

# The Neglected “Backyard” of Early Chinese Manuscripts: How an Analysis of the Verso of Bamboo Slips can enable the Reconstruction of a Manuscript Roll\*

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## Abstract

One of the basic problems that researchers have to face, when dealing with early Chinese bamboo or wood manuscripts, is natural disintegration. In almost every case, the binding strings that once held together the slips originally constituting a manuscript do either not exist anymore or only remain as traces on individual slips. The problem of reconstruction becomes even more complex, if the manuscript in question was not scientifically excavated or even is of unknown provenance. The present article shows how an analysis of verso lines and mirror-inverted imprints of writing on a group of bamboo slips from the Yuelu Academy collection can help to reconstruct the original structure of the respective manuscript roll. The described analysis can in certain cases enable or facilitate the complete reconstruction of bamboo manuscripts, even if external archeological evidence is lacking.

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In 2012, the editors of the Yuelu Academy manuscripts consulted the yet unpublished draft versions of the present paper as well as its abbreviated Chinese version (see Shi Da 2013). Based on the results from the analysis of verso imprints of writing that are described in both works, they later revised the sequence of the seven case records of *Wei yu deng zhuang si zhong* MS 1. Therefore, the final arrangement in volume three of the Yuelu Academy manuscripts is in accordance with the results of the present paper. Cf. Yuelu shuyuan cang Qin jian zhengli xiaozu 2013, 81–83 as well as Zhu Hanmin and Chen Songchang 2013, 317–319. Note that some of the references to the edition (primarily the item numbers of certain slips) in the already published Chinese version of this paper are no longer correct, as that article was submitted before the final version of the edition was published (see also footnotes 65 and 81). For an explanation of the change of certain item numbers for the final edition see Zhu Hanmin and Chen Songchang 2013, 319.

## 1. The problem of manuscript reconstruction

One of the basic problems that researchers have to face, when dealing with early Chinese bamboo or wood manuscripts, is natural disintegration. More than 2,000 years after their production, these manuscripts exhibit different stages of decay. In almost every case, the binding strings that once held together the slips originally constituting a manuscript do either not exist anymore or only remain as traces on individual slips. The discovery of intact manuscripts is quite exceptional and until now only very few such specimens have been found.<sup>1</sup> Due to the constant development and refinement of archeological methods in China in the course of the past century, archeology in many cases can provide valuable support for the purpose of manuscript reconstruction.<sup>2</sup> If the excavation site was previously undisturbed by tomb robbers or other outer influences such as intruding water, the position of the slips can provide information on the number of manuscripts, their size and in some cases even their structure (i.e. the sequence of the individual slips inside the manuscripts).

A good example is the excavation of Zhangjiashan 張家山 tomb no. 247 conducted at the turn of the years 1983 and 1984. Although water had broken into those parts of the coffin, where the manuscripts were stored in a bamboo basket, the pressure of other grave goods packed on top of the manuscripts had apparently held the largest part of them in their original position.<sup>3</sup> The archeological drawing, which the editors later included into the first publication of the Zhangjiashan manuscripts (see fig. 1 below), accordingly yielded interesting insights.

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<sup>1</sup> To my knowledge, the only examples of bamboo manuscripts with at least some intact binding strings are the Qin slips in the possession of Peking University. Here it was even possible to draw some conclusions on the binding techniques applied, see the report Beijing daxue chutu wenxian yanjiu suo 2012a, 40–41. One of the few examples of a wood manuscript with intact binding strings is 99ES16ST1: 1–8, which was excavated at Juyan. For photos and a transcription see Wei Jian 2005, 73–75.

<sup>2</sup> Enno Giele stressed the overall importance of the archeological context for the study of early Chinese manuscripts in two of his articles, giving various illustrative examples. See Giele 2003 as well as 2010. Li Ling also emphasized that a proper documentation of this archeological context is an important prerequisite for further research, see Li Ling 2008, 166–168.

<sup>3</sup> Jingzhou diqu bowuguan 1985, 1–3.

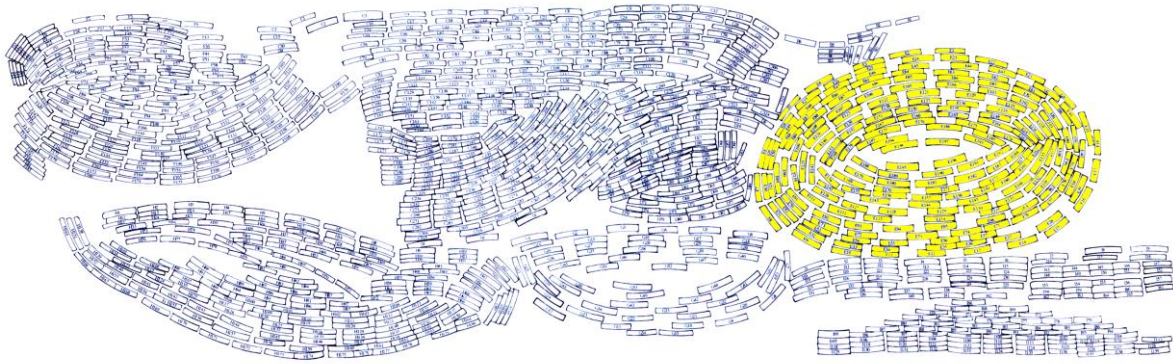


Fig. 1: Manuscripts from Zhangjiashan tomb no. 247 at the time of excavation (cross-section).<sup>4</sup>

Although the binding strings were no longer extant and some slips had been scattered by the water, the remains of six or seven manuscript rolls are still visible. As was later found out, the respective groups of slips, to which archeologists assigned the letters B to I also largely correspond to different texts.<sup>5</sup> The slips of group E (marked yellow in the drawing), for example, bear the title *Zouyanshu* 奏讞書 and contain a collection of 22 criminal case records.<sup>6</sup> The drawing suggests that the overall 228 slips originally constituted one manuscript.<sup>7</sup> The slips formed a roll with about 12 to 14 layers of increasing perimeter, the outermost of which appears to have contained more than 20 slips. Slip E1 (or 228 respectively, according to the numbering of the edition), which contains the last part of case record 22 on its recto and the title *Zouyanshu* on its verso, obviously constituted the last slip of the roll. As it is situated at the end of the outermost layer, it is clear that the manuscript was rolled up with its first slip in the middle and its last slip (with the title) at the outer edge of the roll. As we have to assume that the position of the slips changed to some degree after the binding strings had disintegrat-

<sup>4</sup> The figure was taken from Zhangjiashan er si qi hao Han mu zhujian zhengli xiaozu 2001, appendix B. The yellow highlighting was added.

<sup>5</sup> See the table in Zhangjiashan er si qi hao Han mu zhujian zhengli xiaozu 2001, appendix A. The slips of group K, which contained an inventory of grave goods (*qiance* 遣冊), were placed in another part of the coffin and were therefore not included into the drawing. The same is true for some wood tablets (group A). They were unfortunately excluded, because they did not contain any writing (Zhangjiashan er si qi hao Han mu zhujian zhengli xiaozu 2001, appendix B). For some critical remarks on inconsistencies in the table and the drawing see Wang Wei 2006, 353, footnote 2.

<sup>6</sup> In fact not all of the texts appear to be (based on) authentic case records. For some remarks on the nature of the *Zouyanshu* as a compilation of fictitious and documentary texts see Lau and Lüdke 2012, 20–27 as well as Barbieri-Low and Yates 2015, 32–33, 98–109.

<sup>7</sup> It should be noted that about 30 slips that were originally assigned to group I—the largest part of which contains a text called *Yinshu* 引書—were later included into the *Zouyanshu* (see Zhangjiashan er si qi hao Han mu zhujian zhengli xiaozu 2001, appendices). As these slips contain parts of text that belong to different case records on the slips of group E and therefore do not appear to form an independent manuscript, it is possible that one part of the *Zouyanshu* manuscript (group E) was scattered and became mingled with the 112 slips of group I containing the *Yinshu*.

ed, the exact original sequence of the slips is difficult to determine. Still, it is possible to judge whether a certain slip or group of slips most likely belonged to the beginning, the middle or rather the end of the manuscript.<sup>8</sup>

The problem of reconstruction becomes even more complex, if the manuscripts in question were not scientifically excavated or are even of unknown provenance. In addition to questions that may arise about the dating and geographical origin of the manuscripts it is also not possible to make use of the position of the slips at the time of their discovery for reconstruction.<sup>9</sup> These problems pertain to an increasing number of manuscripts that different institutions such as museums and universities in China have purchased since the 1990s—mostly on the antique market of Hong Kong. As there is a steadily growing interest in early Chinese manuscripts in China as well as abroad, selling these manuscripts obviously became a profitable business. Forgeries without doubt exist, which of course also raises the general question of authenticity for every manuscript that was not scientifically excavated.<sup>10</sup> In general, researchers need to be well aware of this problem and should constantly question the overall integrity of the manuscript(s) they are working with.

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<sup>8</sup> Indeed the editors state that they made use of this information (Zhangjiashan er si qi hao Han mu zhujian zhengli xiaozu 2001, fanli).

<sup>9</sup> The editors of the Yuelu Academy manuscripts supply photos and drawings of the position of the slips after they were purchased (Zhu Hanmin and Chen Songchang 2010, 204–220). However, as the slips had earlier been divided quite arbitrarily into eight bundles kept in plastic bags (Zhu Hanmin and Chen Songchang 2010, preface), the drawings hardly provide reliable information on the relative position of the slips at their unknown place of discovery. The circumstances appear to be better for the editors of the Qin manuscripts now in possession of Peking University. By conducting what has been named “indoor excavation” (*shinei fajue* 室內發掘) the editors were able to draw valuable conclusions regarding the number of manuscripts and the arrangement of the slips. For a detailed description of their methods, which may well serve as a model for the handling of manuscripts that were not scientifically excavated, see Hu Dongbo and Chang Huaiying 2012.

<sup>10</sup> Hu Pingsheng discussed several examples of known forgeries in a paper presented at the 2008 International Forum on Bamboo and Silk Documents in Chicago (see Hu Pingsheng 2008, later published as Hu Pingsheng 2010). It is difficult, if not impossible, to prove the authenticity of a manuscript on a textual or paleographical basis alone. This has led to a growing importance of material analysis. The editors of the unprovenanced manuscripts that are now in possession of Tsinghua University, Peking University as well as Yuelu Academy all supplied the findings of different kinds of material analysis, see Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu bao hu zhongxin 2010, preface, as well as Fang Beisong et al. 2012; Hu Dongbo et al. 2011; Zhu Hanmin and Chen Songchang 2010, 197–201, respectively. The problem is that analysis is typically restricted to the writing support (in said cases mostly bamboo slips), which may prove that the material is definitely “ancient” or even allow a rough dating by comparison with other scientifically excavated manuscripts but of course does not exclude the possibility that a forger used ancient bamboo or wood slips for writing. Various examples of slips that did not carry any writing—and therefore could be used for this purpose—have been excavated from different tombs (see e.g. the tablets of group A from Zhangjiashan tomb no. 247, cf. footnote 5 above). However, to undertake material analysis of the writing support and ink for every single slip of an unprovenanced manuscript is most certainly both immensely time consuming and expensive. It might therefore not be an option in every case.

In this paper it will be shown how an analysis of the verso of a group of bamboo slips from volume three of the Yuelu Academy manuscripts can not only help to reconstruct the original structure of the respective manuscript roll but also support the claim for its authenticity (section 3). An analysis of codicological and paleographical features, by which slips belonging to separate manuscripts are distinguished (section 2), will lay the foundation for this reconstruction.

