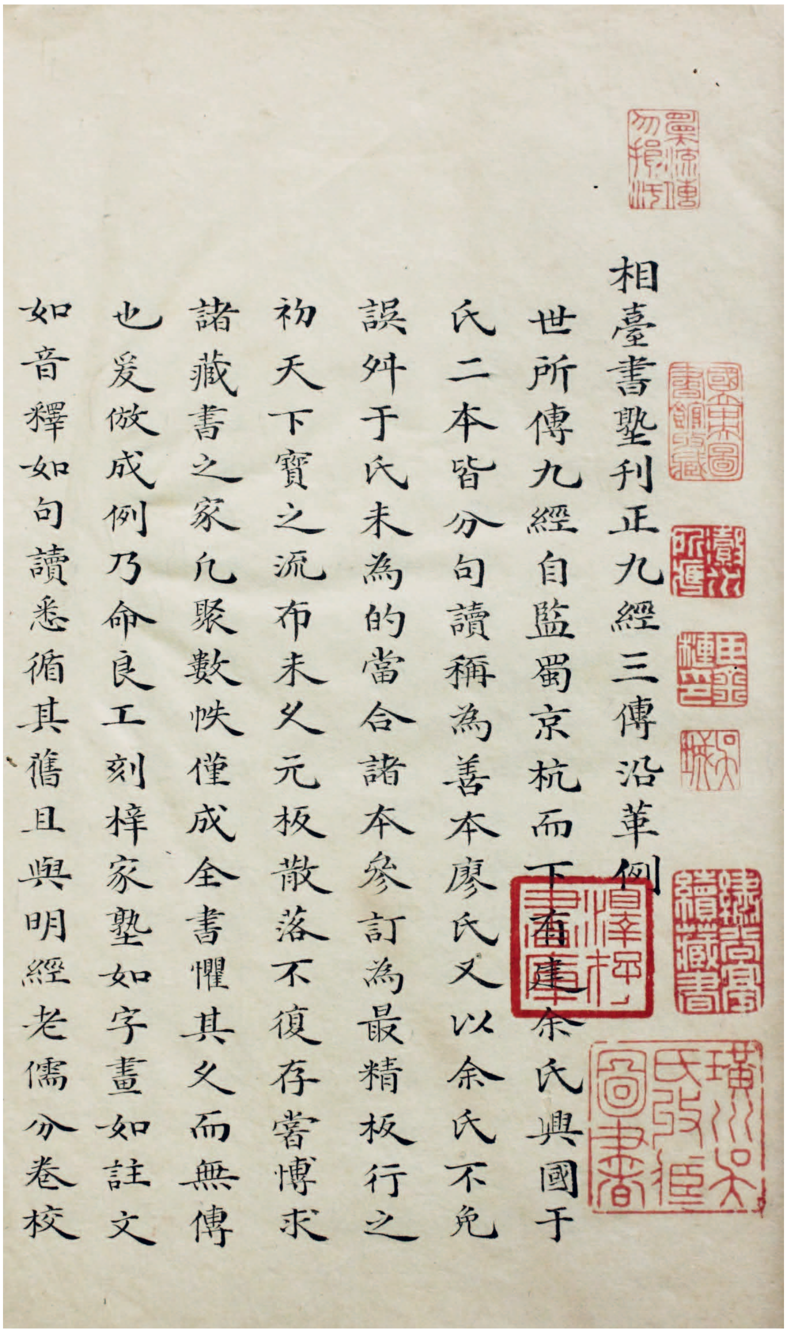
mc N° 8 2015

manuscript cultures

Hamburg | Centre for the Study of Manuscript Cultures
ISSN 1867–9617


相臺書塾刊正九經三傳沿革例
世所傳九經自監蜀京杭而下有建余氏興國于
氏二本皆分句讀稱為善本廖氏又以余氏不免
誤舛于氏未為的當合諸本參訂為最精板行之
初天下寳之流布未久元板散落不復存嘗博求
諸藏書之家凡聚數帙僅成全書懼其久而無傳
也爰倣成例乃命良工刻梓家塾如字畫如註文
如音釋如句讀悉循其舊且與明經老儒分卷校

Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG
CENTRE FOR THE STUDY OF MANUSCRIPT CULTURES
DFG

CONTENTS

ARTICLES

2 | The Library at the East Indian Buddhist Monastery Vikramaśīla: an Attempt to Identify its Himalayan Remains

by Martin Delhey

25 | Introduction to the History, Use and Function of Chinese Book Collectors' Seals

by Max Fölster

53 | The Manuscript Collection of Abbot Sathu Nyai Khamchan at the Monastery of Vat Saen Sukharam (Luang Prabang, Laos)

by Bounleuth Sengsoulin

75 | Audience Certificates in Arabic Manuscripts – the Genre and a Case Study

by Tilman Seidensticker

92 | On the Threshold between Legend and History: the Afterlife of a Mackenzie Manuscript

by Eva Wilden

99 | The Secondary Life of Old Georgian Manuscripts

by Jost Gippert

138 | Some Preliminary Observations on the Afterlife of Notre Dame Fragments

by Eva M. Maschke

157 | Identifying Codicological Sub-units in Bamboo Manuscripts: Verso Lines Revisited

by Thies Staack

187 | Material Technology and Science in Manuscripts of Persian Mystical Literature

by Mandana Barkeshli

215 | Contributors

216 | Announcement

Fig. 1: Archaeological site in Bihar, district of Bhagalpur, which has been identified with the monastery of Vikramaśīla.

Fig. 2: Separate building at the archaeological site Vikramaśīla which is possibly the library building.

Article

The Library at the East Indian Buddhist Monastery of Vikramaśīla: an Attempt to Identify Its Himalayan Remains*

Martin Delhey | Hamburg

1. Introduction and historical overview

The celebrated East Indian[1] Buddhist monastery of Vikramaśīla[2] was founded in the early ninth century and was deserted and destroyed around 1200. This period roughly coincides with the reign of the Pāla dynasty over Eastern India. In fact, it was the third Pāla king, Devapāla (r. c. 812–850), who founded the monastery as a royal establishment.[3] Later, the fortunes of the dynasty were ever changing and there were times when its power extended over a significantly smaller part of the region. The Pāla kings were favourably disposed towards Buddhism, and Vikramaśīla was not the only flourishing large monastery at the time in East India. Sanderson, for instance, singles out the monasteries of Nālandā, Somapura, Trikaṭuka, Uddaṇḍapura and Jagaddala as the most eminent great monasteries of the region and period along with Vikramaśīla.[4] Vikramaśīla arguably eclipsed all other important monasteries during its existence, however. There is a relatively large amount of information available about its history, especially from Tibetan sources. The *Rgya gar chos 'byung* ('History of Buddhism in India'), which was written in 1608 by the Tibetan scholar Tāranātha[5], contains a wealth of information on Vikramaśīla and is generally bestowed with a high level of credibility as an account of what represents a relatively late period of Indian Buddhism.[6] It is extremely likely that an archaeological site excavated in recent decades near the south banks of the River Ganges holds the remains of the monastery (fig. 1).[7] This area now belongs to the Indian state of Bihar. However, it is close to the border with West Bengal.[8]

Vikramaśīla is often labelled as a 'monastic university' – a designation that certainly is not inadequate if one considers that a great number of famous teachers with a wide array of scholarly and religious interests were active there, attracting students from East India as well as from faraway regions. For our present purposes, it is important to note that there was intensive contact with Buddhists from the Kathmandu Valley[9] – a relatively isolated region in the Himalayas which

* The findings presented in this article are the result of ongoing research at SFB 950 'Manuscript Cultures in Asia, Africa and Europe', which is generously funded by the German Research Foundation (DFG), and part of the research work undertaken at the Centre for the Study of Manuscript Cultures, University of Hamburg. I am greatly indebted to Professor Harunaga Isaacson for his comments on one of the last drafts of the present article.

[1] In this contribution, 'East Indian' or 'Eastern India' refers roughly to the area that is now politically divided into the present-day states of Bihar and West Bengal in the Republic of India and the independent country of Bangladesh (which corresponds to historical East Bengal).

[2] Generally, the monastery is designated more fully as *vikramaśīlamahāvihāra* ('The Great Monastery of Vikramaśīla') or as *vikramaśīladevamahāvihāra* ('The Great Monastery of King Vikramaśīla'). From the latter form of the name, it is clear that the monastery received its designation from the byname of a Pāla king (see Majumdar 1943, 115 and n. 1, cf. ibid., 123). *Vikramaśīla* literally means 'He who has prowess as an inborn or acquired character trait'. The name of the monastery also appears in a shortened form, namely as *vikrama* (Sanderson 2009, 91). In secondary literature, the name is often spelt as *vikramaśilā* (mentioned in ibid. 88, n. 156), which means 'Vikrama's rock' or 'rock of prowess'. Although the same spelling also occurs once in a Sanskrit colophon composed by a Tibetan scribe (see Yonezawa, 2014, 1236) and Tibetan legend has it that a demon called Vikrama was defeated at this place (see Niyogi 1980, 105), this certainly represents a secondary development.

[3] Sanderson 2009, 90f., cf. ibid., 87.

[4] Sanderson 2009, 88. See ibid. for basic information about these institutions.

[5] English translation by Chimpa and Chattopadhyaya (1990).

[6] See Sanderson 2009, 89f.

[7] See Verma 2011 and especially Sanderson 2009, 88, n. 156.

[8] See Verma 2011, 1 for a more detailed localisation.

[9] Unlike today, the term 'Nepal' (or rather the Sanskrit word *nepāla* from which the English name is ultimately derived) previously referred almost exclusively to the Kathmandu Valley and its immediate surroundings

has belonged to the Indian cultural sphere and Sanskrit manuscript culture since antiquity – and there was also interaction with Tibetans, who were very active in absorbing Indian Buddhism during this period. A further feature of Vikramaśīla that should be highlighted here is the fact that it was a stronghold of tantric or esoteric ritualistic practice and scholarship. Other tantric forms of religion were also popular at the time, in particular among the Śaivas – adherents of the branch of so-called 'Hinduism' in which the God Śiva and his wife occupy a central position.[10]

Around the year 1200 , the flourishing Eastern Buddhist activity fuelled not least by the great monastic centres mentioned above received a severe blow from which it never recovered. This happened in the course of political and military events that were finally to lead to the establishment of the Delhi Sultanate in 1206. This in turn marked the beginning of long-term Muslim rule in North India. During this time, the Afghan commander Muhammad Bakhtiyar led several raids in the region of present-day Bihar and also succeeded in conquering Bengal a few years later.

It should be noted that there is some debate as to how much of the harm done to Eastern Buddhist monasteries during this period was due mainly to Muhammad Bakhtiyar – or to any other Muslim – rather than to Hindus who were hostile towards Buddhism.[11] In any case, not only Tibetan Buddhist historical sources, but also the principal Islamic history of the period, namely *Tabakat-i-Nasiri*, which was written circa 1260,[12] leave no doubt that Bakhtiyar's military expeditions also included attacks on Buddhist monasteries.

The pertinent passage from the latter source deserves to be cited here, not only because it represents an important historical piece of evidence regarding the destruction of great monastic centres in the course of the Islamic conquest, but also since manuscripts play a major role in the text. The author names an eyewitness as his source and continues as follows:

> … they reached the gateway of the fortress and began the attack … and they captured the fortress, and acquired great booty. The greater number of the inhabitants of that place were Brahmans, and the whole of those Brahmans had their heads shaven; and they were all slain. There were a great number of books there; and, when all these books came under the observation of the Musalmāns, they summoned a number of Hindūs that they might give them information respecting the import of those books; but the whole of the Hindūs had been killed. On becoming acquainted [with the contents of those books], it was found that the whole of that fortress and city was a college, and in the Hindūl tongue, they call a college … Bihār.[13]

Bihār, which was subsequently applied to the whole region and is now the name of one state in the Republic of India, corresponds to the Sanskrit word *vihāra* – the common Old Indo-Aryan designation for a Buddhist monastery. The designation of this institution as a 'college' becomes easily understandable when one considers the important role played by the great monasteries of the time in the transmission of knowledge. The 'Brahmans' who 'had their heads shaven' is another relatively unambiguous reference to Buddhist monks, although their designation as 'Brahmans' is not quite correct. Various different identifications of this monastery can be found in secondary literature, but Uddaṇḍapura, which was situated to the west of Vikramaśīla, is probably the most likely candidate.[14]

However, it seems that none of the great monasteries specified at the beginning of the article remained unaffected by the military and political developments of the time. A fairly early source, the biography of the Tibetan monk Chag lo tsā ba Chos rje dpal (1197–1264), written by his disciple Chos dpal dar dpyang,[15] mentions in the account of a journey to India which took place circa 1234–1236 that Vikramaśīla did not exist anymore since it had been completely destroyed

Consequently, the two geographical terms have been regarded as interchangeable in this article.

