual evidences, by offering a quire-by-quire analysis below (see Fig. 7). We go even further by proposing the partial identification, subject to sufficient textual evidence, of the content of some of the material lacuna. We also hypothesise two material lacuna originally attached to folia with counterfoils (19 and 26), placed respectively in quires III and V (since they are

currently sewn into the latter). The reader can follow the discussion by referring to Fig. 8 representing the content distribution throughout the quires. It presents the synoptical representation of the collation of the quire, and in the lower panel indication about the crosses and the content according to the guards' sequences (highlighting the hermeneutic structure).

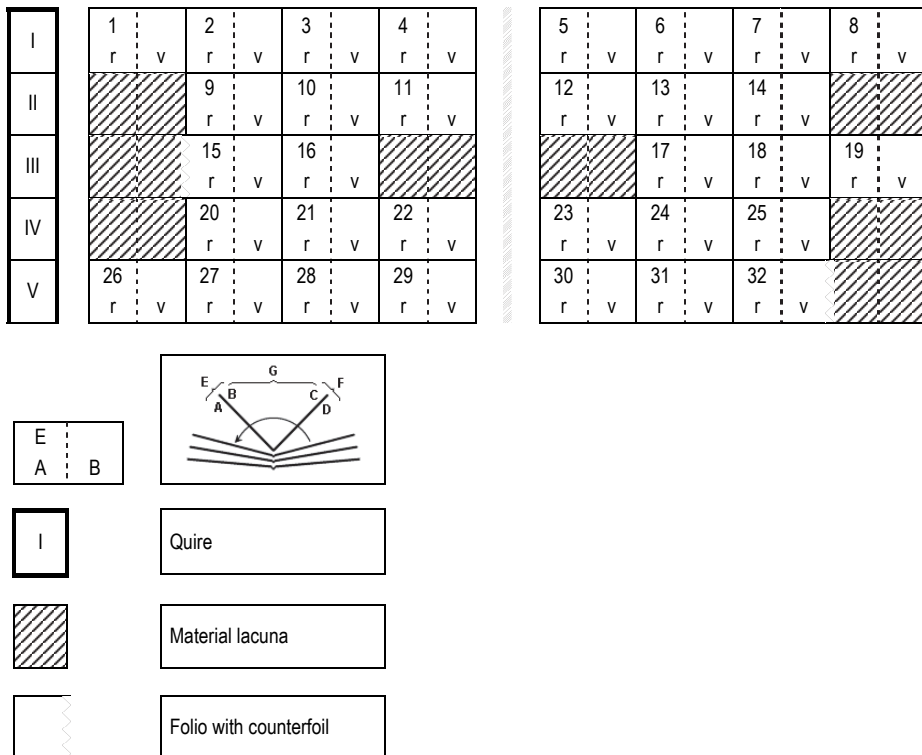


Figure 7: Synoptical diagram of the collation, with location of the material lacuna, according to Binard hypothesis (2016)

### IV.1. First quire

This quire, consisting of 4 bifolia, is complete.

### IV.2. Second quire

This quire consists of 3 bifolia. To form a quaternion, we propose to identify a material lacuna of a bifolium, placed between folia 8-9 and 14-15. This hypothesis can be supported by the text. Indeed, folio 8 ends on a play which reads: “Here we resume First Guard, and it is opposed with the first opposition, namely Half-Shield; and you will have

all the previous actions<sup>30</sup>; followed by: “When Half-Shield is adopted, fall under the sword and shield.<sup>31</sup>” As a result of this action, the student must rebind, and then set up one of the five options at his disposal shown in the first quire:

- two for the Student: the shield-strike (*schilslach*), or to seize the Priest’s arms with his left hand.

- three for the Priest: change of sword (*mutatio gladii*), stepping through (*durchtreten*), or with his right hand he can seize the Student’s arms (*vel dextra manu comprehendere brachia scolaris*).

Both of the Student’s options are explained and represented. As for the Priest, only the change of sword is explained. The capture of arms will be presented later in the treatise, on folio 12v. The analysis of the text and the deductions based on the pedagogical sequence suggests that explanations are lacking and reinforces the idea of a missing folio at this location. The material lacuna could thus include the explanation of the “stepping through” (*durchtritt*), or of the seizing of the arms with the right hand, even if it is repeated later. In addition, the following folio (9) begins by explaining the second guard, thus confirming that this guard was not seen before.