## 2. The Yuelu Academy manuscripts and the collection of criminal case records

After the Shanghai Museum had acquired its manuscripts on the Hong Kong antique market in 1994,<sup>11</sup> it took more than a decade until another institution purchased a large cache of manuscripts. In July 2008, Tsinghua University bought bamboo manuscripts from Warring States times, followed by the acquisition of bamboo manuscripts from Western Han and Qin times by Peking University in the years 2009 and 2010.<sup>12</sup> The first to follow the Shanghai museum, however, was the Yuelu Academy of Hunan University, which purchased its Qin bamboo and wood slips in the winter of 2007.<sup>13</sup> Besides three calendars (*Zhiri* 質日) from the years 220, 213 and 212 BCE, a guidebook for officials (*Wei li zhi guan ji qianshou* 爲吏治官及黔首), a divinatory manuscript (*Zhanmeng shu* 占夢書) and a mathematical manuscript (*Shu* 數), more than 75% of the material consist of legal manuscripts.<sup>14</sup> Most of the legal material is still unpublished, but it is already clear that it consists of two basic types of texts. Legal prescriptions—so-called statutes (*lü* 律) or ordinances (*ling* 令)—form the largest part of presumably up to 1,400 items.<sup>15</sup> The recently published volume three of the series contains the other type of legal text: a collection of criminal case records similar to the *Zouyanshu* from Zhangjiashan,

<sup>11</sup> To date nine volumes of these manuscripts have been published. See Ma Chengyuan 2001–2012.

<sup>12</sup> The first seven volumes of the Tsinghua University manuscripts have already been published, see Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010–2017. For an introductory article on the Qin manuscripts held by Peking University see Beijing daxue chutu wenxian yanjiu suo 2012b. For the first five volumes of the Western Han manuscripts see Beijing daxue chutu wenxian yanjiu suo 2012–2015.

<sup>13</sup> For a general introduction to these manuscripts see Chen Songchang 2009 as well as the preface of volume one of the Yuelu Academy manuscripts (Zhu Hanmin and Chen Songchang 2010).

<sup>14</sup> According to the preface of volume one, the total number of items, which of course is larger than the number of complete slips as each fragment was assigned an item number, is 2,176. The non-legal material was published in volumes one and two, see Zhu Hanmin and Chen Songchang 2010 and 2011. The first volume contains the calendars (more than 160 items), the guidebook (more than 80 items) and the divinatory manuscript (about 48 items); the second contains the mathematical manuscript (236 items), which leaves at least 1,652 items for the legal manuscripts.

<sup>15</sup> A first part of this material (amounting to overall 391 slips) has been published in Zhu Hanmin and Chen Songchang 2015.

which the editors named *Wei yu deng zhuang si zhong* 爲獄等狀四種 (hereafter abbreviated as *Zhuang si zhong*).<sup>16</sup>

The *Zhuang si zhong* consists of 15 criminal case records (12 of them comparably well preserved) that were for various reasons submitted by local officials to the higher authorities for decision. Although all of these case records could be subsumed under one label (like the *Zouyanshu*) because of their similar structure and content, it is clear from a codicological point of view that they were not part of one and the same manuscript, as it is the case with the *Zouyanshu* from Zhangjiashan described above. Instead, the *Zhuang si zhong* appears to have consisted of four separate manuscripts—the editors termed them “categories (of slips)” (*lei* 類)<sup>17</sup>—that differed in terms of writing support, measurements of the slips, number and position of bindings as well as style of script.

## 2.1 Writing support, measurements of the slips, number and position of bindings

According to the overview provided in the preface of volume three of the Yuelu Academy manuscripts, the *Zhuang si zhong* besides bamboo slips contains a small amount of wood slips.<sup>18</sup> These 27 slips with a length of roughly 23 cm (if complete) and a width of about 0.8 cm are among the shortest of the *Zhuang si zhong* slips and constitute “category 3,” which contains only one single case record. Apart from being slightly narrower (between 0.5 and 0.7 cm) the bamboo slips can be distinguished into three categories with lengths of around 27.5 cm (category 1, seven case records), 25 cm (category 2, six case records) and 23 cm (category 4, one case record), respectively. Although Chen Songchang 陳松長 originally noted that the wood slips do not show any traces of bindings<sup>19</sup> (which holds true, if only examining the recto of the slips), there appear to be traces of two bindings visible on the verso of at least some slips.<sup>20</sup> Complete bamboo slips show traces of either two or three bindings. For the exact positions, see the sample slips in fig. 2 below.

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<sup>16</sup> See Zhu Hanmin and Chen Songchang 2013. The whole volume contains 252 slips according to the preface.

<sup>17</sup> Zhu Hanmin and Chen Songchang 2013, preface.

<sup>18</sup> For the following data see Zhu Hanmin and Chen Songchang 2013, preface. The numbering of the categories of slips also follows the editors.

<sup>19</sup> Chen Songchang 2009, 85–86.

<sup>20</sup> Zhu Hanmin and Chen Songchang 2013, 219–220. Cf. Zhu Hanmin and Chen Songchang 2013, preface.

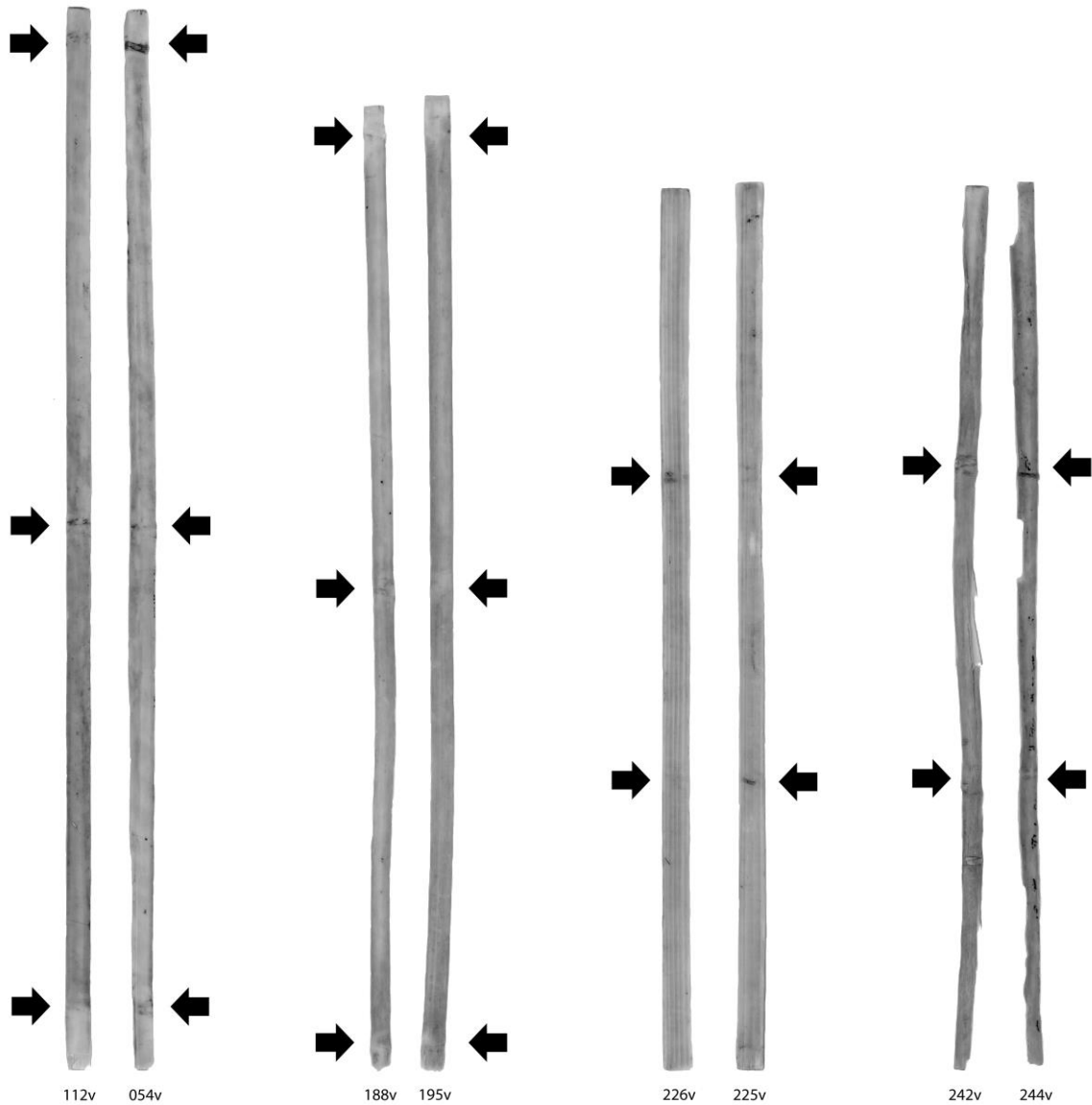


Fig. 2: Sample slips from *Zhuang si zhong* categories 1–4 (from left to right).<sup>21</sup>

In the above figure, slips 112 and 054 belong to category 1, 188 and 195 to category 2, 226 and 225 to category 3, 242 and 244 to category 4. The arrows indicate the position of the bindings. It is obvious that these slips of different length with different binding positions did most probably not all belong to the same manuscript.<sup>22</sup>

<sup>21</sup> Please note that this figure shows the verso of all eight slips, because on the wood slips (226 and 225) traces of bindings are barely visible on the recto. If not otherwise stated, slip numbers refer to the edition provided in Zhu Hanmin and Chen Songchang 2013.

<sup>22</sup> Of course, a certain degree of variation in slip length has to be considered, even inside the same manuscript. However, the degree of variation is rather small for the slips of the Yuelu Academy *Zhuang si zhong*. Usually, the slips of a certain category only show a variation of no more than a few millimeters when compared with other slips of the same category. The difference between categories, however, is evident apart from categories 3 and 4, which are quite similar in terms of measurements and binding positions. The existence of a composite manuscript that comprised two or more (formerly independent) codicological units with different

## 2.2 Type and styles of script, hands

Chen Songchang already pointed out that the *Zhuang si zhong* is not uniform as far as the “style of script” (*wenzi fengge* 文字風格) is concerned.<sup>23</sup> To avoid misunderstandings, the category of “style” should be distinguished from those of “type” of script on the one hand and individual “hands” on the other. In the following, the definitions by Matthias Richter are applied:

*Types of script* are “writings that consistently share the same essential morphological qualities, i.e. a degree of consistence in structure and shape of characters that [...] ensures legibility within a certain scope.”<sup>24</sup> This means that within the same type of script the component structure of a character is relatively stable, although variations are possible as far as individual strokes are concerned. *Styles of script* describe “the fashion in which a certain type of script is executed.”<sup>25</sup> This concerns features often described by attributes such as elaborate/ornamental, plain, regular, etc. Finally, *hands* as the narrowest category of analysis signify differences in the execution of the same style caused by the fact that (parts of) manuscripts were written by different scribes (or possibly the same scribe at different points in time). As Richter points out “relevant details range from layout features [...] to morphologic and orthographic peculiarities as well as features of the single strokes.”<sup>26</sup>

An examination of the *Zhuang si zhong* slips suggests that the writing on all of them belongs to the same type of script, which may tentatively be described as “Late Warring States or Qin dynasty brush-written Qin-script.”<sup>27</sup> However, differences in style of script are evident. Closer examination shows that there are most probably four different styles discernible. As these differences can best be shown when comparing forms of frequently used characters, a few sample forms of the characters [不] *bu*, [之] *zhi*, [爲] *wei* and [敢] *gan* are provided below.