[10] For an excellent overview of the history of Indian Tantrism, see Sanderson 2009. Sanderson argues that the development of Tantrism coincided with the rise of the Śaiva religion to dominance and that this in turn was responsible for tantric elements spreading to the other religions of India.

[11] See n. 16 and 18 below.

[12] For a brief introduction to the author and work, see Bazmee Ansari 2015.

[13] Raverty 1970, vol. 1, 552. The periods of ellipsis mark my own intervention; the rest of the text is given exactly as it is printed in Raverty's translation.

[14] See Wink 1997, 147, for example.

[15] Translation (with original Tibetan text) in Roerich 1959; critical edition in Zongtse 1981. Regarding the question of the autobiographical elements or citations of Chos rje dpal's own words contained in the text, see de Jong 1962, 168.

by Muslim forces.[16] The same source reports that Nālandā was still partly functioning, however, there were few monks left who could take care of the remains of the monastery.[17] It is not necessary to assume that all the great monasteries were destroyed during the Muslim conquest in order to explain why they disappeared during this period; these large institutions needed royal support in order to function, and it is only natural to assume that the new rulers were not particularly interested in providing this support.[18]

The vast majority of the manuscripts which were stored in the libraries of the monastic universities are lost. A certain proportion of them were clearly destroyed in the course of fighting.[19] Others survived the attacks and remained at their original location, as suggested by the Muslim source cited above. However, many of the manuscripts undoubtedly fell prey to natural decay. The climate of the Indo-Gangetic Plain is not favourable to the long-term preservation of palm-leaf manuscripts. Most of the texts also got lost since there were no longer sufficient funds or individuals available to copy the old manuscripts. There is ample evidence of the fact that Buddhist practice and scholarship continued to exist in Eastern India for some centuries.[20] However, activities were reduced to a much smaller scale than previously before finally coming to a complete halt. Other parts of India and neighbouring countries remained unaffected by the political events mentioned above, at least for a certain length of time. Historical sources indicate that many Buddhist scholars who were active in Eastern India fled, travelled or emigrated to these regions around 1200,[21] and it is only natural to assume that they took manuscripts with them whenever it was possible. In a couple of cases, one can associate certain extant manuscripts from Eastern India with one of these travellers to other regions. One illuminated manuscript contains a later addition in the Tibetan language that provides a list of its successive owners. The first person mentioned is the Indian monk Śākyaśrībhadra, while the other names are those of Tibetan scholars.[22] Śākyaśrībhadra originally hailed from Kashmir, but spent a long time studying and working in East Indian monasteries. He is often designated as 'the last abbot' of Vikramaśīla. However, some of the Tibetan sources telling of his life suggest that he also had similarly strong ties with the two other great monasteries of Bihar, namely Nālandā and Uddaṇḍapura. The Muslim raids on Bihar seemingly induced him to flee eastwards and relocate to the great monastery of Jagaddala where he is said to have stayed for three years. After that, Śākyaśrībhadra spent a long

[16] Roerich's translation (1959, 64): 'Vikramaśīla was still existing in the time of the Elder Dharmasvāmin and the Kashmir Paṇḍita, but when the Dharmasvāmin visited the country there were no traces of it left, the Turushka [i.e. Turkic (M. D.)] soldiery having razed it to the ground, and thrown the foundation stones into the Gaṅgā.' Cf. also the original text (ibid., 12; Zongtse 1981, 50/51) and the pertinent remarks in Roerich's introduction (Roerich 1959, XLIf.). Tāranātha (Chimpa and Chattopadhyaya 1990, 319) also states that Muslim forces destroyed Vikramaśīla. Verardi (2011, 36f, cf. 392f. n. 198 and 199) strongly opposes the idea that Muslim forces were responsible for the destruction of Vikramaśīla. Instead, he ascribes it to anti-Buddhist aggression on the part of the Hindus. If I understand him correctly, he even opines that the Tibetan accounts, which contradict his assumption, arise from active manipulation of the historical truth by the Indian non-Buddhists (ibid., 393, n. 199).

[17] Roerich 1959, 90ff.

[18] It has long been known that there is also evidence of destruction carried out by anti-Buddhist Indians before and during the Muslim conquest (see Steinkellner 2004, 9, n. 18, for example). Verardi's (2011) narrative of the events is rather extreme, however, since it almost assumes the form of a conspiracy theory (cf. n. 16). According to him, anti-Buddhist Indians allied themselves with the Muslim invaders against the Buddhists. The aforementioned attack on a monastery which is narrated in the Muslim history, for instance, is seen by Verardi as the result of a 'trap prepared' by the Indian Sena king 'at the expense of the Buddhists' (ibid., 362). It is true that the Muslim invaders appear to have simply mistaken the Buddhist monastery as a fortress and probably assumed that it was packed with armed soldiers (Tāranātha [Chimpa and Chattopadhyaya 1990, 318] at least relates that the monastery was fortified to a certain extent and that some soldiers were stationed there). However, I fail to understand how Verardi arrives at his bold conclusion that this misunderstanding was due to active manipulation of the Muslims by the Hindu rulers. At any rate, the matter needs no further consideration here. For the present purposes, it is not important whether the destruction of Buddhist monasteries and the loss of royal support can be attributed to Muslims and Hindus who were not well disposed or were even hostile towards Buddhism, or just to Muslims alone.

[19] See Steinkellner (2004, 9), for example, who refers to Nālandā, but also to the great monasteries in general. If the destruction of Vikramaśīla was as far-reaching as cited by the historical sources above and as partly corroborated by archaeological evidence which includes signs of a conflagration taking place (see Verma 2011, 10), it is likely that violent destruction was the main reason for the loss of the vast majority of these manuscripts, at least at this location.

[20] This does not seem to be well known, although it is anything but a new and original insight, as can be seen by certain remarks to the same effect in Kern 1896, 134. It is not until recently that this fact has been fully acknowledged and that certain aspects of late East Indian Buddhism have been studied in some detail. In particular, attention should be drawn to a forthcoming study on three extant Eastern Indian Buddhist manuscripts from the fifteenth century (Hori, 2015). Also relevant are publications dealing with the Bengalese Buddhist pandit Vanaratna (1384–1468; see esp. Ehrhard 2002; Ehrhard 2004; Isaacson 2008) and with other late Buddhist masters from Eastern India (Shastri 2002; McKeown 2010).

[21] Chimpa and Chattopadhyaya 1990, 319; Filliozat 1981, 69–71; Steinkellner 2004, 9–11.

[22] Huntington and Huntington 1990, 185–189; cf. Bautze-Picron 1998, 17.

period in Tibet before returning to Kashmir.[23] In view of the fact that he obviously stayed at several different monastic centres, it is unclear whether he obtained the manuscript from the library of Vikramaśīla or from another East Indian monastery. The paratexts point to it being associated with Nālandā, at least as its original place of production.[24] Another extant manuscript seems to have belonged to Dānaśīla, the monk who accompanied Śākyaśrībhadra on his journey from Jagaddala to Tibet.[25] Other manuscripts were certainly brought by travellers to regions other than their East Indian place of origin in the centuries predating this event. However, old manuscripts were only able to survive to the present day in regions with a favourable climate and a population that continued to show some interest in them. Correspondingly, almost all extant East Indian Buddhist manuscripts were found either in the Kathmandu Valley or in various places in Tibet.

After these introductory remarks on the monastery of Vikramaśīla and its broader regional and historical context, it is time to focus the discussion on the question of what is known about the monastery library or about the role played by the manuscript collections stored there. The archaeological evidence will be presented first. The scholars involved in the excavation of the site tend to the assumption that the library of Vikramaśīla was a separate building situated outside the fortified square that formed the main monastery, but connected to it by a narrow passage (fig. 2).[26] The reason for this assumption is the fact that the building seems to have been provided with a device for 'forced draft ventilation', which might have been used for better preservation of palm-leaf manuscripts, given the climate of the Indo-Gangetic Plain.[27] It is very hard to find further evidence to back the library hypothesis, however, and other possible functions of the building cannot be excluded. The Somapura monastery, for example, which was founded at roughly the same time or slightly earlier than Vikramaśīla[28] and is built according to the same plan, contains a very similar architectural feature in the same location which excavators have interpreted as the bathing area of the monks (Dikshit 1938, 30f.). However, even if the building at Vikramaśīla has been correctly identified as the library, its remains are not likely to give us any particularly valuable clues on its contents and how it was organised beyond what has been said above.[29] Regarding evidence from historical textual sources, the situation seems to be even worse. As mentioned above, there are fairly good sources about the monastery as a whole, especially in the form of texts written in Tibetan. However, the present author is not aware of any pre-modern sources composed by Tibetans or others which mention a library or contain any other relevant remarks about a collection or set of manuscripts at the monastery of Vikramaśīla.

Does this imply that conducting research into the library of Vikramaśīla may be chasing a phantom? It certainly does not. Although oral text composition and transmission appear to have always been held in particularly high esteem in ancient and medieval India, there is plenty of evidence pointing to the fact that manuscripts played a crucial role even long before this period.[30] The great number of Buddhist monastic scholars active in Vikramaśila – many of them also known as prolific authors of texts – is hard to explain against this background without the assumption that considerable quantities of manuscripts were produced and stored there.

---

[23] For this and further information on Śākyaśrībhadra's life, the reader is referred to Chimpa and Chattopadhyaya 1990, 316f., 329, 434f. and especially to Jackson 1990 and van der Kuijp 1994.

[24] The manuscript was originally written in the eleventh century by Ānanda, who was a resident of the monastery of Nālandā, but it was partly renewed in the twelfth century. See Huntington and Huntington 1990, 185–189; cf. also the pertinent passages in Kim 2013, which can be found by referring to ibid., 368, left column s.v. MS A4. If I have correctly deciphered colophon folio 301^{v} as given in ibid., 44 (the image is very small), the passage on Ānanda (line 4) runs as follows: '[This manuscript] has been written by Ānanda, the preacher/reciter of Buddhist scriptures/doctrine (*dharmabhāṇaka*), a resident of glorious Nālandā' (Sanskrit in diplomatic transcription: *śrīnnā landāvasthitadharmabhāṇakaānandena likhitam iti* || ||).

[25] See Watanabe 1998, p. III. On the folios of the manuscript, I was only able to trace the first of the marks indicating Dānaśīla's ownership that are mentioned in Watanabe 1998, p. V, n. 11.

[26] See Verma 2011, 9f., 49.

[27] See *Indian Archaeology, A Review* 1978–79, [appeared 1981]; 43; Verma 2011, 49.

[28] The Somapura monastery was, according to Sanderson (2009, 90f.), probably built by Dharmapāla, who was the predecessor of the founder of Vikramaśīla (King Devapāla).

[29] See also *Indian Archaeology: A Review* 1978–79, [appeared 1981], 42: 'No antiquities worth mentioning were recovered from this area, except one almost complete sprinkler and a few fragments of the same type, besides a few bases of stone pillars.'

[30] Cf. Steinkellner 2004, 6: 'When Buddhism first came to Tibet in the 7th to 9th centuries, it was no longer a tradition with a primarily oral culture of transmission. Authoritative scriptures had long been developed into various canons, and writing and copying had become part of Buddhist life soon after the beginning of our era.…'

There is, however, one conclusion that can be safely drawn from the dearth of archaeological and textual evidence of the vanished library of Vikramaśīla. To find out something of relevance about this topic, one must rely on the material Himalayan remains of the institution – in other words, the extant manuscripts.[31] Unfortunately, it is anything but easy to prove that a significant number of the manuscripts that have been preserved in Nepal and Tibet were actually produced or stored in this particular monastery. It is this attempt at attributing as many manuscripts as possible to Vikramaśīla to which the present article is devoted.

Most of the manuscripts dealt with in the following section were discovered in Kathmandu in modern times and are stored there either in the National Archives, Kathmandu (NAK) or in the Kaiser Library (KL). For the present purpose, digital colour photographs of the materials were available and access to the original manuscript folios was provided during research trips to Kathmandu. Other manuscripts were discovered in Tibet in the 1930s by two modern-day scholars, Rāhula Sāṅkṛtyāyana and Giuseppe Tucci,[32] who made independent research trips to the region. There are digitised black and white photographs available which were taken during their journeys.