The hypothesis of the second part of the material gap (attached to the previously described folio) placed between folia 14-15 is also supported by the analysis of the textual content. The end of folio 14 reads:

After we have dealt with the Third Guard, here we deal with the Fourth; the opposition to it will be Half-Shield. You will find here everything you had before, up to the next mark of cross.<sup>32</sup>

Comparing with the previous play to which the text return (third guard opposed with half-shield), the following action is therefore lacking: the fall under the sword and the shield, counterbind, and shield-strike. Assuming one image per action, we would have 3 missing images, covering three quarters of a potential missing bifolium (one folio contains two images).

### IV.3. Third quire

The third quire is composed of 2 bifolia (15-18), 1 half-sheet with counterfoil (19), sewn into the third quire (the counterfoil is therefore placed between folia 14-15, see Fig. 1). The counterfoil is not cut cleanly: fibres are observable on the tear, suggesting a pull-out by hand. Unlike to what Forgeng and Cinato were able to postulate, this quire does not

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<sup>30</sup> Trsl Forgeng 2013, p. 62: *Custodia prima resumitur hic et obsedet cum prima possessione, videlicet halpschilt. Et habebis omnia priora.*

<sup>31</sup> Ibid.: *Dum ducitur halpschilt, cade sub gladium quoque scutum.*

<sup>32</sup> Trsl Forgeng 2013, p. 74: *Postquam determinatum est de tertia custodia, hic determinat de quarta, cuius obsessio erit halpschilt, que omnia prius habuisti inuenies hic, usque ad proximum signum crucis.*

consist in the current state of only two bifolia. They place folio 19 in the next quire, thus shifting their assumptions about the location of the material lacuna.

The first lacuna in this quire lies before folio 15. The text here does not show enough indications to support this hypothesis. We can however assume that the lacuna could contain plays that still concern the fourth guard, because the text of folio 15r begins: “Here the Priest resumes the Fourth Guard.”<sup>33</sup>

To form a quaternion, it still lacks a bifolium. We locate this, as Forgeng, Cinato and Hester did, between folio 16 and 17, in the middle of the quire (where the seam lies). However, if all three researchers have identified the same location for the material lacuna, they have not suggested a material lacuna of a single bifolium, but of two.

The location of the material lacuna is justified by the content analysis:

(fol.16v) Here the Student’s sword is released by means of a Shield-Strike; and let the Priest beware lest the Student deliver a blow to the head or the common thrust that the Priest is accustomed to teach his students. And if the Student delivers a blow to the head, protect it with the sword and the shield held together in your left hand. And thus you will break the shield from your opponent’s hand; see below in the next illustration.<sup>34</sup>

(fol.17r) Here the Priest adopts the Sixth Guard, which is given to the chest. And note that you should only deliver the same thrust that is delivered from the Fifth Guard; see up to the next mark of the cross.<sup>35</sup>

It clearly lacks the shield-strike mentioned at the end of folio 16. The mention in folio 17 of a missing play, the thrust, confirms another lacuna. Since previous folia are introducing plays of the fourth guard, and folio 17 the sixth guard, we can suggest that the material lacuna is about the fifth guard.

#### IV.4. Fourth quire

The quire is composed of 3 bifolia. We hypothesise a missing bifolium, located between folia 19-20 and 25-26, the seam being located between folia 22-23. The analysis of the textual content supports the hypothesis.

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<sup>33</sup> Trsl Forgeng 2013, p. 75: *Hic sacerdos resumit quartam custodiam.*

<sup>34</sup> Trsl Forgeng 2013, p. 78: *Hic relevatur gladius scolaris mediante schiltslac. Et caveat sacerdos ne scolaris ducat plagam capiti, sive fixuram generalem quam sacerdos consuevit docere discipulos suos. Preterea, scias quod si scolaris dat plagam capiti, protectionem duc gladio connexoque scuto quod habetur in sinistra manu. Et sic frangis scutum de manibus tui adversarii, ut patet infra proximo exemplo.*

<sup>35</sup> Trsl Forgeng 2013, p. 79: *Hic sacerdos ducit sextam custodiam que datur pectori. Et nota quod solum illa fixura est ducenda, que ducetur de quinta custodia usque ad proximum signum crucis.*

In folia 17, 18 and 19 of the third quire, the author talks about the bind. He first of all announces that there are four different binds: two on the right and two on the left. He discusses the superior right bind, then the inferior left bind on folio 19. Folio 20 addresses the superior left bind, and once again the superior right bind. One bind is missing, which could be contained in this missing folio, between folio 19 and 20: the inferior right bind.