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writing support, measurements of the slips and/or number/position of bindings (i.e. two or more different categories of slips) would also be possible in theory, especially with regard to categories 3 and 4. On the concepts “composite (manuscript)” and “codicological unit” in the context of codex manuscripts see in detail Gumbert 2004.

<sup>23</sup> Chen Songchang 2009, 86.

<sup>24</sup> Richter 2006, 134.

<sup>25</sup> Richter 2006, 135.

<sup>26</sup> Richter 2006, 136.








<sup>27</sup> This slightly unwieldy description of the type of script, which is narrowed down with regard to period, writing implement and region (of origin), was chosen based on the general classification of the manuscripts in the first survey by Chen Songchang (2009).



### Style A

Description: controlled, regular, mostly rectangular shape, characters tilted towards bottom left, some strokes typically hooked; wide spacing













Distribution: slips of category 1

Examples:	[不] <i>bu</i>	 (099.26) <sup>28</sup>	 (069.4)	 (011.20)
	[之] <i>zhi</i>	 (105.2)	 (048.1)	 (093.6)
	[爲] <i>wei</i>	 (115.20)	 (092.25)	 (055.7)
	[敢] <i>gan</i>	 (023.5)	 (031.17)	 (080.28)

### Style B

Description: controlled, regular, mostly square shape; narrow spacing

Distribution: slips of category 2













Examples:	[不] <i>bu</i>	 (152.36)	 (187.11)	 (198.14)
	[之] <i>zhi</i>	 (177.3)	 (204.2)	 (170.11)
	[爲] <i>wei</i>	 (205.35)	 (173.7)	 (169.10)
	[敢] <i>gan</i>	 (147.16)	 (149.18)	 (170.9)

<sup>28</sup> The reference numbers in parentheses comprise the number of the slip (according to the edition in Zhu Hanmin and Chen Songchang 2013) and the number of the character on the respective slip, separated by a dot.

## Style C

Description: less controlled and regular, mostly rectangular shape (height of characters up to more than twice the width), occasional long strokes at the bottom; wide spacing








Distribution: slips of category 3

Examples:	[不] <i>bu</i>	 (233.9)	 (230.4)	 (217.14)
	[之] <i>zhi</i>	 (217.11)	 (234.2)	 (210.17)
	[爲] <i>wei</i>	 (216.5)	 (226.7)	 (217.16)
	[敢] <i>gan</i>	 (210.15)	 (220.15)	 (218.9)

## Style D

Description: less controlled and regular, mostly rectangular shape; narrow spacing

Distribution: slips of category 4

Examples:	[不] <i>bu</i>	 (243.11)	 (238.1)
	[之] <i>zhi</i>	 (242.28)	 (242.37)
	[爲] <i>wei</i>	 (244.21)	
	[敢] <i>gan</i>	 (241.1)	 (238.2)

The above character forms illustrate the styles of script that occur in the *Zhuang si zhong*. Apart from different styles, there are some clues that point to the possibility of different hands writing in the same style. In a recent paper, Chen Songchang and Zhang Yijing 張以靜 proposed that two different hands could be identified in the writing on the slips of category 1 (designated as style A above).<sup>29</sup>

To sum up, the above codicological differences in the *Zhuang si zhong* with its four different categories of slips suggest the existence of four separate manuscripts rather than only one that contained all cases. In addition, codicological differences in writing support, measurements of the slips and number or position of bindings are always paralleled by paleographical differences in style of script (see table 1).

Category/MS	Writing support	Number of slips <sup>30</sup>	Length	Number of bindings	Style of script
1	bamboo	136	27,5 cm	3	A (2 hands?)
2	bamboo	73	25 cm	3	B
3	wood	27	23 cm	2	C
4	bamboo	9	23 cm	2	D

Table 1: Overview of codicological and paleographical features of the *Zhuang si zhong*.

### 3. *Zhuang si zhong* MS 1

The above analysis already provided some insights on the number and size of the manuscripts that are part of the *Zhuang si zhong*. To demonstrate how an analysis of the verso of the slips can help to further reconstruct the structure of one of these manuscripts, the following section will focus on the bamboo slips of MS 1, which is peculiar in several ways. First, it is by far the largest manuscript of the *Zhuang si zhong* collection with more than 130 slips. Second, it is preserved much better than the other three. Although there seem to be slips missing, these are quite few in number, and the extant slips are in a relatively good condition. Third, and

<sup>29</sup> Chen Songchang and Zhang Yijing 2014. In the preface of Zhu Hanmin and Chen Songchang 2013, it had been claimed that the writing on all the slips of category 1 is from the same hand.

<sup>30</sup> According to Zhu Hanmin and Chen Songchang 2013, preface. The overall number of 252 slips contains the 245 slips also found in this table as well as seven fragments. For the latter see Zhu Hanmin and Chen Songchang 2013, 245–247. For an additional slip of MS 1 that was not included in the edition see footnote 59.

most important, one can observe two characteristic phenomena on the verso of many slips: verso lines as well as mirror-inverted imprints of writing.<sup>31</sup>

### 3.1 Verso lines<sup>32</sup>

A close examination of the verso of the slips of MS 1 shows that there are thin, apparently ink-drawn, lines on most of the slips (see fig. 3 below).<sup>33</sup>

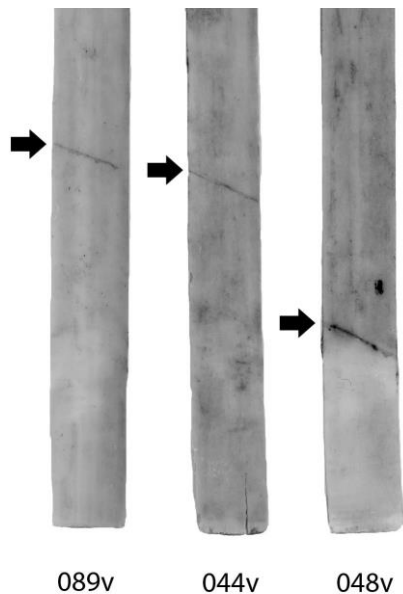


Fig. 3: Examples of verso lines (indicated by arrows).

To my knowledge, this phenomenon was first mentioned in the edition of the Baoshan 包山 manuscripts more than 25 years ago. The Baoshan editors stated that there were knife-cut or ink-drawn lines on the verso of some slips and that in some cases the lines on adjacent slips fit together and formed a continuous line; in other cases, they did not. They assumed that the lines were some kind of marks, which were applied before the slips were tied together.<sup>34</sup> Between 1991 and 2011 the verso lines were not paid further attention, which seems to be mostly due to the fact that photographs of the verso of slips were only exceptionally included into manuscript publications, for example if they contained writing. Therefore, researchers, who in

<sup>31</sup> Both phenomena also occur on slips of the other manuscripts, but they are most prominent in MS 1. Cf. Zhu Hanmin and Chen Songchang 2013, 317–319.

<sup>32</sup> For a separate study especially devoted to the verso line phenomenon see Staack 2015.

<sup>33</sup> What is termed “ink-drawn” here is not to be equated with Sun Peiyang’s *mo huaxian* 墨劃綫 (Sun Peiyang 2011, 455). It is actually possible that the lines in *Zhuang si zhong* MS 1 were first cut with a knife and only afterwards treated with ink to enhance visibility (Staack 2015, 158).

<sup>34</sup> Hubei sheng Jing Sha tielu kaogudui 1991, 4.

most cases have to rely on these publications, normally had no means of investigating the verso of the slips. The situation changed with publication of the first volumes of the Tsinghua University and Yuelu Academy manuscripts at the end of 2010. These publications for the first time included photographs of both, recto and verso, of all slips, although the reason for this innovation was apparently not the discovery of verso lines in both manuscript corpora, as the editors did not discuss them.<sup>35</sup> The first to point out the existence of verso lines in these two corpora and their apparent significance for reconstructing the sequence of the slips was Sun Peiyang 孫沛陽.<sup>36</sup> Following his discovery and interpretation of the verso lines some researchers at Fudan University in January 2011 proposed an alternative arrangement of a part of the Tsinghua University bamboo slips containing the text named *Chengwu* 程寤.<sup>37</sup> Li Tianhong 李天虹 briefly discussed the verso lines in an article written in May 2011. She held the opinion that the verso lines were probably created during the process of preparing the slips and that one may use them to identify slips made at the same place and time as well as from the same bamboo culm segment (*tong yi zhucai de tong yi zhuduan* 同一竹材的同一竹段). Although the possibility that slips produced at the same time and place were also used for the same manuscript is comparatively high, she remained skeptical about a direct relation between the verso lines and the sequence of the slips in a manuscript.<sup>38</sup> Sun Peiyang himself finally published the first piece of scholarship exclusively devoted to the verso lines near the end of 2011.<sup>39</sup> Sun pointed out that knife-cut or ink-drawn lines on the verso of bamboo manuscripts and similar to those found in the Tsinghua University and Yuelu Academy manuscripts can also be found in scientifically excavated manuscripts from Warring States to Han times. Besides Baoshan these also include finds from Guodian 郭店, Shuihudi 睡虎地,

<sup>35</sup> However, according to Li Junming (quoted by Li Tianhong) the Tsinghua University editors were not only aware of the verso lines, but also made use of them during the editorial work on volume one. See Li Tianhong 2011, 105.

<sup>36</sup> Sun Peiyang had discovered the phenomenon while participating in the editorial work on the manuscripts owned by Peking University (Beijing daxue chutu wenxian yanjiu suo 2011, footnote 1). For a discussion of the verso lines in these manuscripts see Beijing daxue chutu wenxian yanjiu suo 2011, 49–53 with footnotes 2 and 3, Beijing daxue chutu wenxian yanjiu suo 2012b, 66 with footnote 6 as well as Han Wei 2012.

<sup>37</sup> Although Sun Peiyang had not yet published his findings on the verso lines by this time, the research group of Fudan University acknowledged that they had consulted a draft version of his article, see Fudan daxue chutu wenxian yu gu wenzi yanjiu zhongxin yanjiusheng dushuhui 2011a.

<sup>38</sup> Li Tianhong 2011, 103–104. In an addendum to this article Li slightly revised this view, stating that—in view of the research by Sun Peiyang—the relation between the verso lines and the sequence of the slips appears to be closer than originally assumed, see Li Tianhong 2011, 105.

<sup>39</sup> Sun Peiyang 2011.