2. Extant manuscripts from Vikramaśīla

All manuscripts dealt with in this section have certain common features which are typical of manuscripts from Eastern India and Nepal produced in this period. As a general background for the following discussion, it may be useful to mention some of these features at this point. All of the manuscripts were written on palm leaves using black ink, with the lines of text running in *scriptio continua* from left to right and parallel to the oblong sides of the writing supports. The text is set apart from the edges of the leaves by margins on all four sides. This central text block is interrupted by either one or two holes (the number of holes depends on the length of the leaves) which serve the purpose of tying the loose pages together using string. The size of the cleared space around the holes varies from one manuscript to the next and is consequently an important feature of the layout.[33]

The easiest way by far to identify the exact place of origin of Sanskrit manuscripts found in modern times in the Kathmandu Valley or in Tibet is to find explicit remarks in the paratexts, especially in the scribal colophons. Unfortunately, scribes were sporadic in taking the trouble to provide this kind of information. Only five manuscripts could be identified as products of Vikramaśīla this way.[34] A sixth manuscript (stored in the Cleveland Museum of Art [1938.301]) contains paratexts which also refer to a monastery called Vikramaśīla,[35] but the fact that it is dated according to the Nepalese era seems to indicate that it is more likely to have been produced in another ancient monastery which bore the same name and still exists in Kathmandu.[36] It has been suggested that the manuscript was indeed produced in Nepal, but then brought to the Indian Vikramaśīla monastery and dedicated there as a religious gift.[37]

---

31 The situation is similar regarding the other monasteries of Eastern India, except perhaps in the case of Nālandā. This institution is said to have had three large library buildings (references to this fact are virtually omnipresent in secondary literature). They seem to be attested quite early in Tibetan sources (see Steinkellner 2004, 9, n. 18). I am not aware of any corroborating evidence of their existence from archaeological excavations or from Chinese texts. However, the latter sources inform us at least about the large number of Sanskrit manuscripts brought back from India by Chinese pilgrims. The case of Xuanzang (602–664) is especially interesting in this regard. He is said to have managed to bring 520 manuscripts from India to China; 50 more items got lost while he was crossing the Indus (Beal 1914, 214, 192). Furthermore, a classification of the 520 manuscripts according to their contents has been preserved. Unfortunately, the manuscripts are no longer extant, and the above-mentioned list does not contain the individual text titles. However, 75 of the texts are available in Xuanzang's own Chinese translation (ibid., 214; Mayer 1992, 119f. and 279, n. 613). One can be fairly certain that most of the manuscripts he took with him, if not all of them, were copies made at the monastery of Nālandā. Regarding other monasteries of Eastern India, the following fact also deserves to be mentioned at this point: an anthology of Sanskrit poetry that can be assumed to have been written at the monastery of Jagaddala sometimes contains shelf numbers as a reference to the sources used by the compilers, as has been pointed out by the editors of the text (Kosambi and Gokhale 1957, XXVIII).

32 See Sāṅkṛtyāyana 1935, 1937 and 1938 and Sferra 2009 for catalogues of these materials. In the table appended to this article, the manuscripts from Tibet are referred to by these catalogue entries, whereas shelf numbers are provided for the materials stored in the two Nepalese institutions.

33 For an illustration of this short description, the reader is referred to fig. 3 of this article.

34 See table 1, I.1–5 (henceforth, references to items in this table will be made by giving the numbers in parentheses in the main text). In the case of the *Pañcarakṣā* MS (I.2), only a catalogue entry was available (Luo 1985, pp. 61–65, no. 28; I am indebted to Professor Kazuo Kano for drawing my attention to this entry). The pertinent part of the colophon appears in a somewhat corrupted form.

35 See Hollis 1939.

36 See below for a more detailed discussion of the Nepalese Vikramaśīla monastery.

37 Pal and Meech-Pekarik 1988, 34. See also Melzer and Allinger 2012, 264 (under the heading N8) for further references to literature on this manuscript.

Each of the five manuscripts exhibits one or more peculiarities which sets it apart from the others. For the present purposes, it is not necessary to study them in great detail. However, some of their features will be highlighted as an illustration of the varied nature of manuscript production at the monastery of Vikramaśīla. The British Library manuscript Or. 6902 (I.1) is the only one that is illustrated. It is also worth noting that the manuscript is dated. The date given is the fifteenth year of King Gopāla (i.e. circa 1145).[38] The colophon[39] states the 'Glorious Great Monastery of the King Vikramaśīla' (*śrīmadvikramaśīladevamahāvihāra*) as the place of production. The manuscript is designated as a religious gift (*deyadharma*), which means that the donor, an elder monk called Sumatiśrīmitra, hoped to obtain religious merit by funding its production or by donating it to the monastery. It contains the text of the *Aṣṭasāhasrikā Prajñāpāramitā*, an important scripture in Mahāyāna Buddhism. The textual content is quite typical of manuscripts produced primarily for the sake of religious merit and enriched with miniature paintings. The script has recently been labelled as a calligraphic standard script, which was widely used in these artefacts.[40] Another manuscript (I.2) contains a fixed set of five texts that are likewise considered as Buddha's words. Besides the fact that the production and worship of this type of manuscript was thought to be meritorious, it was also believed to have an apotropaic function, as is indicated by the name given to the set of texts ('The five kinds of protection'). The manuscript of the *Vinayasūtra* by Guṇaprabha (I.3) was intended to fulfil functions of an entirely different nature: it was primarily meant to be studied or consulted with regard to matters pertaining to the field of monastic law and is written in Tibetan rather than Indian script, which strongly suggests that it was copied by one of the many Tibetan visitors to Vikramaśīla.[41] Another manuscript (I.4) is more or less comparable in the way it was intended to be used, but completely different as regards its textual content. It contains a very important and influential exegetical text from tantric or esoteric Buddhism, namely the *Hevajratantrapiṇḍārthaṭīkā* (also known as *Ṣaṭsāhasrikā*) composed in approximately 1000 CE by an author who claimed to be the celestial *bodhisattva* Vajragarbha. The colophon states that 'Viśuddhirakṣita has commissioned the copying [of this manuscript] at the Glorious Great Monastery of Vikramaśīla for his own welfare and for the welfare of others'. Around two syllables of this sentence are lost; they might have specified Viśuddhirakṣita as being a *bhikṣu* ('monk').[42]

The last of the five manuscripts (I.5) is very similar in some aspects, including the subject matter and the fact that it mentions a commissioner, but different in terms of the size of the leaves and the layout. More importantly, the colophon and codicological features of this manuscript serve as an excellent starting point for the further identification of Vikramaśīla manuscripts. The colophon runs as follows: 'The scholar-monk[43] Jinaśrīmitra has commissioned this manuscript to be written for his own sake and for the sake of other [sentient beings], and it has been written while staying in the monastery of Vikramaśīla by [the scribe] called Mahīdhara'.[44] There are four further extant manuscripts that do not contain

[38] Losty 1982, 32; cf. Weissenborn 2012, 292. For further secondary literature on this manuscript, see the references in Melzer and Allinger 2012, 262–263, to which Kim 2013 should now be added (see ibid. 368, left column s.v. C4 for references to the pertinent passages of her book).

[39] Citations of parts of the colophon can be found in Barnett 1910, 151 and Kim 2013, 315, n. 22. I also had occasion to study the colophon folio myself.

[40] According to Weissenborn (2012, 278f.), not only the British Library manuscript, but all but three other East Indian illuminated manuscripts which she lists are written in this calligraphic standard script, which was also used in Nepal. Furthermore, she points to the deplorable, but not untypical fact for Indian palaeography that that there is no agreement about what the script should be called. Among the different alternative designations, she also mentions 'Proto-Bengali'. However, the script of the illuminated manuscript British Library Or. 6902 is clearly completely different to the script generally referred to as 'Proto-Bengali'. To the best of my knowledge, the same is true for many other East Indian illuminated manuscripts (if not the majority of them, as suggested by Weissenborn's aforementioned claim that there is an almost omnipresent standard script). The British Library manuscript Or. 14203 (discussed in Losty 1989, 140–142), however, (which is not listed in Weissenborn 2012) can be regarded as written in Proto-Bengali script. See also n. 48 for details on the script designation 'Proto-Bengali'.

[41] The colophon is cited and translated in Yonezawa 2014, 1236. For more on this manuscript, see also the pertinent remarks in the discussion of group II below.

[42] *śrīmadvikramaśīlamahāvihāre likhāpitaṃ ++ ++ viśuddhirakṣitena svārthaṃ parārthaṃ ca* ‖ *cha* ‖

[43] Or rather, 'the monk who holds the title of *paṇḍita*'. The Tibetan historian Tāranātha repeatedly mentions the fact that the kings officially conferred the academic degree of a *paṇḍita* upon inhabitants and students of Vikramaśīla (Chimpa and Chattopadhyaya 1990, 292, 304, 308).

[44] Folio 5^r, line 7: *likhāpitā pustikeyaṃ paṇḍitabhikṣujinaśrīmitreṇa svaparārthahetor iti* ‖ ※ ‖ *likhitā ca vikramaśīlavihārāva{sthāva}sthāne mahīdharanāmneti* ‖ ※ ‖ ※ ‖ (※ symbolises an ornamental sign; the braces enclose superfluous text that has already been deleted in the manuscript). In colophons, the participle *avasthita* often seems to be used in the sense of 'residing in' (though perhaps not always). However, I see no reason at present to believe that the substantive *avasthāna* has similar connotations. I assume that Mahīdhara was a layman, as will be seen below.

a paratextual reference to a place or scribe, but mention the same commissioner, namely the scholar-monk Jinaśrīmitra[45] (I.6–9).[46]

Apart from these manuscript colophons, the historical sources seem to be almost completely silent about a monk named Jinaśrīmitra. The only possible exception is the seal of someone called 'Janaśrīmitra', which was found at the excavated ruins of the monastery of Nālandā. Shastri conjectures a misspelling of 'Jinaśrīmitra' here.[47] Since this religious Buddhist name follows a very conventional pattern (one of the common epithets of the Buddha, namely 'victor' [*jina*], is combined with the equally common component *śrīmitra*), it is unclear – provided that Shastri's conjecture is correct – whether we are dealing here with our scholar-monk Jinaśrīmitra or simply with another monk bearing the same name. The colophon cited above does not explicitly state that the scholar-monk Jinaśrīmitra belonged to the monastery of Vikramaśīla. However, as a commissioner of that particular manuscript (I.5), he seems to be linked to the place quite clearly. This does not, of course, exclude the possibility that the same Jinaśrīmitra also travelled from Vikramaśīla to Nālandā. At any rate, as will be seen below, the five manuscripts in the set (I.5–9) are closely linked by a great number of other common features, making it highly improbable that there were several different monk-scholars called Jinaśrīmitra involved in the production of the five manuscripts. The only possibility that cannot be ruled out completely is that one and the same Jinaśrīmitra was active as a commissioner of manuscripts at both places. However, in the absence of any further evidence and in view of the many similarities referred to above, it seems to be far more probable that the whole set of manuscripts was produced at Vikramaśīla. We know from historical sources that both monasteries entertained close relations. However, they were situated relatively far away from each other, and one would expect that this distance would have left at least some trace in the form of a distinctive feature on the material artefacts. Moreover, all of the manuscripts deal with esoteric Buddhist subject matter, and as we know from historical sources, Vikramaśīla was especially famous for its specialty in tantric practice and scholarly theory.

We have already pointed to two similarities in the manuscripts, namely the identity of the commissioner and the common subject matter. Let us now turn our attention to further shared features. The palm leaves are all of roughly uniform size, namely c. 56 × 5.5 cm. Each page contains exactly seven lines of script. They are interrupted by the space cleared for two binding holes, which divides the breadth of the leaves into three approximately equal parts. In each case, the space cleared for the holes interrupts the running text of the third to fifth lines only, and the breadth of the empty space is equal to around five to six letters of text (see fig. 3).

The script used for writing the texts is Proto-Bengali, which was widely used in East India around the twelfth century.[48] As its name indicates, this script already exhibits some features that later became the typical distinctive marks of the regional script of Bengal (and closely related scripts) as it is still used today, while other features have not developed yet. The Proto-Bengali script in itself was not standardised. Therefore, depending on the exact time and place of its use – and perhaps the predilections of individual scribes – many letters assumed distinctly different shapes. What is noteworthy about our five manuscripts is the fact that there are hardly any differences in the way that the letters are written. The size and width of the letters sometimes varies,

45 In some manuscripts the name appears as Jinaśrīmittra, which merely results from a common variant spelling.

46 Unfortunately, no photographs of one of these manuscripts (I.9) were available to us. We therefore had to rely completely on a catalogue entry in this case (Sāṅkṛtyāyana 1937, no. 303).