The second part of the lacuna lies between folia 25-26. In the next folia, the author review the guards 3 to 5 opposed with the special guard of the priest. Folio 26 begins with the middle or end of a play. We know this because there is no cross to mark the beginning of the play here. We can then assume a lacuna at this point. Unfortunately, the text (“The one who binds and the one who is bound are contrary and irate; The one who is bound flees to the side; I seek to pursue”<sup>36</sup>) is too unspecific to relate it to a specific play. The next play addresses the third guard opposed with the special guard of the priest. Without too many risks, we can then suggest the hypothesis that the contents of the missing folio are about the first and the second guards opposed with the special guard of the priest.

#### IV.5. Fifth quire

This quire is composed of 3 bifolia (27-32), with 1 half-sheet with counterfoil (26), sewed in the fifth quire (the counterfoil is therefore placed after folio 32, see Fig. 1).

As well as folio 19, the counterfoil appearing on the other side of spine may have been torn by hand. It should be noted, as Forngeng pointed out that, the last folio of the manuscript is very damaged. The paper is obscured, possibly by the heat, and we can see some scorches. However, the counterfoil suffered no change of colour. In addition, fibres that come out from the counterfoil do not appear to have been affected by any heat. To these physical observations, we should add textual comments. Folio 32 ends on a blow, it would therefore be consistent whether the end of the play with Walpurgis. No evidence can allow us to identify the potential content of this lacuna suggested by the presence of the counterfoil. The fact that this counterfoil does not have the same traces of wear as folio 32 lets us think, as suggested by Forngeng, that the quire has been reshuffled. However, we stand firm by our hypothesis. Indeed, it seems logical that folio 26 is in the right place since the author reviewed two oppositions (*obsessio*), then all the guards one after the other opposed with the special guard of the priest. Folio 25 concerns the “rare opposition” (*valde aliena obsessio*) opposed with the special guard of the priest, then there is a lacuna, that we suppose to be about the special guard of the priest opposed with first guard, then second guard. Indeed, folio 26 is about the special guard of the priest opposed to the third guard, then the fourth guard, and finally folio 27 is still about the special guard of the priest, opposed with the fifth guard.

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<sup>36</sup> Trsl. Forngeng 2013, p. 97: *Ligans-ligati contrarii sunt et irati. Ligatus fugit ad partes laterum, peto sequi.*

## Quires

I	1	2+	3+	4	5	6	7	+	8	+
II		9+	10	11	12+	13	14	+		
III		15+	16			17+	18		19	
IV		20+	21+	22+	23	24	25			
V	26	27+	28	29	30+	31	32+			












										
Recto Verso Sheet	Missing pages	Beginning of the play	1 <sup>st</sup> ward	2 <sup>nd</sup> ward	3 <sup>rd</sup> ward	4 <sup>th</sup> ward	5 <sup>th</sup> ward	6 <sup>th</sup> ward	7 <sup>th</sup> ward	Special wards

Figure 8: Content distribution throughout the quires, according to Binard hypothesis (2016)

## V. CONCLUSION

After having reviewed the different hypotheses of previous researchers, simulated them with our working document, and confronted with material and textual evidences, we demonstrated some of the weaknesses of these hypotheses, mainly about quires III to V. We believe that the current state of the manuscript represents the original order and the identification of material lacunas allows, in a certain way, to resolve the irregularities observed in the analysis of the text, reported and discussed by previous studies. Figure 9 offers a representation of the different hypothesis with the detail of the quires' spine, allowing the reader to make the same observations that have been presented in this article.

The discussion of the collation of the manuscript remains hypothetical of course, since it is based on the state of the manuscript, as it arrived in the collection of the Royal Armouries. The restoration of 2012 led to a relocation of the folio 19 from the quire IV to quire III, which we believe to be accurate. To our knowledge, there is no document allowing to retrace any previous collation or reshuffle, leaving any study about previous states of conservation open for discussion.