Zhangjiashan and Yinqueshan 銀雀山.<sup>40</sup> He convincingly argued that one would need to consider the lines when reconstructing the sequence of slips inside a manuscript. At the same time, however, he stressed their limited decisiveness. As supplemental evidence, the verso lines should be considered together with all other information provided by the manuscripts.<sup>41</sup>

An analysis of Yuelu Academy *Zhuang si zhong* MS 1 supports the basic description of the verso lines as well as the hypotheses forwarded by Sun.<sup>42</sup> Unfortunately, there is no textual counterpart for the *Zhuang si zhong* in either received literature or among the manuscripts excavated so far, which could be used for comparison. However, the structure of the case records and the steps of criminal procedure bear strong similarities to those in an already mentioned other collection of criminal case records: the Zhangjiashan *Zouyanshu*.<sup>43</sup> This of course was of great value when reconstructing the basic structure of each case in *Zhuang si zhong* MS 1.<sup>44</sup> Furthermore, the frequent occurrence of names of investigating officials, accused and witnesses provided supplemental evidence to distinguish the seven cases of MS 1. As the sequence of the slips in the individual case records could therefore roughly be reconstructed according to textual criteria, it became obvious that there likely is a connection between the lines on the verso of the slips and their original sequence in the manuscript. As regards slips belonging to the same case, the sequence of the slips one would have to reconstruct according to the text on the recto, generally corresponds to the sequence created by aligning the slips according to the lines on the verso. The “line sections”<sup>45</sup> on individual slips exhibit a very similar slant on slips belonging to the same case—although it is always falling in a left to right direction. Furthermore, it is in most cases possible to join the line sections on adjacent slips to form continuous lines crossing several slips, if the slips are carefully aligned (see fig. 4).

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<sup>40</sup> Sun Peiyang 2011, 454. For some examples see appendix A of this paper. The examples also demonstrate that this phenomenon was not restricted to a certain sort of text. It can be found in manuscripts containing literary, hemerological as well as administrative or legal texts.

<sup>41</sup> Sun Peiyang 2011, 458.

<sup>42</sup> Zhu Hanmin and Chen Songchang 2013, 317.

<sup>43</sup> For a detailed analysis of the steps of criminal procedure in early Han times as reflected by the *Zouyanshu* see Lau 2002 as well as Lau and Lüdke 2012, 80–89. For a comparison between the *Zouyanshu* and the Yuelu Academy *Zhuang si zhong*, which shows that the two case collections exhibit a considerable degree of correspondence as far as legal terminology, the hierarchy of punishments and the stages of criminal procedure are concerned see Lao Wuli 2013 as well as Lau 2014.

<sup>44</sup> Zhu Hanmin and Chen Songchang 2013, preface.

<sup>45</sup> The distinction between “line sections” on individual slips and complete “lines” follows Sun Peiyang (2011, 449) who coined the terms *ke/mo huaxian* 刻/墨劃綫 and *jiance bei huaxian* 簡冊背劃綫 for it.

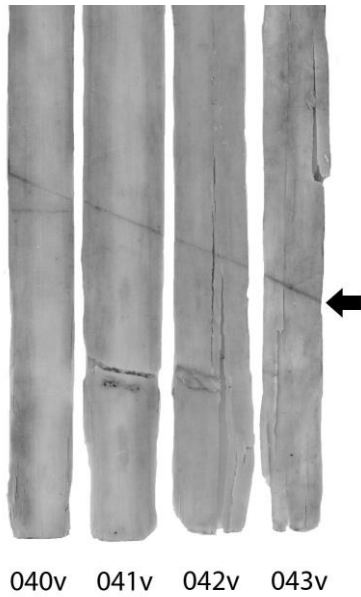


Fig. 4: Example of verso line crossing several slips.<sup>46</sup>

In *Zhuang si zhong* MS 1, lines typically only occur in the lower third of the bamboo slips. Starting on a certain slip, at a distance of roughly one third of its overall length from the bottom, the lines cross up to about 20 slips, ending on the very bottom of another slip. Then a new line starts, again at a distance of roughly one third of the overall length of the slips from the bottom.<sup>47</sup> Usually there appear to be “overlaps” of the lines at their beginning and end, meaning that in these areas there are two line sections visible on some slips.<sup>48</sup> Fig. 5 below clearly shows two line sections on the verso of slip 051.

<sup>46</sup> Cf. Zhu Hanmin and Chen Songchang 2013, 90–91.

<sup>47</sup> Note that this is not always the case. Sometimes the lines do not run as far as the bottom end of the slips before a new line starts, or they seem to begin at a much lower distance from the bottom and cross far less than 20 slips (cf. Zhu Hanmin and Chen Songchang 2013, 87–92). This however is most likely due to the fact that the slips carrying the “rest” of the respective lines were used separately, e.g. in another (part of the) manuscript, or were for some reason discarded.

<sup>48</sup> Recent research suggests that in cases where two line sections occur on the same slip these line sections do in all likelihood not belong to two different verso lines but rather the same one. This is caused by the fact that a “spiral-shaped” line was applied to a bamboo culm segment before it was cut into individual slips. For details see Han Wei 2012. For a further discussion and the proposal that the same is actually the case in *Zhuang si zhong* MS 1 see Staack 2015.

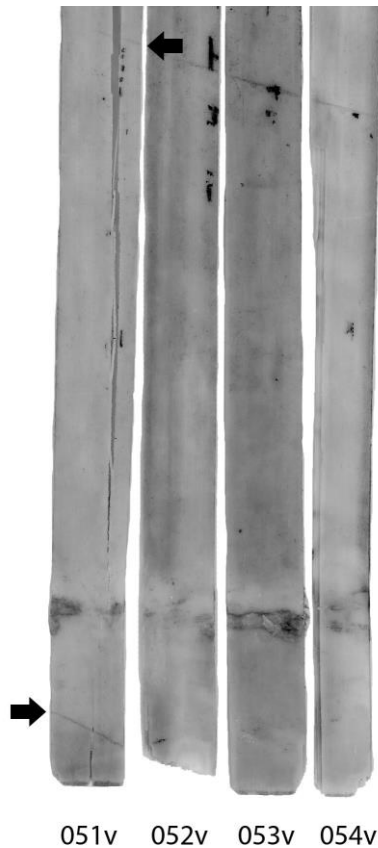


Fig. 5: Example of two line sections on the same slip.<sup>49</sup>

Although a certain line section often perfectly matches the corresponding line sections on the two adjacent slips, there sometimes appear to be gaps. In some of these cases, it is also evident from the text on the recto that there have to be one or more slips missing. In other cases, however, this is doubtful, because the text makes perfect sense without assuming any missing slip. The question is whether the text on the verso can be complete, if there is a gap in the verso lines. The calendars contained among the Yuelu Academy manuscripts provide an answer to this question.<sup>50</sup> In contrast to the content of the criminal case records in the *Zhuang si zhong*, which is otherwise unknown, it is possible to judge from the cyclical sequence of Heavenly Stems (*tiangan* 天干) and Earthly Branches (*dizhi* 地支) whether or not a portion of the text is missing in the calendars. In fact, there are examples where no part of the text is missing, but there still are gaps in the verso lines (see fig. 6).<sup>51</sup> In conclusion, it would be unjustified to assume missing slips in the *Zhuang si zhong*, only because there is a gap in the verso lines.

<sup>49</sup> Cf. Zhu Hanmin and Chen Songchang 2013, 90.

<sup>50</sup> For these see Zhu Hanmin and Chen Songchang 2010, 3–24 (color photographs with transcription), 47–106 (IR photographs with transcription and commentary).

<sup>51</sup> Sun Peiyang 2011, 451.



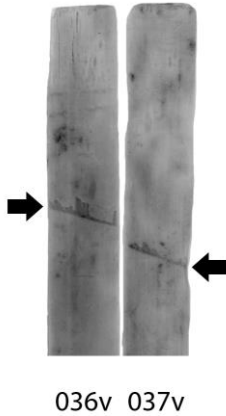


Fig. 6: Example of gap in verso line.<sup>52</sup>

This conclusion also provides some clues on the chronology of the three different production steps application of lines, binding and writing for *Zhuang si zhong* MS 1. It is evident that the lines were drawn before the slips were tied together. Otherwise, one could not easily explain gaps in the lines. Further evidence is the fact that line sections sometimes occur at the position of the lower binding (see fig. 7), which means that the lines must have been drawn before the binding strings were attached.

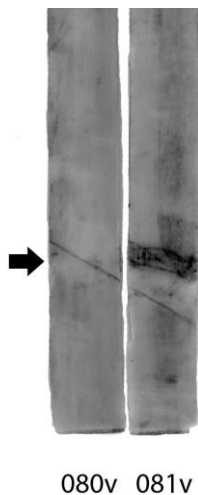


Fig. 7: Example of line section at the position of the lower binding.<sup>53</sup>

As the binding strings in many cases cover writing,<sup>54</sup> it is also clear that the slips were tied together only after the writing had been applied, which means that binding was certainly the

<sup>52</sup> The two slips belong to the calendar of the 34<sup>th</sup> year of King Zheng of Qin (213 BCE), see Zhu Hanmin and Chen Songchang 2010, 80.

<sup>53</sup> Cf. Zhu Hanmin and Chen Songchang 2013, 89.

<sup>54</sup> E.g. on slips 016, 041, etc. See Zhu Hanmin and Chen Songchang 2013, 100, 116.

last step. From the just mentioned existence of obvious gaps in the lines—but not the text—one can further conclude that some slips must have been sorted out or used for other purposes after the lines had been applied, either before the text was written on them or during the writing process.<sup>55</sup> Therefore, the application of the lines must have preceded the application of the writing, which is why the most probable production sequence for *Zhuang si zhong* MS 1 was: 1. application of lines, 2. writing, and 3. binding.<sup>56</sup>

Now, although the verso lines obviously relate to the original sequence of the slips, one may ask whether this also was their original purpose. In other words: Was the function of the lines to provide information about the correct sequence of the slips in a manuscript, either before they were tied together for the first time, or in case they came to be scattered for some reason afterwards and had to be put back together again? Among the Tsinghua University Warring States manuscripts, on the slips carrying the text named *Jin teng* 金滕, there are verso lines in the upper third of the slips.<sup>57</sup> Apart from their position on the slips, the lines there are similar to those in *Zhuang si zhong* MS 1 insofar as they also appear to fit the reconstructed sequence of the slips very well. However, numbers written on the verso of the slips also clearly indicate this sequence. Why should two separate indicators for the sequence be used? The numbering system alone would have worked perfectly well, although it is of course possible that the numbers were only secondary supplements. Another aspect that might add a question mark to this function of the lines is that they are not particularly useful as a guideline anymore, if the number of slips in a manuscript reaches a certain number. As already mentioned the lines usually only occur on either the upper or the lower third of the slips inside the same manuscript and can cross about 20 slips or more. This means that in manuscripts of a certain length there are at least two lines and accordingly two sets of slips with very likely some of them carrying line sections at the same height (although their slant might be slightly different). With increasing length of the manuscript, it becomes more and more difficult to use the verso lines as a guideline to verify or recover the sequence of the slips for the entire manuscript.

To sum up, the verso lines provide valuable evidence to reconstruct the original sequence of the slips inside the individual case records of MS 1, although this was not necessarily their original purpose. Now if the lines can help to reconstruct the sequence of the slips

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<sup>55</sup> Sun Peiyang (2011, 451) already suggested this possibility with regard to the calendars from the Yuelu Academy collection.

<sup>56</sup> A comparison with other manuscripts shows that verso lines were usually applied before both the writing and the binding strings. See Staack 2015, 160–161.

<sup>57</sup> The lines appear to be carved with a knife, without any application of ink. See the photos in Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010, 16–17.

inside individual case records, are they also useful to determine the order of the seven case records in MS 1? In fact, the lines appear to extend beyond the first and last slips of individual case records and therefore seem to cross the textual “boundaries” between case records. However, it is not always possible to find a definite link between two case records as far as the verso lines are concerned.<sup>58</sup> Whereas the verso lines are therefore only useful to determine the sequence of slips belonging to the same case record, the following section will show that mirror-inverted imprints of writing on the verso of the slips of MS 1 can help to reconstruct the order of the seven case records in the whole manuscript.