47 Shastri 1942, 60.

48 Here, I adopt the designation of the script as already used by Bühler (1896, §26). In addition to the characteristic features mentioned by Bühler, one should perhaps also regard the way in which the medial vowels *e* and *o* are written. From the script tables, table VI, column X fits especially well to the Proto-Bengali manuscripts we are dealing with in this article. The letters are derived from the manuscript known as Cambridge Add.1699, dated 1198–1200. See also the specimen from this manuscript given in Bendall 1883, plate II.4, and the electronic tool *IndoSkript: Eine elektronische Indische Paläographie* (downloadable from the website: http://userpage.fu-berlin.de/~falk/index.htm, last date of access January 16, 2015). Bühler's designation is still widely used, most notably by Dimitrov (2002), who recently published a palaeographical study of the next stage in script development, namely 'Old Bengali'. Sāṅkṛtyāyana (1935, 1937, 1938) seems to use the designation 'Māgadhī' fairly consistently in the sense of 'Proto-Bengali', as becomes clear in the case of the manuscripts discussed in the present article (cf. Bandurski 1994, 19). Other common designations include 'Gauḍī' and 'Proto-Bengali-cum-Proto-Maithili'. Although the terminological differences are in some cases combined with conflicting views of script development and periodisation, all designations mentioned above share the common feature that they all refer to Eastern India by their very names and that they are inspired by the similarities to modern scripts from this region. Unfortunately, the confusion of terms is often much greater. The designation 'Newari' (a Nepalese script), for instance, is very misleading with regard to these Eastern Indian manuscripts (for examples, see Bandurski 1994, 19). One may suspect that this confusion is partly due to the fact that manuscripts were sometimes written in Nepal in a Proto-Bengali hand or at least in a hand exhibiting some of its features.

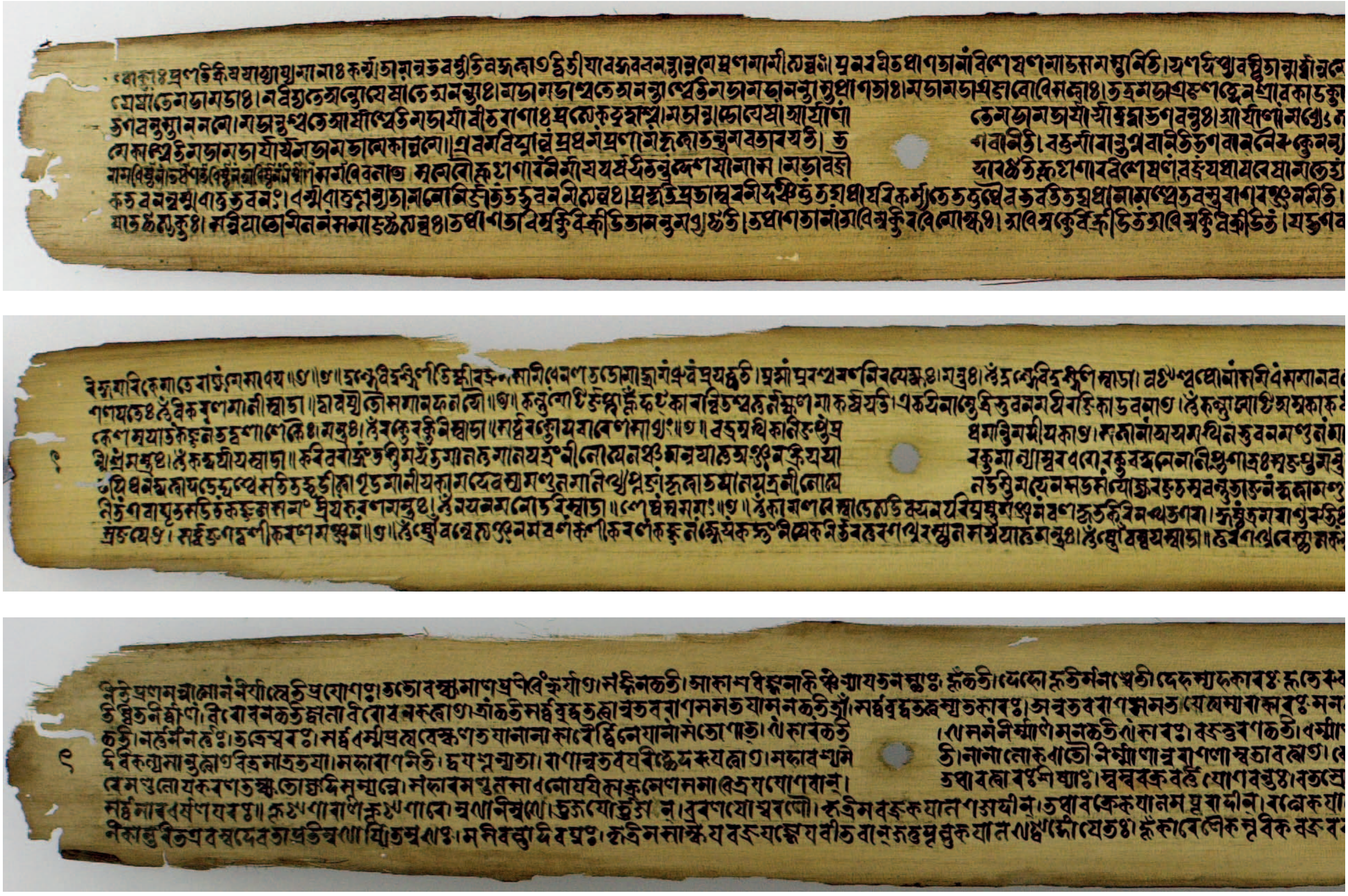
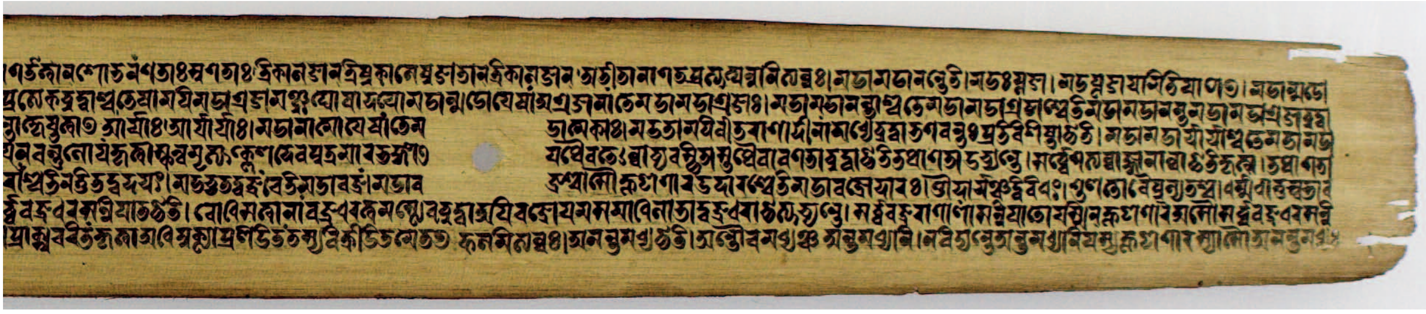


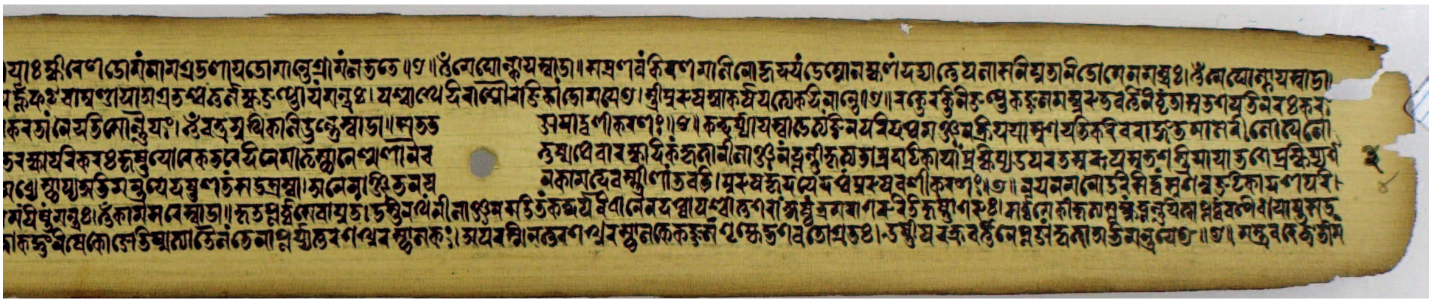
Fig. 3: Comparison of *Trisamayarājaṭīkā,* f. 2^{r} (I.6), *Kalyāṇakāmadhenuvivaraṇa,* f. 4^{v} (I.5) and *Ḍākinīvajrapañjarapañjikā*, f. 4^{v} (II.1); all folios are preserved under the shelf number NAK 5-20.

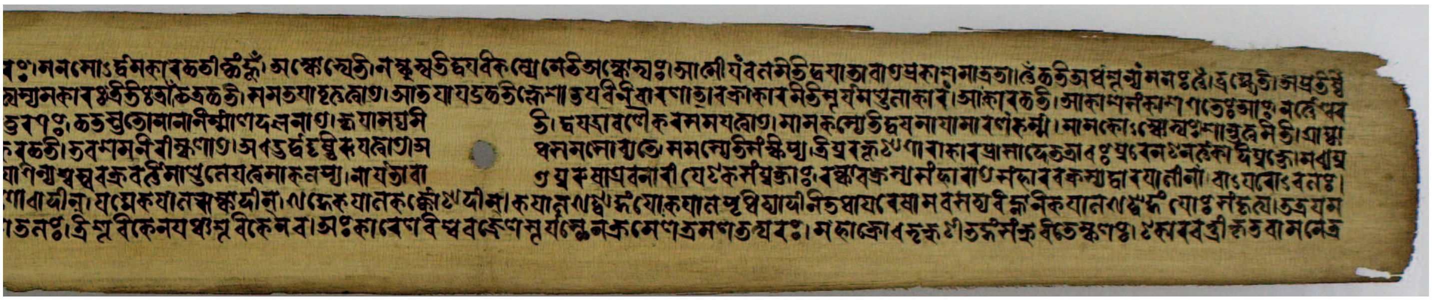
of course, but there are no obvious differences in the way in which the different parts of a letter are positioned in relation to one other or regarding the presence or absence of certain letter elements. The possibility that the manuscripts were all written by one and the same scribe, in other words, by Mahīdhara, who is mentioned in one of the colophons (I.5), cannot be totally excluded. If they were written by several scribes, all of the men must have belonged to the same scriptorium or have undergone the same training. Another interesting common feature is that all the manuscripts – as far as we could examine them by means of material analysis – were written with a carbon-based ink containing some admixture of mercury. The latter element is not unknown in ancient Indian scribal practice, but was certainly not an omnipresent feature and probably not even particularly widespread.[49]

Finally, it should be noted that the five manuscripts in the set (I.5–9) were discovered in two different places, namely in Kathmandu and in Zha lu (also spelt Zhwa lu) in Tibet. Almost all extant East Indian manuscripts have been found either in the Kathmandu Valley or in Tibet, since these were the only places that provided the cultural environment (Buddhists who held the late Indian varieties of their religion in high esteem) and climatic environment necessary for their preservation over such a long period of time. As will become clear later in the article, however, it is not unimportant to note that despite the relatively numerous potential storing places for Sanskrit manuscripts in Tibet, this part of the collection (I.6–9) ended up in only one place (Zha lu). One very important factor concerning the Jinaśrīmitra manuscripts is the fact that – unlike the case of the first four manuscripts from Vikramaśīla (I.1–4) – we are dealing here with a set of closely related standardised manuscripts produced by one specific group of people who were active at that particular monastery.

[49] See Delhey, Kindzorra, Hahn, and Rabin (2013-2014 [2015]).







There is another reason why the Jinaśrīmitra manuscripts are crucial in the attempt to identify as many extant manuscripts as possible from the library of Vikramaśīla. Up to now, 18 other manuscripts have been identified that share many but not all of the similarities that link the five Jinaśrīmitra manuscripts. Unlike the latter materials, however, they do not contain a reference to the place of their production or to Jinaśrīmitra (or to any other person involved in the production of the manuscript) in their colophons (or in any other paratexts), or else the colophon folios have simply not been preserved. As a result, the attempt to identify the provenance of manuscripts will rely almost entirely on non-textual evidence from now on and consequently assume a much more hypothetical form.[50] This approach is almost entirely original in the study of Eastern Buddhist manuscripts that are not illuminated, as is the case for all of the manuscripts discussed on the following pages. There are therefore hardly any similar studies available which might provide worthwhile methodological guidance or additional corroborating evidence.[51]

All 18 manuscripts (II.1–18) have the same size of palm leaves and layout as the Jinaśrīmitra manuscripts (see fig. 3). This combination of two features was the decisive criterion for including the manuscripts in the present considerations. It should be noted, however, that four of them (II.15–18)

[50] For this reason, I differentiate between the Vikramaśīla manuscripts dealt with above and the other 18 manuscripts by assigning them to two different groups, namely group I and group II.