Therefore, the weakest point of our argumentation is the opinion we have about the last folio (32), divergent from Forngeng's or Hester's observations and assumptions<sup>37</sup>.

<sup>37</sup> Forngeng, *The Illuminated Fightbook*, p. 28. He hypothesizes a ternion (see above, note 26). Hester notes a material lacuna between folia 31 and 32 (based on assumption that the material lacuna is attached to 26, but this is not possible considering the location of the sewing). He postulates this



Nevertheless, we believe that the association of the folio 19 with the fourth quire, as assumed by previous studies is actually altering the hypotheses about the composition of the manuscript. This point remains even so open for discussion and further research. It lies with the question of the location of the folia 19 and 26, and the direction of the folding of their counterfoil. Another collation of folia 19 and 26 at the beginning and end of the quire IV with a folding towards the inside of the quire might, for example, represent a previous state of conservation and explain the absence of damage on the counterfoils<sup>38</sup>. Moreover, other hypotheses might even lead to discussion about another material lacuna in the quire V, offering explanation about the conclusion of the work, which might be incomplete or have endured a change of auctorial project during production<sup>39</sup>.

To conclude, this contribution offered a current state of research and a review of the previous studies concerning the collation of the manuscript with diagrams allowing the comparison between the different hypotheses. It proposes a hypothesis based on both the analysis of the material and the content, while leaving the issues about the location of the flying leaves and the composition of last quire open for discussion and further research.

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would imply possible explanation about the lack of damage on 31 compared to 32, as well as to why the figure of Walpurgis appears instead of the Student without other comment, see Hester, 'A Few Leaves Short of a Quire', p. 24.

<sup>38</sup> This is a hypothesis formulated by Franck Cinato. We thank him for sharing his opinion on this matter.

<sup>39</sup> This would follow the second hypothesis of Cinato, 'Development, Diffusion and Reception of the Buckler plays', already hinted in his 2009 edition while observing that the auctorial project might have undergone a reorientation during realisation.

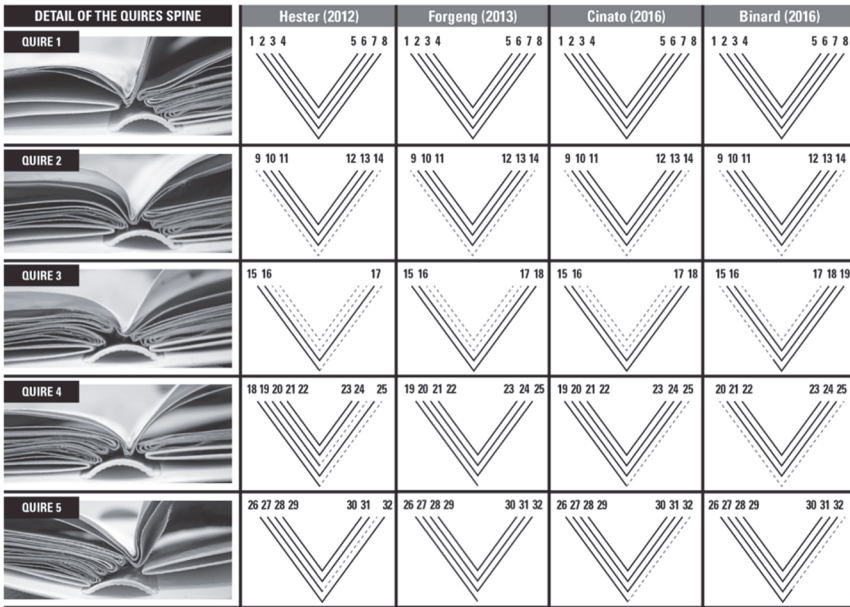


Figure 9: Comparison of collation hypothesis with pictures of the edge of the quires  
 Pictures by F. Binard, with Courtesy of the Royal Armouries Library.  
 Diagram by F. Binard and O. Gourdon, reproduced or created according to the published  
 articles/monographs of the cited authors. Nota bene: the second hypothesis of Cinato is not  
 represented on the figure (see legend of fig. 6).

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