### 3.2 Mirror-inverted imprints of writing

In the course of investigating the verso lines of MS 1, I found that the verso of some slips also showed traces of writing. As these traces appeared mirror-inverted, they seemed to be imprints left by the writing on the recto of other slips. Upon closer investigation all traces on the verso of slips from MS 1 could be identified as imprints stemming from the writing on the recto of other slips from the same manuscript (see fig. 8 for three examples).

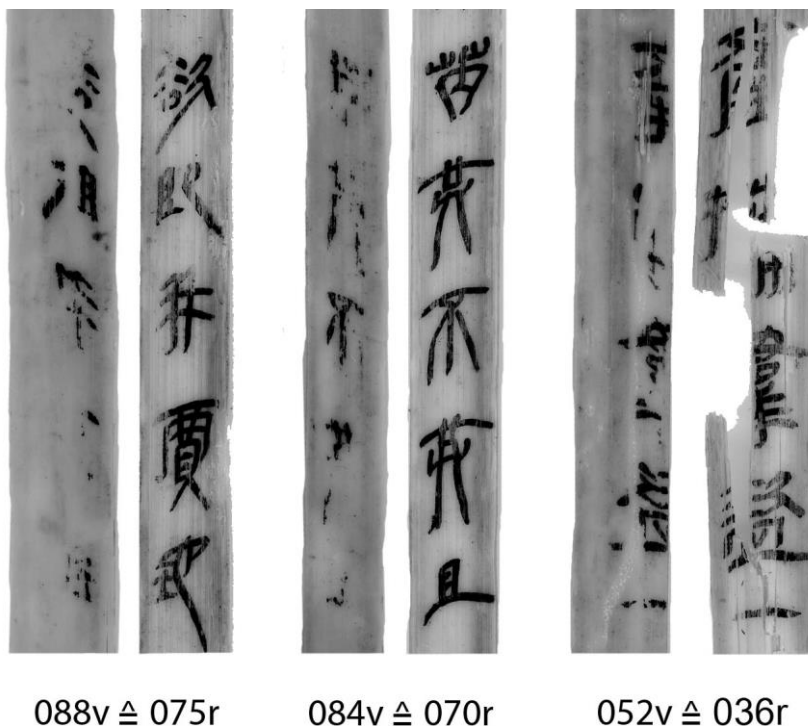


Fig. 8: Examples of verso imprints with their respective recto original pendants.

<sup>58</sup> The editors therefore assume that the individual case records may have circulated separately before they were at some point compiled in one manuscript, see Zhu Hanmin and Chen Songchang 2013, 317. This would actually imply that *Zhuang si zhong* roll 1 is a composite manuscript consisting of seven (formerly independent) codicological units that each contain one case record. See also footnote 22.

Now this could seem somewhat disappointing at first, if one is searching for missing fragments of text.<sup>59</sup> However, the imprints turned out to be unexpectedly useful for the reconstruction of MS 1.<sup>60</sup> An examination of the distribution of the imprints yielded some interesting facts (see table 2).

Affiliation of slips with recto original	Affiliation of slips with verso imprint
Case record 1 <sup>61</sup>	Case record 1 or 2
Case record 2	Case record 3
Case record 3	Case record 4
Case record 4	Case record 4 or 5
Case record 5	Case record 6
Case record 6	Case record 7
Case record 7	Case record 7

Table 2: Affiliation of slips with recto original writing and their verso imprint pendants.<sup>62</sup>

It is obvious that the pattern is quite regular. Writing from the recto of slips belonging to a certain case record (left side of the table) only left imprints on the verso of slips belonging to

<sup>59</sup> There originally was one example where there was no recto original pendant for a mirror-inverted passage of writing on the verso of slip 104, cf. Zhu Hanmin and Chen Songchang 2013, 145 (缺 08) and 148 (slip 104). Later, the missing slip (item no. J15) was found among the unpublished slips of Yuelu Academy. For a photo and transcription of this slip see Shi Da 2014, cf. Tao An 2014.

<sup>60</sup> That imprints of writing on the verso could be used for the purpose of reconstruction was already suggested by Abe (2006) in a work on the household registers excavated at Zoumalou 走馬樓 well no. 22. However, Abe assumed that the imprints came into existence during the production of a manuscript. He proposed that the slips might have been stacked on each other after the writing had been applied but before they were tied together and that this probably caused the imprints. With regard to the results of the analysis in the present paper, this assumption appears rather unlikely. A research group at Fudan University also did preliminary work on the verso imprints in the *Wei li zhi guan ji qianshou* from the Yuelu Academy manuscript collection. However, their method of analysis also differed from the one presented in this paper insofar as it was confined to special cases where the verso of a certain slip showed imprints from the recto of two other slips side by side (see Fudan daxue chutu wenxian yu gu wenzi yanjiu zhongxin yanjiusheng dushuhui 2011b). For a re-ordering of the complete *Wei li zhi guan ji qianshou* manuscript on the basis of verso lines and verso imprints see Staack 2014. For a discussion of imprints on the recto of a bamboo manuscript from the Shanghai Museum collection see Mo Zihan 2007.

<sup>61</sup> The numbering of the case records from 1 to 7 follows the edition in Zhu Hanmin and Chen Songchang 2013. Note that the tentative order of the seven case records proposed by Arnd Helmut Hafner, who was mainly responsible for volume three of the Yuelu Academy manuscripts, was very different at the time when the revised (and final) order was first proposed in the original version of this paper in July 2012.

<sup>62</sup> For an overview of the actual slips with recto original writing and their respective verso imprint pendants including their edition and item numbers see the table in appendix B.

a certain other case record (right side of the table). In three instances, imprints (also) occur on slips belonging to the same case record. Assuming that this manuscript was rolled up with the writing facing towards the center of the roll for protective reasons, one has to conclude that case record 7 was originally situated in the middle of the manuscript roll, whereas case record 1 was situated at the outer edge. From imprint relations occurring on slips that belong to the same case record (as in case records 1, 4 and 7), one can gather that the manuscript began with case record 1 on the outside and ended with case record 7 in the middle—not the other way round. Otherwise, the slips with the recto original writing would not always precede those with the respective verso imprints in terms of the sequence of the text.<sup>63</sup>

Now this is considerable evidence for the hypothesis that the sequence of the case records in MS 1 was 1-2-3-4-5-6-7. However, one might wonder if the imprints really reflect the structure of MS 1 when it was still intact, or rather, the position of the slips at the time the Yuelu Academy acquired them. Did the imprints come into existence before or after disintegration of the binding strings (and thereby the manuscript roll)? If the latter were the case, then it would not make sense to reconstruct the structure of MS 1 according to the imprints. An examination of the drawings showing the position of the slips in the eight bundles after their acquisition shows that in many cases of an imprint relation the recto and verso of the respective slips were directly adjacent.<sup>64</sup> This seems to suggest that the imprints only came into being after MS 1 had already disintegrated. However, there is evidence against this possibility. To illustrate this, the structure of MS 1 as a whole has to be examined in more detail:<sup>65</sup>

Case 1:           A-x-x-x-x-x-?-x-x-x-B-C-D-x-E-x-F-x-x-x-A-x-x-?-x-x-?-x-x-x-B-C-D-  
(33 slips)

Case 2:           G-E-x-F-x-H-I-x-J-?-x-K-x-x-  
(14 slips)

<sup>63</sup> The sequence of the slips inside each case record could already be reconstructed on the basis of textual criteria and verso lines (see above).

<sup>64</sup> Zhu Hanmin and Chen Songchang 2013, 337–343. Cf. Zhu Hanmin and Chen Songchang 2010, 204–220.

<sup>65</sup> Note that there have been a few revisions when comparing the list in Shi Da 2013, 24. First, the third slip of case record 3, which was originally missing, has meanwhile been found (i.e. item no. 1359, see Zhu Hanmin and Chen Songchang 2013, 119). Second, item no. 1216, originally placed as the third slip of case record 6, is now correctly reconstructed as the third slip of case record 4 (see Zhu Hanmin and Chen Songchang 2013, 129). Third, item no. J15 was identified as the originally missing first slip of case record 6 (cf. footnote 59). This made it possible to include a new pair of slips with imprint relation (J15/J16 or S/S). The discovery of J15 also enabled a slight revision of the sequence of the slips in the first half of case record 6 and suggested that there is apparently only one instead of two slips missing in this case record (see Shi Da 2014). Therefore, the reconstruction of MS 1 presented here and in appendix C also slightly differs from the one included in Zhu Hanmin and Chen Songchang 2013.



As can be seen, the distance diminishes from 20 down to only six slips, if the cases (more precisely the respective bamboo slips) are arranged according to the evidence provided by the imprints. This is exactly the situation one would expect in a manuscript roll. The layers of bamboo slips forming the roll decrease in perimeter, if seen from outside to inside. Accordingly, the distance between two slips that are located “above each other” (or verso to recto) is smaller near the middle, bigger near the outer edge. The situation actually reflected by the verso imprints found on the slips of MS 1 probably matches this ideal structure too well as to be a mere coincidence that has nothing to do with the structure of the manuscript before its disintegration. Therefore, it is safe to assume that MS 1, before it was deposited at its unknown place of origin probably more than 2,000 years ago, was rolled up from its end (case record 7) in the middle towards its beginning (case record 1) on the outside (see diagram in appendix C).

#### 4. Conclusions

The different steps of analysis described above have shown that in special cases like that of *Zhuang si zhong* MS 1 it can be possible to completely reconstruct the structure of a manuscript, only from the evidence provided by the manuscript itself, even if there is no archeological context and the slips constituting the manuscript are completely scattered. However, for this purpose photographs of the verso of the slips are crucial. The two phenomena examined in this paper underline the importance of studying the verso of bamboo slips and strongly support recent efforts of editors to include the respective photographs into their publications. Research on early Chinese manuscripts would benefit from this and it might even be possible to settle some long-disputed cases of manuscript reconstruction with the help of the supplemental evidence provided by the long-neglected verso of the slips. In the case of *Zhuang si zhong* MS 1, the analysis can not only help to learn more about the textual organization of the examined manuscript<sup>66</sup> but also support the claim for its authenticity. It seems highly unlikely that a potential forger would have been aware of the described phenomena on the verso of the slips and had furthermore taken the trouble to imitate them. Even more so, as scholarship still

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<sup>66</sup> In fact, the sequence of the case records seems to be reverse chronological. Case 1 is the most recent (sixth month of the 25<sup>th</sup> year of King Zheng of Qin, i.e. 222 BCE), case 7 the oldest (18<sup>th</sup> year, i.e. 229 BCE). Case 2 (fifth month of the 25<sup>th</sup> year, i.e. 222 BCE), case 3 (23<sup>rd</sup> year, i.e. 224 BCE) and case 6 (21<sup>st</sup> year, i.e. 226 BCE) also fit into this scheme. Cases 4 and 5 are not exactly datable, because the dates mentioned in them do not provide the respective years. The editors tentatively dated both cases to the 22<sup>nd</sup> year (i.e. 225 BCE) according to the dates of the preceding and following cases in the manuscript (see Zhu Hanmin and Chen Songchang 2013, 138, footnotes 3 and 6 as well as 143, footnote 1).

all but completely neglected these phenomena at the time Yuelu Academy purchased the manuscripts.<sup>67</sup>

The reasons for the occurrence of the verso imprints as well as the function of the verso lines are still not entirely clear. At least one can assume that the imprints are caused by natural unplanned processes. As the slips of *Zhuang si zhong* MS 1 were tied together only after the writing had been applied, it is hardly imaginable that the ink had not yet dried when the manuscript was rolled up, as a considerable amount of time must have passed between these two steps. A certain pattern in the occurrence of the imprints could point to the possibility that, for example, one half of the manuscript roll once lay in water, whereas the other half remained dry. However, the distribution of the imprints does not exhibit any obvious pattern apart from giving the vague impression that imprints are slightly more numerous in the outermost layers of the roll than in the middle (see appendix C). This might be a hint that moisture gradually seeped into the manuscript roll from the outside.<sup>68</sup>

The verso lines on the other hand are obviously man-made and therefore must have served a certain purpose. Li Shoukui 李守奎 elaborated on the already mentioned assumption by Li Tianhong, namely that slips carrying line sections of the same verso line were produced from the same bamboo culm segment. As the bamboo slips from the collection of Tsinghua University mostly have a length of about 46 cm and therefore contain one or two of the typical bamboo nodes that are generally missing from shorter slips, Li Tianhong had observed that there is a relation between the position of these nodes and a certain verso line.<sup>69</sup> Apparently, slips that carry line sections belonging to the same verso line also have nodes at exactly the same position. From this Li Shoukui concluded that they were not only cut from the same segment of a bamboo culm, but that the lines might even have been applied to the bamboo before it was cut into slips.<sup>70</sup> However, the question of their function remains. Were the lines supposed to facilitate the process of binding and re-binding or the reconstruction of the manu-

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<sup>67</sup> For verso lines as a possible proof of authenticity see in detail Foster 2017, 52–56.