[51] Among the discussions about the provenance of illuminated manuscripts, an article by Losty (1989) can be singled out. In spite of the fact that relatively much of the evidence is based on a comparison of artistic painting styles, many of the problems he was faced with in his undertaking are quite similar to those encountered in the present discussion. Moreover, it is interesting in the present context that Losty assigns two illuminated manuscripts to the monastery of Vikramaśīla on account of the stylistic similarities of their miniatures to the British Library manuscript Or. 6902, in other words, to our manuscript I.1 (ibid., 95). For references to other (predominantly art-historical) discussions regarding Eastern Indian and Nepalese Buddhist illuminated manuscripts, many of which also address the problem of provenance, the reader is referred to Weissenborn 2012, and Melzer and Allinger 2012.

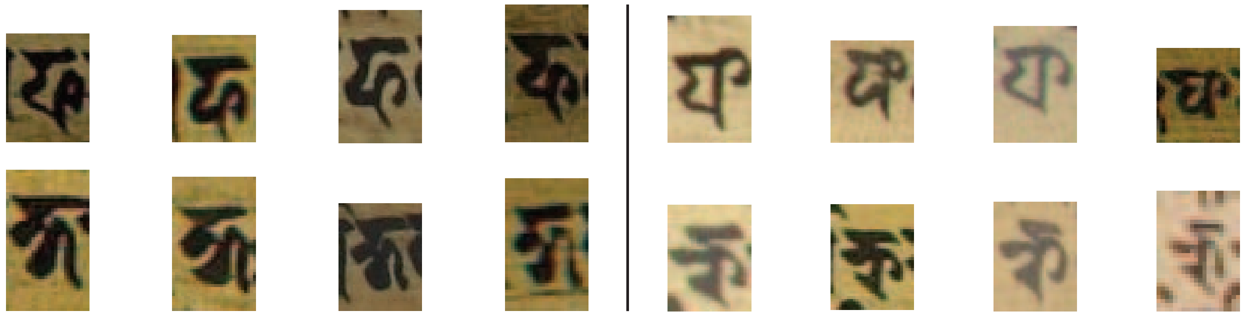


Fig. 4: Examples of differences between the Jinaśrīmitra manuscripts I.5–9 (left) and all the Proto-Bengali manuscripts in group II (right): *pha* (top), *ku* (bottom).

sometimes show deviations regarding the layout, whereas all of the other manuscripts seem to adhere strictly to the standard. In spite of these common features, it is not very likely that all – or even some – of these 18 manuscripts were commissioned by Jinaśrīmitra. To begin with, it has already been mentioned that the manuscripts in which the colophon is preserved do not mention his name. However, this does not by any means exclude the possibility that Jinaśrīmitra was involved in their production. What is more important is the fact that even the manuscripts which are written in typical Proto-Bengali script (II.1–14)[52] do not show as many similarities to the set of five Jinaśrīmitra manuscripts in terms of palaeographical features as the latter show to each other (see fig. 4). If the above mentioned alternative hypothesis (p. 11f.) should turn out to be true, namely that all five manuscripts were written by one and the same scribe rather than by different scribes, the features specific to the set of five may be explained as individual traits which were not shared by other scribes working for Jinaśrīmitra. Consequently, the only possibility that can currently be excluded outright is that the identity of the scribes who wrote one or more items in the set of five manuscripts and one or more of the 18 manuscripts is the same.

In any case, it is relatively unlikely that the similarity between all of these manuscripts is a mere coincidence. For the time being, we can formulate the working hypothesis that the combination of roughly identical palm-leaf sizes with a more or less standardised layout as described above is a feature peculiar to manuscripts produced at Vikramaśīla.[53] This would imply that not only the Jinaśrīmitra manuscripts (I.5–9) are products of this monastery, but also all 18 manuscripts in group II.

A somewhat more probable modification of this working hypothesis could be formulated as follows: all manuscripts of this size that also *strictly* adhere to the features of the standardised layout are products of Vikramaśīla, while occasional deviations point to the assumption that we are dealing with imitations of the Vikramaśīla style. This would imply that the last four manuscripts (II.15–18) have a *different* origin. Remarkably, these four manuscripts also deviate from all the others in palaeographical terms, though not all to the same extent. Regarding one of them (II.15), it has already been mentioned above that there are certain idiosyncrasies which set it apart from the other Proto-Bengali manuscripts in our corpus.[54] Another of the manuscripts (II.16) combines the use of typical Proto-Bengali features with additional pronounced hooks at the top of the letters, which is the main characteristic of Nepalese hooked script. This script became a very common feature of Nepalese manuscripts for some centuries.[55] It is perhaps mistaken to assume that it was never used by Indians,[56] but it is somewhat more probable that a Nepalese scribe was at work here.[57] Finally, the last two manuscripts (II.17 and 18) are clearly written in Old

[52] I exclude manuscript II.15 here since it exhibits many features that set it apart from all of the other Proto-Bengali manuscripts. It should also be noted that two hands can be differentiated in manuscript II.3, one of which shows similar deviations to II.15.

[53] This does not, of course, exclude the possibility that manuscripts with different features were also produced there. This is obvious from the heterogeneous manuscripts I.1–4, which are also from Vikramaśīla.

[54] See n. 52.

[55] See Bendall 1883, XXIII.

[56] Bühler 1896, 59 (§26) already ascribed the origin of the Nepalese hooks to Eastern Indian influence. However, this does not necessarily imply that this feature was already fully developed in Eastern India.

[57] Proto-Bengali features in Nepalese manuscripts are relatively common, as will be discussed below. To the best of my knowledge, the same cannot be said at present about the use of the hooked script in Eastern India. Therefore, I am now somewhat more sceptical about the possibility that this manuscript originates from Eastern India and that there was no Nepalese hand involved than I was in Delhey et al. (2014).

Fig. 5: Examples of differences between the Jinaśrīmitra manuscripts (I.5–9) and manuscripts II.1–16 (on the left) and manuscripts II.17–18 (on the right): the medial vowel 'o' (top) and the vowel 'i' in initial position (bottom).

Newari script, which seems to prove that Nepalese hands were active in this case. The many differences to the Proto-Bengali script of our corpus are easily recognisable. The different shape of the medial vowels may be singled out here. In particular, the letters 'e' and 'o' are written in a way that is still characteristic of the Newari script today, just as the different way of writing the same letters in our other manuscripts is characteristic of the Bengali script (see fig. 5).[58]

Regardless of whether one adopts the unmodified hypothesis or the modified one as outlined above, one may object that the assumption of a common place of origin is rather arbitrary. The Buddhist monasteries did not work in isolation from each other, but, as historical sources show, had regular contact not only in the form of travelling students and scholars, but also as regards the circulation of manuscripts. Therefore, there seems to be no *a priori* reason not to consider the possibility that the Jinaśrīmitra standard was commonly used in other centres of Buddhist manuscript culture as equally likely. The mere absence of positive evidence for its use in another monastery can hardly be taken as a strong argument if one considers that it was generally not very common to mention the place of production in the paratexts of the manuscript. The hypothesis formulated above therefore clearly needs further corroboration, which will be provided below. First, however, it is necessary to dwell a while on two fundamental problems of provenance, one of which is relevant not only for manuscripts from Vikramaśīla, but also for Eastern Indian manuscripts in general.

The fact that most of the manuscripts are written in Proto-Bengali script leaves room for the possibility that they could have been written anywhere in Eastern India, since to my knowledge the script was used throughout the region. A particularly intricate problem is the fact that from the second half of the twelfth century onwards, a minority of extant manuscripts can be shown to have been written in Nepal (based on the names of Nepalese kings mentioned in the colophon or due to the fact that the year of copying is given in terms of the Nepal *saṃvat* era, which was only used in Nepal), although in terms of palaeography they exhibit some or even all of the characteristic features of the Proto-Bengali script.[59] This might be due either to the fact that some Nepalese scribes were influenced by East Indian ways of writing or that the manuscripts were written by immigrants from Eastern India.

Yet another problem should be mentioned in this context since it also concerns manuscripts which, according to their colophons, were written at Vikramaśīla, such as the Jinaśrīmitra manuscripts. There is an ancient monastery in Kathmandu which also sometimes goes by the name of Vikramaśīla (*mahāvihāra*) (fig. 6).[60] However, we can be very confident that at least the Jinaśrīmitra manuscripts were written in the Indian monastery of the same name.[61] For a start, religious names ending in *-mitra*, especially in *-śrīmitra*, seem to be virtually omnipresent in East Indian Buddhist monasticism, and there is no evidence I am aware of to suggest that there was also a strong predilection in the Kathmandu Valley for giving similar names upon ordination.[62] Moreover, it has already been mentioned that the designation of Jinaśrīmitra as *paṇḍitabhikṣu* (scholar monk) probably alludes to the academic title of *paṇḍita*, which was conferred

[58] Sāṅkṛtyāyana labels the script here *kuṭilā*. In all other manuscripts in groups I and II catalogued by him, he uses the designation *māgadhī*, which he seems to understand as being similar to the term 'Proto-Bengali' (cf. n. 48). He therefore agrees with me at least in the dividing line he draws between the two scripts.

[59] The phenomenon of these Bengalisms was already observed by Bendall (1883, XXII).

[60] For information on this monastery and many other references, see Stearns 1996, 137 n. 37.

[61] In the case of the British Library manuscript (I.1), the East Indian origin is proven beyond reasonable doubt since it is dated according to the reign of a Pāla ruler.

[62] Dikshit (1938, 74) observes that groups of monks with identical endings to their names sometimes occur in the case of the Somapura monastery. One of the examples he mentions is the name component *-śrīmitra*. He interprets the phenomenon as being indicative of a succession or lineage of monks. More concretely, we are probably dealing here with an ordination lineage where the master who instructs an adept on monastic law (*vinaya*) and ordains him also chooses a religious name for him which is partly identical to his own name (see Jiang and Tomabechi 1996, XV n. 18, for example).

Fig. 6: Vikramaśīla monastery at Kathmandu, Nepal.

upon students of the Indian Vikramaśīla by the local kings.[63] One can hardly imagine that he received this title as an inhabitant of the Nepalese monastery, since the Kathmandu Valley had its own rulers. He must therefore have come to Nepal after the title was conferred upon him in Vikramaśīla. The question then arises as to the identity and home town of his scribe, Mahīdhara. His scribe bears a name that is typical for devotees of the gods Śiva or Viṣṇu rather than for Buddhists, and it is likely that he was simply a layman who came to Vikramaśīla in order to copy manuscripts for payment. Either Jinaśrīmitra would have taken him all the way to Nepal, which is a rather unlikely assumption, or he would have hired him in Nepal. The alternative that Mahīdhara was a local scribe cannot be excluded, but presupposes that he was able to write the manuscript in Proto-Bengali characters, although this was a skill much more typical of Eastern Indian scribes than natives of the Kathmandu Valley. Finally, it is known that palm-leaf manuscripts of such a large size became increasingly rare in Nepal after c. 1100.[64]

It is very likely that there were historical ties between the East Indian monastery and its Nepalese counterpart. It is hard to imagine that the very distinctive name of the Indian monastery was adopted by the monks of the Nepalese monastery by mere coincidence.[65] As a matter of fact, traditional accounts have it that Atiśa, who was a famous master at the Indian Vikramaśīla monastery and a key figure in the spreading of Buddhism to Tibet, founded the Nepalese counterpart when he crossed the Kathmandu Valley on his way to Tibet in the eleventh century. However, it seems very unlikely that both monasteries became so similar and closely intertwined in terms of organisation, manuscript production and actors involved in the process that the arguments against a Nepalese provenance of the Jinaśrīmitra manuscripts lose their validity. In my view, such a close resemblance would also imply that we should regard the relationship between the Indian monastery and its Nepalese namesake as being like that of an organisation's headquarters to its branch office. Even if this were the case, the present considerations regarding

[63] See n. 43.

[64] Trier (1972, 136) pointed out that the length of the manuscripts in Nepal greatly decreased throughout the centuries. His observation, which was based on a rather small number of manuscripts, can be easily verified and refined if one compares the length of the many dated Nepalese palm-leaf manuscripts that are contained in the title list of the *Nepal-German Manuscript Preservation Project* (http://mycms3.rrz.uni-hamburg.de/sfb950/content/NGMCP/ngmcp.xml; last date of access September 22, 2015). How the similar sizes of manuscripts II.17 and 18 can be interpreted will be clarified below.

[65] See n. 2 above on the origin of this name.

identification of the provenance of manuscripts would not be rendered pointless; they would simply have to be modified to refer to Vikramaśīla in the sense of a single institution located in two different places rather than in the sense of a specific monastic complex situated in Eastern India.