<sup>68</sup> It seems likely that slips with an imprint relation became stuck together some time before the slips were removed from their place of discovery and were only separated during the editorial process. This could explain why they were located close to each other in the previously mentioned eight bundles although the manuscripts as such had long disintegrated. It might also suggest that the connection between adjacent slips from different layers may have been stronger than the connection between adjacent slips from the same layer as soon as the binding strings disintegrated.

<sup>69</sup> Obviously, bamboo nodes were avoided on slips with short standard lengths such as one foot (ca. 23 cm). For relatively long slips (e.g. the standard size of two feet or about 46 cm) this might have been impossible, because the natural distance between these nodes in the bamboo culms used to produce slips was probably smaller than 46 cm. On the choice of raw materials, the production of bamboo slips and standard lengths see Jia Lianxiang 2015, 53–81 and 103–122.

<sup>70</sup> See Li Shoukui 2012. On this hypothesis, which Sun Peiyang (2011, 457) had already hinted on, see also Han Wei 2012 as well as Takeda 2013.



script after the sequence of the slips had for some reason become confused?<sup>71</sup> Were they some kind of marks used during the processing of bamboo?<sup>72</sup> Did the slips fit together best in a manuscript, if adjoined in the same way they had been as part of a bamboo culm segment?<sup>73</sup> Experimental archeology and an investigation of modern techniques of processing bamboo, which might have preserved some ancient techniques, may help to elucidate these questions. Whatever the original function of the lines might have been, it appears that the persons involved in manuscript production often wrote on the slips and tied them together in a sequence that accorded with the verso lines, which means that they adhered to the sequence “prescribed” by these lines. Therefore, if not the primary, the determination of the correct sequence of the slips might have been at least a secondary function of the verso lines, a fact that makes them a valuable source of information for reconstruction even today.

## References

- Abe Sôichirô 安部聡一郎. 2006. “Shilun Zoumalou suo jian mingji zhi tishi” 試論走馬樓吳簡所見名籍之體式. *Wu jian yanjiu* 吳簡研究 2, 14–24.
- Barbieri-Low, Anthony J. and Robin D. S. Yates. 2015. *Law, State, and Society in Early Imperial China: A Study with Critical Edition and Translation of the Legal Texts from Zhangjiashan Tomb no. 247*. 2 vols. Leiden/Boston: Brill.
- Beijing daxue chutu wenxian yanjiu suo 北京大學出土文獻研究所. 2011. “Beijing daxue cang Xi Han zhushu gaishuo” 北京大學藏西漢竹書概說. *Wenwu* 文物 2011.6, 49–56.

<sup>71</sup> Sun Peiyang 2011, 457.

<sup>72</sup> Li Tianhong 2011, 104. It is indeed worth noting that the examples of verso lines discovered so far (see Sun Peiyang 2011, cf. appendix A of this paper) are almost all from bamboo manuscripts. Among the Qin manuscripts in possession of Peking University there is one wood manuscript (originally titled *Bai nang* 白囊 by the editors, now titled *Za zhu fang* 雜祝方) with ink-drawn lines on its verso, see Tian Tian 2015, cf. Beijing daxue chutu wenxian yanjiu suo 2012b, 66, table 1. However, the lines on that manuscript differ from the ones discovered on bamboo slips insofar as they are intersecting (see plate 3 for Tian Tian 2015). Another possible example of a wood manuscript with verso lines is the so-called *Wang zhang zhaoshu ling* 王杖詔書令 excavated at Wuwei in 1981, see Wuwei xian bowuguan 1984. A photograph of the verso of the slips is reproduced on one of the unnumbered first pages of the respective volume. Apart from ink-written numbers indicating the sequence of the slips and some curious x-shaped marks there seems to be a faint curved line visible on the middle part of the verso of at least some of the 26 slips. However, due to the poor quality of the photograph this is hard to verify. That all other known examples of verso lines are from bamboo manuscripts could be due to the possibility that the line phenomenon was mainly restricted to bamboo as writing support.

<sup>73</sup> For the hypothesis that the verso lines indicated the most practical way to put the slips together side by side when producing a manuscript see Jia Lianxiang 2015, 101–102 as well as Staack 2015, 175.

- . 2012a. “Beijing daxue cang Qin jiandu shinei fajue qingli jianbao” 北京大學藏秦簡牘室內發掘清理簡報. *Wenwu* 文物 2012.6, 32–44.
- . 2012b. “Beijing daxue cang Qin jiandu gaishu” 北京大學藏秦簡牘概述. *Wenwu* 文物 2012.6, 65–73.
- , ed. 2012–2015. *Beijing daxue cang Xi Han zhushu (yi-wu)* 北京大學藏西漢竹書 (壹—伍). Shanghai: Shanghai guji chubanshe.
- Chen Songchang 陳松長. 2009. “Yuelu shuyuan suo cang Qin jian zongshu” 嶽麓書院所藏秦簡綜述. *Wenwu* 文物 2009.3, 75–88.
- Chen Songchang and Zhang Yijing 張以靜. 2014. “Yuelu shuyuan cang Qin jian (san) de shushou bianxi yu shuti tezheng” 《嶽麓書院藏秦簡 (叁)》的書手辨析與書體特徵. *Chutu wenxian yanjiu* 出土文獻研究 13, 140–150.
- Fang Beisong 方北松, Li Meiyong 李梅英 and Tong Hua 童華. 2012. “Zhu yangpin laohua chengdu duibi fenxi” 竹樣品老化程度對比分析. In: *Gudai jiandu baohu yu zhengli yanjiu* 古代簡牘保護與整理研究. Edited by Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 清華大學出土文獻研究與保護中心, Beijing daxue chutu wenxian yanjiu suo 北京大學出土文獻研究所 and Jingzhou wenwu baohu zhongxin 荊州文物保護中心, 338–341. Shanghai: Zhongxi shuju.
- Foster, Christopher J. 2017. “Introduction to the Peking University Han Bamboo Strips: On the Authentication and Study of Purchased Manuscripts.” *Early China* 40, 1–73.
- Fudan daxue chutu wenxian yu gu wenzi yanjiu zhongxin yanjiusheng dushuhui 復旦大學出土文獻與古文字研究中心研究生讀書會. 2011a. “Qinghua jian *Chengwu jianxu tiaozheng yi ze*” 清華簡《程寤》簡序調整一則. [http://www.gwz.fudan.edu.cn/old/SrcShow.asp?Src\\_ID=1343](http://www.gwz.fudan.edu.cn/old/SrcShow.asp?Src_ID=1343) (accessed July 5, 2017).
- . 2011b. “Du Yuelu shuyuan cang Qin jian (yi)” 讀《嶽麓書院藏秦簡 (一)》. [http://www.gwz.fudan.edu.cn/old/SrcShow.asp?Src\\_ID=1416](http://www.gwz.fudan.edu.cn/old/SrcShow.asp?Src_ID=1416) (accessed July 5, 2017).
- Giele, Enno. 2003. “Using Early Chinese Manuscripts as Historical Source Materials.” *Monumenta Serica* 51, 409–438.

- . 2010. “Excavated manuscripts: Context and methodology.” In: *China’s Early Empires: A Re-appraisal*. Edited by Michael Nylan and Michael Loewe, 114–134. Cambridge: Cambridge University Press.
- Gumbert, Johan P. 2004. “Codicological Units: Towards a Terminology for the Stratigraphy of the non-homogeneous Codex.” *Segno e testo* 2, 17–42.
- Han Wei 韓巍. 2012. “Xi Han zhushu *Laozi* jianbei huahen de chubu fenxi” 西漢竹書《老子》簡背劃痕的初步分析. In: *Beijing daxue cang Xi Han zhushu (er)* 北京大學藏西漢竹書（貳）. Edited by Beijing daxue chutu wenxian yanjiu suo 北京大學出土文獻研究所, 227–235. Shanghai: Shanghai guji chubanshe.
- Hu Dongbo 胡東波 and Chang Huaiying 常懷穎. 2012. “Jiandu fajue fangfa qianshuo – Yi Beijing daxue cang Qin jiandu shinei fajue wei li” 簡牘發掘方法淺說——以北京大學藏秦簡牘室內發掘為例. *Wenwu* 文物 2012.6, 57–64.
- Hu Dongbo 胡東波, Zhang Qiong 張瓊 and Wang Kai 王愷. 2011. “Beida Xi Han zhujian de keji fenxi” 北大西漢竹簡的科技分析. *Wenwu* 文物 2011.6, 90–93.
- Hu Pingsheng 胡平生. 2008. “Jianbo bianwei tonglun” 簡帛辨偽通論. Paper presented at the International Forum on Bamboo and Silk Documents, University of Chicago. [http://cccp.uchicago.edu/archive/2008\\_IFBSD/Hu\\_Pingsheng\\_2008\\_IFBSD.pdf](http://cccp.uchicago.edu/archive/2008_IFBSD/Hu_Pingsheng_2008_IFBSD.pdf) (accessed July 5, 2017).
- . 2010. “Lun jianbo bianwei yu liushi jiandu qiangjiu” 論簡帛辨偽與流失簡牘搶救. *Chutu wenxian yanjiu* 出土文獻研究 9, 76–108.
- Hubei sheng Jing Sha tielu kaogudui 湖北省荊沙鐵路考古隊, ed. 1991. *Baoshan Chu jian* 包山楚簡. Beijing: Wenwu.
- Jia Lianxiang 賈連翔. 2015. *Zhanguo zhushu xingzhi ji xiangguan wenti yanjiu – Yi Qinghua daxue cang Zhanguo zhujian wei zhongxin* 戰國竹書形制及相關問題研究——以清華大學藏戰國竹簡為中心. Shanghai: Zhongxi shuju.
- Jingzhou diqu bowuguan 荊州地區博物館. 1985. “Jiangling Zhangjiashan san zuo Han mu chutu da pi zhujian” 江陵張家山三座漢墓出土大批竹簡. *Wenwu* 文物 1985.1, 1–8.
- Lao Wuli 勞武利 (=Ulrich Lau). 2013. “Zhangjiashan Han jian *Zouyanshu* yu Yuelu shuyuan Qin jian *Wei yu deng zhuang si zhong* de chubu bijiao” 張家山漢簡《奏讞書》與嶽麓書

- 院秦簡《爲獄等狀四種》的初步比較. *Hunan daxue xuebao (shehui kexue ban)* 湖南大學學報（社會科學版） 27.3, 5–9.
- Lau, Ulrich. 2002. “Die Rekonstruktion des Strafprozesses und die Prinzipien der Strafzumessung zu Beginn der Han-Zeit im Lichte des *Zouyanshu*.” In: *Und folge nun dem, was mein Herz begehrt: Festschrift für Ulrich Unger zum 70. Geburtstag*. Edited by Reinhard Emmerich and Hans Stumpfheldt, vol. 2, 343–395. Hamburg: Hamburger Sinologische Gesellschaft.
- . 2014. “Qin Criminal Case Records of the Collection *Wei yu deng zhuang*.” *Oriens Extremus* 53, 139–192.
- Lau, Ulrich and Michael Lüdke. 2012. *Exemplarische Rechtsfälle vom Beginn der Han-Dynastie: Eine kommentierte Übersetzung des Zouyanshu aus Zhangjiashan/Provinz Hubei*. Tokyo: Research Institute for Languages and Cultures of Asia and Africa, Tokyo University of Foreign Studies.
- Lau, Ulrich and Thies Staack. 2016. *Legal Practice in the Formative Stages of the Chinese Empire: An Annotated Translation of the Exemplary Qin Criminal Cases from the Yuelu Academy Collection*. Leiden/Boston: Brill.
- Li Ling 李零. 2008. *Jianbo gushu yu xueshu yuanliu (xiuding ben)* 簡帛古書與學術源流（修訂本）. Beijing: Sanlian shudian.
- Li Shoukui 李守奎. 2012. “Qinghua jian de xingzhi yu ziji” 清華簡的形制與字跡. Paper presented at the Fourth EASCM Workshop in Paris.
- Li Tianhong 李天虹. 2011. “Hubei chutu Chu jian (wu zhong) geshi chuxi” 湖北出土楚簡（五種）格式初析. *Jiang Han kaogu* 江漢考古 2011.4, 102–106.
- Li Xueqin 李學勤 and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 清華大學出土文獻研究與保護中心, eds. 2010–2017. *Qinghua daxue cang Zhanguo zhujian (yi–qi)* 清華大學藏戰國竹簡（壹—柒）. Shanghai: Zhongxi shuju.
- , eds. 2010. *Qinghua daxue cang Zhanguo zhujian (yi)* 清華大學藏戰國竹簡（壹）. 2 vols. Shanghai: Zhongxi shuju.
- Ma Chengyuan 馬承源, ed. 2001–2012. *Shanghai bowuguan cang Zhanguo Chu zhushu (yi–jiu)* 上海博物館藏戰國楚竹書（一—九）. Shanghai: Shanghai guji chubanshe.

- , ed. 2008. *Shanghai bowuguan cang Zhanguo Chu zhushu (qi)* 上海博物館藏戰國楚竹書（七）. Shanghai: Shanghai guji chubanshe.
- , ed. 2011. *Shanghai bowuguan cang Zhanguo Chu zhushu (ba)* 上海博物館藏戰國楚竹書（八）. Shanghai: Shanghai guji chubanshe.
- Mo Zihan 墨子涵 (=Daniel Morgan). 2007. “Tianzi jian zhou zhong suo jian fanyin wen, weishi zi ji ji dian yiduan” 《天子建州》中所見反印文、未釋字及幾點臆斷. [http://www.bsm.org.cn/show\\_article.php?id=764](http://www.bsm.org.cn/show_article.php?id=764) (accessed July 5, 2017).
- Peng Hao 彭浩, Chen Wei 陳偉 and Kudô Motoo 工藤元男, eds. 2007. *Ernian lüling yu Zouyanshu – Zhangjiashan er si qi hao Han mu chutu falü wenxian shidu* 二年律令與秦讞書——張家山二四七號漢墓出土法律文獻釋讀. Shanghai: Shanghai guji chubanshe.
- Richter, Matthias L. 2006. “Tentative Criteria for Discerning Individual Hands in the Guodian Manuscripts.” In: *Rethinking Confucianism: Selected Papers from the Third International Conference on Excavated Chinese Manuscripts, Mount Holyoke College, April 2004*. Edited by Xing Wen 邢文, 132–147. San Antonio: Trinity University.
- Shi Da 史達 (=Thies Staack). 2013. “Yuelu Qin jian Wei yu deng zhuang si zhong juance yi de bianlian – Yiju jianbei huaxian yu jianbei fanyin ziji fuyuan juanzhou yuanmao” 嶽麓秦簡《為獄等狀四種》卷冊一的編聯——依據簡背劃綫與簡背反印字跡復原卷軸原貌. *Hunan daxue xuebao (shehui kexue ban)* 湖南大學學報（社會科學版） 27.3, 20–25.
- . 2014. “Yuelu Qin jian Wei yu deng zhuang si zhong xin jian de yi mei loujian yu anli liu de bianlian” 嶽麓秦簡《為獄等狀四種》新見的一枚漏簡與案例六的編聯. *Hunan daxue xuebao (shehui kexue ban)* 湖南大學學報（社會科學版） 28.4, 7–10.
- Shuihudi Qin mu zhujian zhengli xiaozu 睡虎地秦墓竹簡整理小組, ed. 1990. *Shuihudi Qin mu zhujian* 睡虎地秦墓竹簡. Beijing: Wenwu.
- Staack, Thies. 2014. “The *Wei li zhi guan ji qianshou* Manuscript from the Yuelu Academy Collection: A New Reconstruction Based on Verso Lines and Verso Imprints of Writing.” In: *Documents and Writing Materials in East Asia*. Edited by Nagata Tomoyuki 永田知之, 1–27. Kyoto: Institute for Research in Humanities, Kyoto University.
- . 2015. “Identifying Codicological Sub-units in Bamboo Manuscripts: Verso Lines Revisited.” *Manuscript Cultures* 8, 157–186.

- Sun Peiyang 孫沛陽. 2011. “Jiance bei huaxian chutan” 簡冊背劃綫初探. *Chutu wenxian yu gu wenzi yanjiu* 出土文獻與古文字研究 4, 449–462.
- Takeda Kenji 竹田健二. 2013. “Kakusen shôkô: Pekin kan *Rôshi* to Seika kan *Keinen* to wo chûshin ni” 劃線小考：北京簡『老子』と清華簡『繫年』とを中心に. *Chûgoku kenkyû shûkan* 中国研究集刊 57, 126–144.
- Tao An 陶安 (=Arnd Helmut Hafner). 2013. “Yuelu shuyuan cang Qin jian (san) jiaokanji” 《嶽麓書院藏秦簡（叁）》校勘記. [http://www.gwz.fudan.edu.cn/old/SrcShow.asp?Src\\_ID=2098](http://www.gwz.fudan.edu.cn/old/SrcShow.asp?Src_ID=2098) (accessed July 5, 2017).
- . 2014. “Yuelu shuyuan cang Qin jian (san) jiaokanji (xu)” 《嶽麓書院藏秦簡（叁）》校勘記（續）. [http://www.gwz.fudan.edu.cn/old/SrcShow.asp?Src\\_ID=2309](http://www.gwz.fudan.edu.cn/old/SrcShow.asp?Src_ID=2309) (accessed July 5, 2017).
- Tian Tian 田天. 2015. “Beida cang Qin jian *Za zhu fang jianjie*” 北大藏秦簡《雜祝方》簡介. *Chutu wenxian yanjiu* 出土文獻研究 14, 15–22.
- Wang Wei 王偉. 2006. “Zhangjiashan Han jian *Ernian lüling bianlian chutan*” 張家山漢簡《二年律令》編聯初探. *Jianbo* 簡帛 1, 353–367.
- Wei Jian 魏堅, ed. 2005. *Ejina Han jian* 額濟納漢簡. Guilin: Guangxi shifan daxue chubanshe.
- Wuwei xian bowuguan 武威縣博物館. 1984. “Wuwei xin chu Wang zhang zhaoling ce” 武威新出王杖詔令冊. In: *Han jian yanjiu wenji* 漢簡研究文集. Edited by Gansu sheng wenwu gongzuo dui 甘肅省文物工作隊 and Gansu sheng bowuguan 甘肅省博物館, 34–61. Lanzhou: Gansu renmin chubanshe.
- Yuelu shuyuan cang Qin jian zhengli xiaozu 嶽麓書院藏秦簡整理小組. 2013. “Yuelu shuyuan cang Qin jian *Wei yu deng zhuang si zhong gaishu*” 嶽麓書院藏秦簡《爲獄等狀四種》概述. *Wenwu* 文物 2013.5, 77–83.
- Zhangjiashan er si qi hao Han mu zhujian zhengli xiaozu 張家山二四七號漢墓竹簡整理小組, ed. 2001. *Zhangjiashan Han mu zhujian [er si qi hao mu]* 張家山漢墓竹簡[二四七號墓]. Beijing: Wenwu.

Zhu Hanmin 朱漢民 and Chen Songchang 陳松長, eds. 2010. *Yuelu shuyuan cang Qin jian (yi)* 嶽麓書院藏秦簡（壹）. Shanghai: Shanghai cishu chubanshe.

——, eds. 2011. *Yuelu shuyuan cang Qin jian (er)* 嶽麓書院藏秦簡（貳）. Shanghai: Shanghai cishu chubanshe.

——, eds. 2013. *Yuelu shuyuan cang Qin jian (san)* 嶽麓書院藏秦簡（參）. Shanghai: Shanghai cishu chubanshe.

——, eds. 2015. *Yuelu shuyuan cang Qin jian (si)* 嶽麓書院藏秦簡（肆）. Shanghai: Shanghai cishu chubanshe.

## Appendix A: Examples of verso lines in other manuscripts



Fig. 9: Shanghai Museum manuscripts, *Fan wu liu xing A* 凡物流形 (甲), 3v.<sup>74</sup>

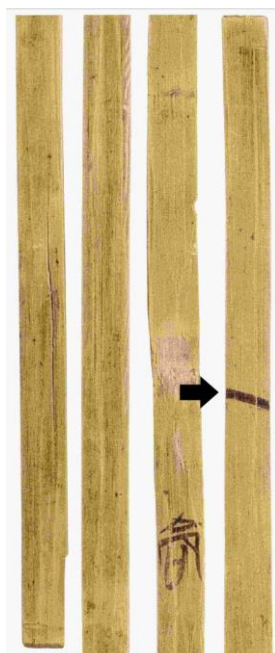


Fig. 10: Shanghai Museum manuscripts, *Ming* 命, 11v.<sup>75</sup>

<sup>74</sup> Ma Chengyuan 2008, 80.

<sup>75</sup> Ma Chengyuan 2011, 68.





Fig. 11: Shanghai Museum manuscripts, *Wang ju* 王居, 1v.<sup>76</sup>



Fig. 12: Shuihudi tomb no. 11, *Rishu A* 日書 (甲), 55v and 54v.<sup>77</sup>

<sup>76</sup> Ma Chengyuan 2011, 72.