To return to the question as to whether there is any corroboration for the hypothesis of a common place of origin shared by the Jinaśrīmitra manuscripts (I.5–9) and all or most of the 18 manuscripts in group II, let us start by examining the **Lakṣaṇaṭīkā* manuscript (II.14) more closely. This manuscript is unique in the present group since it is the only one for which there is relatively clear indirect evidence that it was produced in Vikramaśīla. This item belongs to a whole set of manuscripts, the main peculiarity of which is that the Sanskrit texts are written in Tibetan *dbu med* rather than in an Indian script. Another item in this set (I.3) has already been briefly mentioned above as one of the manuscripts which contain an explicit reference to Vikramaśīla in their colophons. The scribe refers to himself by a Sanskrit name, namely Dharmakīrti, but in view of the script used, he must have been a Tibetan. Yonezawa identifies him as the translator Chos grags, who is known to have collaborated with the famous master Abhayākaragupta of Vikramaśīla (active c. 1100).[66] The manuscript is written on palm leaves of the same dimensions as the Jinaśrīmitra manuscripts and the 18 items in group II. The first folio pages of the **Lakṣaṇaṭīkā* manuscript (II.14) are written in Proto-Bengali, and only then does the script change to Tibetan. Strikingly, the layout familiar from the Jinaśrīmitra manuscripts is observed as long as the script remains Indian. This particular manuscript does not mention the name of the scribe or the place of origin in the colophons. However, apart from the evidence of the aforementioned Vikramaśīla manuscript (I.3), yet another manuscript in the set contains at least a reference to the same scribe, Dharmakīrti (= Chos grags). Under these circumstances, it is certainly not implausible to assume that the parts of the **Lakṣaṇaṭīkā* manuscript (II.14) which are written in Tibetan script can also be ascribed to the same copyist. As a matter of fact, Yonezawa[67] seems to be fairly convinced that all Tibetan *dbu med* text in these manuscripts is written in the same hand. If this is true, then it is very likely that Chos grags copied all of these manuscripts and hence also the *Lakṣaṇaṭīkā* manuscript (II.14) at Vikramaśīla. The Proto-Bengali part was probably copied by an Indian master or scribe from Vikramaśīla rather than by Chos grags. It is fairly certain in the present case that the place of copying really was the Indian monastery of Vikramaśīla and not the Nepalese monastery of the same name. The Eastern Buddhist monastery is well known for the fact that it was frequented by a great number of Tibetan students and scholars.[68] There is also evidence that a significant amount of Indian works were translated into Tibetan on site.[69] Most importantly, Abhayākaragupta, with whom Chos grags collaborated, resided at the Indian Vikramaśīla monastery. The fact that the Proto-Bengali sections observe the same layout as Jinaśrīmitra's manuscripts shows that this set of five is not the only instance of this feature occurring in Vikramaśīla.

A number of further arguments can be put forward in support of the association of several of the 18 manuscripts with Vikramaśīla. Taken alone, none of them can give us any certainty about Vikramaśīla as their place of origin, but taken together, they are certainly liable to corroborate our hypothesis. To begin with, it is remarkable that all five manuscripts found in modern times in Tibet rather than in Kathmandu have been deposited in the same Tibetan monastery, namely in Zha lu (II.9, 12–14, 18), as was the case with the Jinaśrīmitra manuscripts that were found in Tibet.[70] Regarding the type of texts copied, nearly half of the 18 manuscripts perfectly match the Jinaśrīmitra corpus and the character of Vikramaśīla as a stronghold of tantric practice and scholarship. In favour of the assumption that the two manuscripts from group II which deal with monastic law (II.12 and 13) may hail from Vikramaśīla, one can adduce that quite a few masters of Vikramaśīla were adherents of the school from which the texts contained in these manuscripts originate,[71] at least according to the

[66] Yonezawa 2014:1236f. Dharmakīrti is the literal Sanskrit equivalent of the Tibetan name Chos grags.

[67] Ibid.

[68] Dutt 1962, 362.

[69] Ibid.

[70] I touch here upon the question of how the fate of the manuscripts after they were taken from their East Indian origin may be used to corroborate our hypothesis on their relationship, but cite only the most simple argument one can adduce, since many more features of the manuscripts would have to be discussed at length in order to get the whole picture. This particular problem will be dealt with in much more detail in another publication which is currently in preparation.

[71] See Roth 1970, XVf., where the evidence is presented. At another place in the same work (ibid. XXV), Roth himself suggests the possibility that the manuscripts may have been written at the monastery of Vikramaśīla. However, he does not completely rule out the possibility that their place

Tibetan historian Tāranātha. Another possible link between our manuscripts and Vikramaśīla is the fact that many of the non-anonymous texts are known to have been composed by learned inhabitants of the monastery, namely by Bhavabhaṭṭa (II.3), Abhayākaragupta (II.4), Ratnākaraśānti (II.5, 17, 18) and Jñānaśrīmitra (II.9). In the case of the manuscript which contains a text written by Abhayākaragupta (II.4), it is noteworthy that the manuscript belongs to the twelfth century CE based on its script and that Abhayākaragupta was active around 1100. In this context, one may also refer to the above-mentioned observation that his Tibetan collaborator Chos grags seemingly used and produced very similar manuscripts while at Vikramaśīla. However, one should also consider the fact that the fame of the Indian teachers mentioned above spread far beyond their own monastery. One can hardly imagine that manuscripts containing their texts were only produced at Vikramaśīla. Finally, it is worth noting that *all* of the manuscripts examined using material analysis methods (I.4, the Jinaśrīmitra manuscripts I.5, 6 and 7, and II.1, 3, 4, 8, 15, 16 and 17) are characterised by the fact that the palm leaves seem to have been treated with arsenic before the writing process started and that mercury was added to the ink used for the primary text.[72] While the first practice was very common in South Asia (though not necessarily in the case of East Indian palm-leaf manuscripts), the admixture of mercury was, as mentioned above, relatively rare and may therefore be a further hint to the common origin of the manuscripts.

The question of whether the last four manuscripts in the second group (II.15–18) were produced at locations other than Vikramaśīla (which would be in accordance with the modified working hypothesis) remains complicated. Their different palaeographical features and the deviations regarding the layout may suggest they were. In the case of the last two manuscripts (II.17–18), which are characterised by being penned in a typical Nepalese script from the period under consideration – and perhaps also in the case of the manuscript which exhibits mixed palaeographical features (II.16) – this different location would probably have been the Kathmandu Valley. The fact that such large palm leaves became increasingly rare in Nepal from c. 1100 onwards (see above) may indicate that the blank palm leaves were brought to Nepal. Likewise, the admixture of mercury might imply that someone with a thorough knowledge of the material aspects of manuscript production at Vikramaśīla was involved in the preparation of the manuscripts, provided that the presence of mercury is not a mere coincidence. It is even possible that all three manuscripts (II.16–18) really were produced at the Nepalese Vikramaśīla monastery, perhaps after monks fled there in the course of the destruction[73] of the great monasteries of Eastern India around 1200.[74] Since one of these three manuscripts was found again in modern times in Zha lu, one can imagine that the Indian Vikramaśīla manuscripts were brought to the same place in the Kathmandu Valley and that part of the collection was brought to Tibet after the additional manuscript (II.18) had been produced. If one wants to identify all four deviating manuscripts (II.15–18) as original products of the Indian Vikramaśīla monastery, one has to presume that at least numbers II.17 and 18 were written by a visitor from Nepal (or, perhaps less likely, by a long-time resident of the monastery who hailed from Nepal). Similarly, some manuscripts were written in Tibetan script by a Tibetan visitor staying at Vikramaśīla (see above). The manuscript which exhibits strong traits of the hooked script (II.16) can also be interpreted as having been written by a Nepalese staying in Vikramaśīla (or perhaps by a person who hailed from another part of East India). At any rate, the assumption that this markedly different script was common among the people living in the area seems to be relatively unlikely. In the case of the

of origin is Nepal, since texts from this school of monastic law also played a certain role in Nepal and the use of Proto-Bengali does not necessarily render a Nepalese origin impossible.

72 For a detailed discussion of these features, see Delhey, Kindzorra, Hahn, and Rabin (2013-2014 [2015]).

73 Provided that the monks had enough time before the attack on their monastery and that blank palm leaves were available, it is only natural that, as active scholars, they would have tried to take not only important manuscripts with them on a long journey, but also some further writing materials.

74 The example of the monk Vibhūticandra is interesting in this regard: he spent a certain period of time at the Indian monastery of Vikramaśīla in the late twelfth century before subsequently going eastwards to the monastery of Jagaddala in Bengal. He then travelled to Tibet (together with Śākyaśrībhadra and Dānaśīla who were mentioned in the first part of this article), where he stayed for many years before settling down in Nepal. Finally, he became the abbot of the Nepalese monastery of Vikramaśīla (Steinkellner 2004, 9–12; Stearns 1996). There is no positive evidence to support his involvement in the production of our set of manuscripts, however. In Tibet, he wrote on the local writing material (which was paper) rather than on palm leaves, the material used in East India (see Steinkellner 2004, 12). It therefore seems highly improbable that he brought empty leaves to the Kathmandu Valley unless he brought them there on his way to Tibet (according to Steinkellner [2004, 10], he travelled to Tibet via Nepal, which was indeed the usual route, at least from locations in Bihar).

first of the four manuscripts (II.15), the latter alternative is certainly somewhat more probable.

3. Conclusion

It has long been known that ancient Indian Buddhist monastic universities such as Vikramaśīla were important centres of philosophical and religious scholarship and literary culture. Consequently, texts composed at these places have received a great deal of attention in text-based studies of ancient Indian culture and continue to do so.

However, acknowledging the importance of the material aspects of textual transmission in the form of manuscripts and the ways in which knowledge was physically organised in libraries and collections is a more recent trend. In the case of the library at Vikramaśīla, there is a deplorable dearth of archaeological evidence and historical information. It is therefore desirable to try and identify as many manuscripts of Vikramaśīla as possible among the Himalayan remains of these Eastern Indian and Nepalese collections – a study of the surviving manuscripts will help researchers gain an insight into the library practice. On the preceding pages, a first attempt has been made to proceed with this identification process.

It has been shown that in addition to the few and very different manuscripts with explicit colophons (I.1–5), a coherent set of five standardised manuscripts can be identified which were produced under the leadership of the scholar-monk Jinaśrīmitra (I.5–9). Moreover, a working hypothesis has been formulated suggesting that the first 14 items of another set (or perhaps even the whole set) of 18 manuscripts (group II), which follows similar standards to the aforementioned set, can likewise be attributed to the local manuscript culture of Vikramaśīla. Facts that seem to corroborate this hypothesis have also been discussed.

It is true to say that, except perhaps in the case of one of these 14 to 18 manuscripts, we are dealing with varying degrees of probability rather than with certainty when we allocate them to the monastery of Vikramaśīla. However, even if one adopts a very sceptical approach and postulates an unknown place of origin for many or even most of the manuscripts, the assemblage and study of this corpus of manuscripts is far from being a pointless undertaking. Since the similarities between these manuscripts and the ones produced at Vikramaśīla under the leadership of Jinaśrīmitra can hardly be the result of mere coincidence, we are at least dealing here with a certain standard of manuscript production which was adopted in several monasteries, including Vikramaśīla. The study of these materials remains instructive for our understanding of the role played by certain collections or sets of manuscripts in the regional Buddhist manuscript culture of Eastern India.

Comprehensive documentation and analysis of the palaeography, paratexts (such as the marginal remarks and corrections) and other codicological features of the whole corpus of manuscripts is nearing completion and will be presented in forthcoming publications. These contributions will be useful for further determination of the chronological and geographical relationship of our manuscripts and of their place in Sanskrit Buddhist manuscript culture. It is hoped that this research project will trigger not only additional palaeographical research, but also further similar studies of manuscript sets and local centres of manuscript culture. In view of the wealth of Himalayan remains of medieval Eastern Indian and Nepalese manuscript culture and the unsatisfactory state of research to date, this is certainly a desideratum.