<sup>77</sup> Shuihudi Qin mu zhujian zhengli xiaozu 1990, 107.

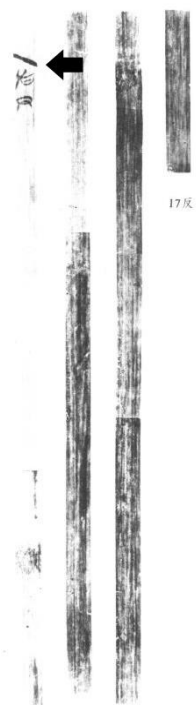


Fig. 13: Baoshan tomb no. 2, *Wenshu* 文書, 17v.<sup>78</sup>



Fig. 14: Zhangjiashan tomb no. 247, *Zouyanshu* 奏讞書, 228v.<sup>79</sup>

<sup>78</sup> Hubei sheng Jing Sha tielu kaogudui 1991, plate IX.

<sup>79</sup> Peng Hao et al. 2007, 83.

**Appendix B: Overview on imprints in Yuelu Academy *Zhuang si zhong* MS 1**

Slip with recto original writing				Slip with verso imprint pendant			
Original	Edition no.	Item no.	Case	Imprint	Edition no.	Item no.	Case
A	001	殘227/1347	1	<u>A</u>	020	1345	1
B	010	0184	1	<u>B</u>	028	0183	1
C	011	1361	1	<u>C</u>	029	殘 303/1360	1
D	012	1222	1	<u>D</u>	030	1220	1
E	014	1466-1	1	<u>E</u>	032	1466-2	2
F	016	1473	1	<u>F</u>	034	1472	2
G	031	1219	2	<u>G</u>	048	1218	3
H	036	1342	2	<u>H</u>	052	1341	3
I	037	1339	2	<u>I</u>	053	1338	3
J	039	1479/1348	2	<u>J</u>	055	1480	3
K	041	0095	2	<u>K</u>	057	0096	3
L	054	1335	3	<u>L</u>	069	1334	4
M	055	1480	3	<u>M</u>	070	1488	4
N	061	0193-1/殘 33	3	<u>N</u>	075	0001/0038	4
O	070	1488	4	<u>O</u>	084	1350	4
P	075	0001/0038	4	<u>P</u>	088	0101/0560	5
Q	079	1316	4	<u>Q</u>	092	1318	5
R	091	1208	5	<u>R</u>	100	1205	6
S	094 (2) <sup>80</sup>	J15	6	<u>S</u>	104	J16	6
T	105	0039	6	<u>T</u>	115	0040	7
U	126	1200	7	<u>U</u>	132	1199	7
V	127	1198	7	<u>V</u>	133	1197	7

Table 3: Slips with recto original writing and their respective verso imprint pendants.<sup>81</sup><sup>80</sup> This was chosen as edition number for the newly-found slip with item no. J15, see Tao An 2014.<sup>81</sup> Note that some item numbers have been changed since publication of the Chinese version of this article to accord with the numbers given in Zhu Hanmin and Chen Songchang 2013. The actual slips the numbers in the table are supposed to refer to are however completely the same in this paper and Shi Da 2013 with the

Appendix C: Reconstructed structure of Yuelu Academy *Zhuang si zhong* MS 1<sup>82</sup>

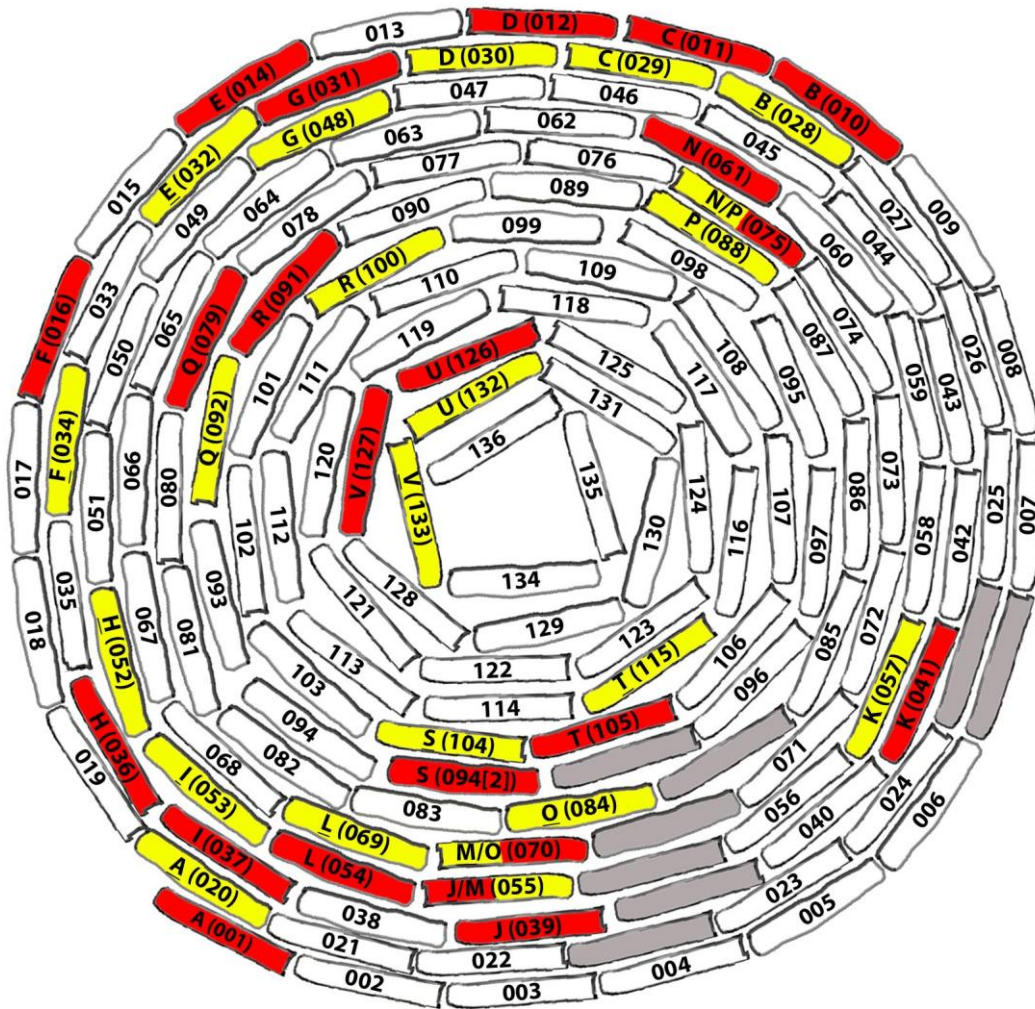


Fig. 15: Reconstructed *Zhuang si zhong* MS 1 with edition numbers (cross-section showing imprint relations).

- Red: slips with recto original writing
  - Yellow: slips with verso imprint pendant
  - Grey: missing slips that can be determined by verso lines and textual content
- Overall 145 slips, including 8 missing slips

exception of the newly found pair J15 (S) and J16 (S̄). For photos of these slips see Tao An 2014. Photos for the other imprint relations mentioned in the table as well as many additional (but less clear) cases can be found in Zhu Hanmin and Chen Songchang 2013, 320–330.

<sup>82</sup> For some revisions since the diagram in Shi Da 2013 see footnotes 65 and 81. Fig. 15 shows the edition numbers of all slips, fig. 16 the item numbers, both according to Zhu Hanmin and Chen Songchang 2013, including the corrections in Tao An 2013 and 2014. Note that slip 095 (item no. 0696) has been positioned between 097 (item no. 0151/0140) and 098 (item no. 1207/1366) in the present reconstruction according to the new textual and material evidence provided by slip 094 (2) (item no. J15, see explanations in Shi Da 2014).

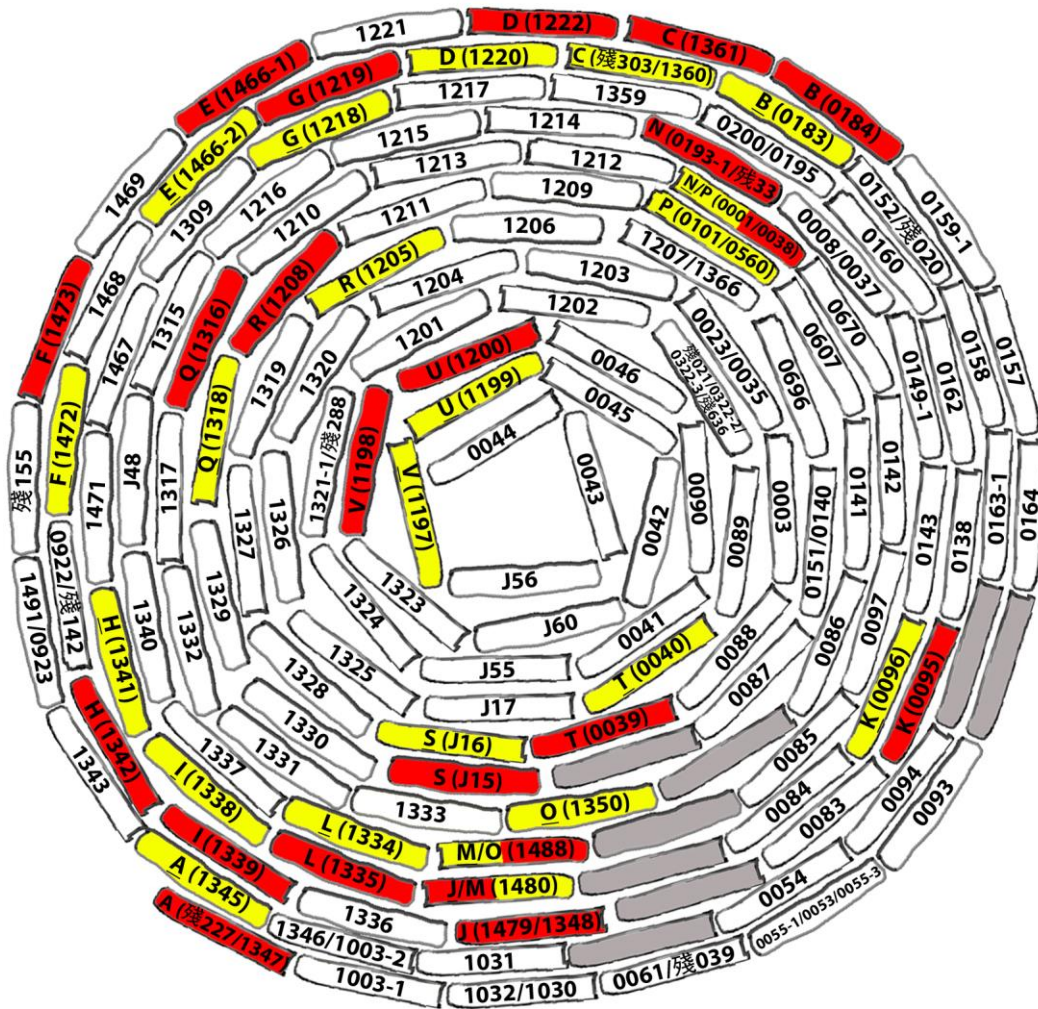


Fig. 16: Reconstructed *Zhuang si zhong* MS 1 with item numbers (cross-section showing imprint relations).

- Red: slips with recto original writing
  - Yellow: slips with verso imprint pendant
  - Grey: missing slips that can be determined by verso lines and textual content
- Overall 145 slips, including 8 missing slips