Table 1: Manuscripts that can be shown to originate from the monastery of Vikramaśīla (group I) or can be hypothetically ascribed to Vikramaśīla (group II)

List no.	(Main) textual content	Subject matter	Shelf nos. or important catalogue entries	State of preservation	No. of (extant) folios
I.1	*Aṣṭasāhasrikā Prajñāpāramitā*	Mahāyāna scripture	British Library, London, Or. 6902	Complete?	337
I.2	*Pañcarakṣā*	Proto-Tantric scripture(s)	Luo 1985, pp. 61–65, no. 28	Incomplete	134
I.3	*Vinayasūtra* by Guṇaprabha	Monastic law	Sāṅkṛtyāyana 1937, no. 243; Bandurski 1994, no. 62 (a)	Complete	62
I.4	*Hevajratantrapiṇḍārthaṭīkā* (aka *Ṣaṭsāhasrikā*) by an author who claims to be the bodhisattva Vajragarbha	Commentary on a tantra (esoteric scripture)	KL 128	Incomplete	33
I.5	*Kalyāṇakāmadhenuvivaraṇa* ascribed to Nāgārjuna	Commentary on a tantra	Sāṅkṛtyāyana 1937, no. 304; Sferra 2009, 45 no. 31; folio 4 preserved in NAK 5-20	Complete	5
I.6	*Trisamayarājaṭīkā* by an unknown author	Commentary on a tantra	NAK 5-20; folio 4 in Sāṅkṛtyāyana 1937, no. 304; Sferra 2009, 45 no. 31	Incomplete	15
I.7	*Ratnāvalī Hevajrapañjikā* by Kamalanātha (aka Mañjuśrī)	Commentary on a tantra	KL 231	Complete	23
I.8	*Samājamaṇḍalopayikā* or *Viṃśatividhi* by Nāgabuddhi (aka Nāgabodhi)	Brief compendium of tantric ritual	Sāṅkṛtyāyana 1937, no. 302; Sferra 2009, 45, no. 33	Complete	7
I.9	*Vajrāmṛta(tantra)pañjikā* by Vimalabhadra	Commentary on a tantra	Sāṅkṛtyāyana 1937, no. 303	Complete	7
II.1	*Ḍākinīvajrapañjarapañjikā Tattvaviṣadā* by Mahāmatideva	Commentary on a tantra	NAK 5-20, NAK 5-23, KL 134	Complete	16
II.2	*Ḍākinīvajrapañjaraṭippati* by an unknown author	Commentary on a tantra	KL 230	Complete	8
II.3	*Catuṣpīṭhanibandha* by *Bhavabhaṭṭa*	Commentary on a tantra	KL 134, KL 231	Incomplete	46
II.4	*Buddhakapālamahātantraṭīkā Abhayapaddhati* by Abhayākaragupta	Commentary on a tantra	NAK 5-21, KL 134	Incomplete	23

List no.	(Approximate) size of the leaves (cm)	Layout	Script	Place of copying / donor (d.) or commissioner (c). / scribe (acc. to the colophons)
I.1	6.8 × 41	6 lines, 2 string holes; space cleared for them extends over all lines	'Calligraphic standard script'	Vikramaśīla / Sumatiśrīmitra (d.) / —
I.2	31.7 × 5.1	5 lines (no further information available)	?	Vikramaśīla / ? / —
I.3	56 × 5.5	5-6 lines, 2 string holes; space cleared for them interrupts line 3	Tibetan dbu med	Vikramaśīla / — / Dharmakīrti
I.4	29 × 5	6 lines, 1 string hole; space cleared for it extends over lines 3–4	Proto-Bengali	Vikramaśīla / Viśuddhirakṣita (c.) / —
I.5	56 × 5.5	7 lines; 2 string holes; space cleared for them interrupts lines 3–5 and corresponds in breadth to c. 5–6 letters	Proto-Bengali	Vikramaśīla / Jinaśrīmitra (c.) / Mahīdhara
I.6	56 × 5.5	Same as above	Proto-Bengali	— / Jinaśrīmitra (c.) / —
I.7	56 × 5.5	Same as above	Proto-Bengali	— / Jinaśrīmitra (c.) / —
I.8	56 × 5.5	Same as above	Proto-Bengali	— / Jinaśrīmitra (c.) / —
I.9	56 × 5.5	(Probably) same as above	Proto-Bengali	— / Jinaśrīmitra (c.) / —
II.1	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.2	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.3	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.4	56 × 5.5	Same as above	Proto-Bengali	— / — / —

List no.	(Main) textual content	Subject matter	Shelf nos. or important catalogue entries	State of preservation	No. of (extant) folios
II.5	*Guṇavatī Mahāmāyāṭīkā* by Ratnākaraśānti	Commentary on a tantra	KL 226	Complete	10
II.6	*Sampuṭatantraṭīkā (Prakaraṇārthanirṇaya)* by an unknown author	Commentary on a tantra	KL 228	Incomplete	11
II.7	*Katipayākṣarā Pañjikā* on the *Herukābhyudayamahāyoginītantra* by Kumāracandra	Commentary on a tantra	KL 229	Complete	10
II.8	*Laghutantraṭīkā* by an author who claims to be the bodhisattva Vajrapāṇi	Commentary on a tantra	KL 225 (and KL 134, which contains an earlier copy of one of the folios; see Almogi et al. [2014]; section 4.5)	Incomplete	29 (+1)
II.9	12 works of Jñānaśrīmitra	Treatises on Yogācāra philosophy and on logic and epistemology	Sāṅkṛtyāyana 1938, no. 337–349; Bandurski 1994, no. 24; Sferra 2009, 46, no. 40	Complete	208
II.10	*Pāramitāsamāsa* ascribed to Āryaśūra	Treatise on the traditional Mahāyāna way to salvation	NAK 5-145	Complete	10
II.11	*Abhidharmakośavyākhyā* (6th chapter) by Yaśomitra	Commentary on a summa of scholastic philosophy	NAK 5-145	Incomplete	1
II.12	*Bhikṣuṇīvinaya* (Mahāsāṃghika-Lokottaravādin recension)	Canonical monastic law as valid for nuns	Sāṅkṛtyāyana 1935, no. 12; Bandurski 1994, no. 55 (a); Sferra 2009, 46, no. 39	Complete	80
II.13	*Abhisamācārikā Dharmāḥ* (Mahāsāṃghika-Lokottaravādin)	Rules of conduct for monks	Sāṅkṛtyāyana 1935, no. 12; Bandurski 1994, no. 55 (b); Sferra 2009, 47, no. 43	Complete	50
II.14	**Lakṣaṇaṭīkā*	Commentary notes on treatises of Madhyamaka philosophy	Sāṅkṛtyāyana 1937, no. 245–247 (cf. Study Group 2001, 26f.)	Incomplete	15
II.15	*Cakrasaṃvarābhisamayapañjikā* by Prajñārakṣita	Commentary on a tantric text	NAK 5-20	Incomplete	5
II.16	*Abhisamayālaṃkārāloka* by Haribhadra	Commentary on a non-tantric Mahāyāna treatise	NAK 3-738	Incomplete	162
II.17	*Khasamā Ṭīkā* by Ratnākaraśānti	Commentary on a tantra	KL 227	Complete	10
II.18	*Rahaḥpradīpa* (*Sarvarahasyanibandha*) by Ratnākaraśānti	Commentary on a tantra	Sāṅkṛtyāyana 1937, no. 299; Sferra 2009, 45, no. 32	Complete	14

List no.	(Approximate) size of the leaves (cm)	Layout	Script	Place of copying / donor (d.) or commissioner (c). / scribe (acc. to the colophons)
II.5	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.6	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.7	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.8	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.9	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.10	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.11	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.12	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.13	56 × 5.5	Same as above	Proto-Bengali	— / — / —
II.14	56 × 5.5	Same as above (on the pages written in Proto-Bengali script)	Proto-Bengali / Tibetan dbu med	— / — / —
II.15	56 × 5.5	Predominantly as above, but deviations on two pages	Proto-Bengali	— / — / —
II.16	Slightly broader than usual	Predominantly as above, but deviations on some pages	Nepalese hooked script with Proto-Bengali features	— / — / —
II.17	56 × 5.5	As above in some cases, but deviations on many pages	Old Newari	— / — / —
II.18	56 × 5.5	As above in some cases, but deviations on many pages	Old Newari	— / — / —

REFERENCES

Almogi, Orna, Martin Delhey, Claire MacDonald, and Boryana Pouvkova (2013-2014 [2015]), 'Recovering Lost Text and Beyond: Multispectral Imaging for Text-related and Codicological Studies of Tibetan Paper and Sanskrit Palm-Leaf Manuscripts,' *Journal of the International Association of Buddhist Studies*, 36-37: 153-192.

Bandurski, Frank (1994), 'Übersicht über die Göttinger Sammlungen der von RĀHULA SĀṄKṚTYĀYANA in Tibet aufgefundenen buddhistischen Sanskrit-Texte (Funde buddhistischer Sanskrit-Handschriften, III)' in Frank Bandurski et al. (eds.), *Untersuchungen zur buddhistischen Literatur* [1. Folge] (Göttingen: Vandenhoeck & Ruprecht; Sanskrit-Wörterbuch der buddhistischen Texte aus den Turfan-Funden, Beiheft 5), 9–126.

Barnett, L. D. (1910), 'Notes on the Dynasties of Bengal and Nepal', *Journal of the Royal Asiatic Society of Great Britain and Ireland,* Jan., 1910: 150–151.

Bautze-Picron, Claudine (1998), 'The Elaboration of a Style: Eastern Indian Motifs and Forms in Early Tibetan (?) and Burmese Painting' in Deborah E. Klimburg-Salter and Eva Allinger (ed.), *The Inner Asian International Style, 12th–14th Centuries* (Wien: Verlag der Österreichischen Akademie der Wissenschaften; Proceedings of the 7th Seminar of the International Association for Tibetan Studies, Graz 1995, 7), 15–66.

Bazmee Ansari, A. S. (2015) 'al-Djūzdjānī', *Encyclopaedia of Islam, Second Edition.* Edited by: P. Bearman, Th. Bianquis, C. E. Bosworth, E. van Donzel, W.P. Heinrichs. (Brill Online, 2015. Reference. Staats- und Universitaetsbibliothek Hamburg. 22 January 2015 http://referenceworks.brillonline.com/entries/encyclopaedia-of-islam-2/al-d-j-u-zd-j-a-ni-SIM_2135. First appeared online: 2012; First print edition: isbn: 9789004161214, 1960–2007.)

Beal, Samuel, trans. (1914), *The Life of Hiuen-tsiang by the Shaman Hwui Li* (London: Kegan Paul, Trench, Trübner & Co. Ltd.; popular re-issue of the new edition from 1911).

Bendall, Cecil (1883), *Catalogue of the Buddhist Sanskrit Manuscripts in the University Library, Cambridge, With Introductory Notices and Illustrations of the Palaeography and Chronology of Nepal and Bengal* (Cambridge, University Press).

Bühler, Georg (1896), *Indische Palaeographie: Von circa 350 a. Chr. – circa 1300 p. Chr.* (Strassburg: Karl J. Trübner; Grundriss der indo-arischen Philologie und Altertumskunde, I.11).

Chimpa, Lama, and Alaka Chattopadhyaya, trans. (1990), *Tāranātha's History of Buddhism in India Translated from the Tibetan* (Delhi: Motilal Banarsidass, reprint, first published in 1970).

Delhey, Martin, Emanuel Kindzorra, Oliver Hahn, and Ira Rabin (2013-2014 [2015]), 'Material Analysis of Sanskrit Palm-Leaf Manuscripts Preserved in Nepal,' *Journal of the International Association of Buddhist Studies*, 36-37: 119 –152.

Dikshit, Rao Bahadur K.N. (1938), *Excavations at Paharpur, Bengal* (New Delhi: Archaeological Survey of India, 1938; reprint 1999; Memoirs of the Archaeological Survey of India, 55).

Dimitrov, Dragomir (2002), 'Tables of the Old Bengali Script (on the Basis of a Nepalese Manuscript of Daṇḍin's Kāvyādarśa)' in Dragomir Dimitrov, Ulrike Roesler and Roland Steiner (eds.), *Śikhisamuccaya: Indian and Tibetan Studies* (Collectanea Marpurgensia Indologica et Tibetologica; Vienna: Arbeitskreis für tibetische und buddhistische Studien; Wiener Studien zur Tibetologie und Buddhismuskunde, 53), 27–78.

Dutt, Sukumar (1962), *Buddhist Monks and Monasteries of India: Their History and Their Contribution to Indian Culture* (London: Allen and Unwin).

Ehrhard, Franz-Karl (2002), *Life and Travels of Lo-chen Bsod-nams Rgya-mtsho* (Lumbini: Lumbini International Research Institute; Lumbini International Research Institute, Monograph Series, 3).

Ehrhard, Franz-Karl (2004), 'Spiritual Relationships Between Rulers and Preceptors: The Three Journeys of Vanaratna (1384–1486) to Tibet,' in Christoph Cüppers (ed.), *The Relationship Between Religion and State (chos srid zung 'brel) in Traditional Tibet: Proceedings of a Seminar Held in Lumbini, Nepal, March 2000* (Lumbini: Lumbini International Research Institute; LIRI Seminar Proceeding Series, 1), 245–265.

Filliozat, Jean (1981), 'Sur le çivaïsme et le bouddhisme du Cambodge, à propos de deux livres récents', *Bulletin de l'Ecole française d'Extrême-Orient*, 70: 59–100.

Hollis, Howard (1939), 'A Nepalese Manuscript', *The Bulletin of the Cleveland Museum of Art*, 26.3: 31–33.

Hori Shin'ichirō (2015), 'Evidence of Buddhism in 15th Century Eastern India: Clues from the Colophon of a *Kālacakratantra* Manuscript in Old Bengali Script', *Indogaku Bukkyōgaku Kenkyū* 『印度學佛教學研究』(*Journal of Indian and Buddhist Studies)*, 63.3.

Huntington, Susan L., and John C. Huntington (1990), *Leaves from the Bodhi Tree: The Art of Pāla India (8th-12th centuries) and Its International Legacy* (Seattle and London: Dayton Art Institute in association with the University of Washington Press).

Isaacson, Harunaga (2008), 'Himalayan Encounter: The Teaching Lineage of the Marmopadeśa, Studies in the Vanaratna Codex 1', *manuscript cultures*, 1: 2–6.

Jackson, David P., ed. (1990), *Two Biographies of Śākyaśrībhadra: The Eulogy by Khro-phu Lo-tsā-ba and Its 'Commentary' by Bsod-nams-dpal-bzang-po* (Stuttgart: Franz Steiner; Tibetan and Indo-Tibetan Studies 4).

Jiang, Zhongxin, and Toru Tomabechi (1996), *The Pañcakramaṭippaṇī of Muniśrībhadra: Introduction and Romanized Sanskrit Text* (Bern etc.: Peter Lang; Schweizer Asiatische Studien, Monographien, 23).

de Jong, J.W. (1962), 'Review of Roerich 1959', *Indo-Iranian Journal,* 6: 167–173.

Kern, Hendrik (1896), *Manual of Indian Buddhism* (Strassburg: Karl J. Trübner; Grundriss der Indo-Arischen Philologie und Altertumskunde, 3.8).

Kim, Jinah (2013), *Receptable of the Sacred: Illustrated Manuscripts and the Buddhist Book Cult in South Asia* (Berkeley etc.: University of California Press).

Kosambi, D.D. and V.V. Gokhale, ed. (1957), *The Subhāṣitaratnakoṣa compiled by Vidyākara* (Cambridge, Mass.: Harvard University Press).

van der Kuijp, Leonard W.J. (1994), 'On the Lives of Śākyaśrībhadra (?–?1225)', *Journal of the American Oriental Society,* 114.4: 599–616.

Losty, Jeremiah P. (1982), *The Art of the Book in India* (London: The British Library).

—— (1989), 'Bengal, Bihar, Nepal? Problems of Provenance in the 12th-Century Illuminated Buddhist Manuscripts', *Oriental Art,* n.s., 35.2: 86–96 [part1] and 35.3: 140–149 [part 2].

Luo Zhao 罗炤 (1985), *Budala Gong suocang beiye jing mulu* (*Ganzhuer*) 布达拉宫所藏贝叶经目录 (甘珠尔) [A Catalogue of the Manuscripts Preserved at the Potala Palace (bka' 'gyur)] (unpublished manuscript, July 1985).

Majumdar, R.C., ed. (1943), *The History of Bengal,* vol. 1: *Hindu Period* (Dacca: University of Dacca).

Mayer, Alexander Leonhard (1992), *Xuanzang, Übersetzer und Heiliger* (Wiesbaden: Harrassowitz; Veröffentlichungen der Societas Uralo-Altaica, 34,1).

McKeown, Arthur Philip (2010), *From Bodhgayā to Lhasa to Beijing: The Life and Times of Śāriputra (c. 1335-1426), Last Abbot of Bodhgayā* (Ph.D. thesis, Harvard University).

Melzer, Gudrun, and Eva Allinger (2012), 'Die nepalesische Palmblatthandschrift der *Aṣṭasahasrikā Prajñāpāramitā* aus dem Jahr NS 268 (1148 AD), Teil II,' *Berliner Indologische Studien* 20: 249–276.

Niyogi, Puspa (1980), *Buddhism in Ancient Bengal* (Calcutta: Jijnasa).

Pal, Pratapaditya, and Julia Meech-Pekarik (1988), *Buddhist Book Illuminations* (Hongkong etc.: Ravi Kumar Publishers).

Raverty, H. G., trans. (1970), *Tabakat-i-Nasiri: A General History of the Muhammadan Dynasties of Asia* (New Delhi: Oriental Books Reprint Cooperation, first published 1881 by the Asiatic Society of Bengal).

Roerich, George, transl. (1959), *Biography of Dharmasvāmin (Chag-lo-tsa-ba Chos-rje-dpal), a Tibetan Monk Pilgrim* (Patna: K.P. Jayaswal Research Institute).

Roth, Gustav, ed. (1970), *Bhikṣuṇī-Vinaya* (Patna: K.P. Jayaswal Research Institute; Tibetan Sanskrit Works Series, 12).

Sanderson, Alexis (2009), 'The Śaiva Age: The Rise and Dominance of Śaivism During the Early Medieval Period' in Shingo Einoo (ed.), *Genesis and Development of Tantrism* (Tokyo: Institute of Oriental Culture), 41–350.

Sāṅkṛtyāyana Rāhula (1935), 'Sanskrit Palm-leaf Mss. in Tibet', *Journal of the Bihar and Orissa Research Society*, 21.1: 21–43.

—— (1937), 'Second Search of Sanskrit Palm-Leaf Mss. in Tibet [with Plates]', *Journal of the Bihar and Orissa Research Society*, 23.1: 1–57.

—— (1938), 'Search for Sanskrit Mss. in Tibet,' *Journal of the Bihar and Orissa Research Society*, 24.4: 137–163.

Shastri, Hirananda (1942), *Nalanda and Its Epigraphic Material* (Delhi: Manager of Publications; Memoirs of the Archaeological Survey of India, 66).

Shastri, Lobsang (2002), 'Activities of Indian Paṇḍitas in Tibet From the 14th to the 17th century', in Henk Blezer (ed.), *Tibet, Past and Present: Tibetan Studies I, PIATS 2000: Tibetan Studies: Proceedings of the Ninth Seminar of the International Association for Tibetan Studies, Leiden 2000* (Leiden etc.: Brill; Brill's Tibetan Studies Library, 2.1), 129–145.

Sferra, Francesco (2009), 'Sanskrit Manuscripts and Photographs of Sanskrit Manuscripts in Giuseppe Tucci's Collection', in Francesco Sferra (ed.), *Sanskrit Texts from Giuseppe Tucci's Collection: Part I* (Rome: Istituto Italiano per l'Africa e l'Oriente, 2008 [appeared in 2009]; Manuscripta Buddhica, 1), 15–78.

Stearns, Cyrus (1996), 'The Life and Tibetan Legacy of the Indian Mahāpaṇḍita Vibhūticandra', *Journal of the International Association of Buddhist Studies*, 19.1: 127–171.

Steinkellner, Ernst (2004), *A Tale of Leaves: On Sanskrit Manuscripts in Tibet, their Past and their Future* (Amsterdam: Royal Netherlands Academy of Arts and Sciences).

Study Group of Sanskrit Manuscripts in Tibetan dBu med Script (2001), *Introduction to the Facsimile Edition of a Collection of Sanskrit Palm-leaf Manuscripts in Tibetan dBu med Script* (Tokyo: The Institute for Comprehensive Studies of Buddhism, Taishō University). [Booklet attached to the facsimile edition. Downloadable from http://www.tais.ac.jp/related/labo/sobutsu/sobutsu_book/vinayasutra.html.]

Trier, Jesper (1972), *Ancient Paper of Nepal: Results of ethno-technological field-work on its manufacture, uses and history – with technical analyses of bast, paper and manuscripts* (Copenhagen: in commission at Gyldendal; Jutland Archaeological Society Publications 10).

Verardi, Giovanni (2011), *Hardships and Downfall of Buddhism in India* (New Delhi: Manohar Publishers & Distributors).

Verma, B. S. (2011), *Antichak Excavations 2: 1971–1981* (New Delhi: Archaeological Survey of India; Memoirs of the Archaeological Survey of India, 102).

Watanabe, Shigeaki, ed. (1998), *Sanskrit Manuscripts of Prajñākaragupta's Pramāṇavārttikabhāṣyam: Facsimile Edition* (Patna, Narita: Bihar Research Society and Naritasan Institute for Buddhist Studies).

Weissenborn, Karen (2012), 'Eine Auflistung illuminierter buddhistischer Sanskrit-Handschriften aus Ostindien', *Berliner Indologische Studien*, 20: 277–318.

Wink, André (1997), *Al-Hind: The Making of the Indo-Islamic World*, vol. 2 (Leiden etc.: Brill).

Yonezawa, Yoshiyasu (2014), 'A Survey of the *Lakṣaṇaṭīkā', *Indogaku Bukkyōgaku Kenkyū* 『印度學佛教學研究』(*Journal of Indian and Buddhist Studies)*, 62.3:1236–1242.

Zongtse, Champa Thupten, ed. (1981), *The Biography of Chag Lo-tsā-ba Chos rje dpal (Dharmasvāmin)* (New Delhi: International Academy of Indian Culture; Śata-Piṭaka Series, 266).

PICTURE CREDITS

Figs. 1, 2, 6: © Author.

Figs. 3, 4, 5: © National Archives, Kathmandu.

Article

Introduction to the History, Use and Function of Chinese Book Collectors' Seals*

Max Jakob Fölster | Hamburg

Many old Chinese books (both printed ones and manuscripts) bear red stamps on them (see figs. 1 and 2, for example). These are imprints of what is conventionally called 'seals' (*yinzhang* 印章). Book collectors' seals (*cangshuyin* 藏書印)[1] – one special kind of seal in China – are often compared to European bookplates or *ex libris*. In fact, some Western scholars even use the term '*ex libris* seals' for them.[2] The two have a number of common features: they are not merely marks of ownership, but have developed into a form of art in their own right, which could be used by collectors to express their personality.[3] Despite these similarities, however, there are also a number of important differences: bookplates are a product of the age of printing in Europe, while Chinese book collectors' seals are not exclusively confined to printed books.[4] Bookplates only came into use around 1470 and were essentially printed for the most part.[5] China, on the other hand, has a very long tradition of using seals to mark books and other collectibles, especially paintings and pieces of calligraphy. This dates back to at least the sixth century.[6] What further distinguishes Chinese book collectors' seals from European *ex libris* is the common practice among collectors of adding their seal imprint to those of previous owners.[7] This sometimes resulted in large numbers of imprints being made in a single book. Not only can such imprints be used to identify the various owners of a book, but they are also an important source of information in the difficult task of authentication and open up the possibility of revealing which books once belonged to a specific collector if the person did not happen to draw up or bequeath a catalogue of the works in his collection.

This article is intended to provide a general introduction to Chinese book collectors' seals since these have not been the subject of much attention in Western scholarship so far. To this end, I have drawn on the rich Chinese secondary literature on this topic and have tried to include as many direct references to primary sources as possible.[8] Needless to say, this paper is still a mere outline and is by no means exhaustive. The article

* The research for this paper was sponsored by the German Research Foundation (Deutsche Forschungsgemeinschaft), SFB 950: 'Manuscript Cultures in Asia, Africa and Europe', and undertaken within the scope of the Centre for the Study of Manuscript Cultures. I am indebted to Prof Michael Friedrich, the participants of his doctoral colloquium and my colleagues Lin Hang 林航 and Imre Galambos for their numerous helpful comments and corrections on earlier drafts.

[1] *Cangshuyin* is the designation used most commonly today; other terms are *cangshuzhang* 藏書章 or *cangshu yinzhang* 藏書印章. Historically used terms include *tushuji* 圖書記 ('bookmark') as well as terms that may also be used for seals in general such as *tuyin* 圖印, *tuji* 圖記, *tuzhang* 圖章, *tushu* 圖書 and *yinji* 印記. See also Lai Fushun 1991, 137.

[2] Van Gulik 1958, 425; Edgren 1997, 59; Edgren 2006, 197.

[3] There are a number of studies comparing the two: Huang Zhiguang 2011; Liu Zhong et al. 2001; Wang Dongming 1987; Qian Jun 1998, 78–101. *Ex libris* (*cangshupiao* 藏書票) only came into use in China in the early twentieth century (Li Yunjing 2000).

[4] Regarding the origin of Western bookplates, it has been argued that since 'printed books had lost their unique character, it was now necessary to provide a designation of individual possession to protect them from theft or even only confusion' (Wolf 1993, 14). Chinese seals have also been identified as technical precursors of printing technology (Tsien 1985, 136–139).

[5] Pearson 1994, 12–96. The common habit of inscribing one's name in a book is much older, of course. In Western Europe, such inscriptions are attested since the twelfth century (at least). On ownership statements in the Islamic world, including the use of seals, see Gacek 1987 and Liebrenz 2011.

[6] In the field of art history, seals are a well-known phenomenon and an important way of authenticating paintings; see van Gulik 1958, 417–457; Contag and Wang 1966; Zhuang Yan et al. 1964.

[7] This use is not only restricted to China. In fact, it can be said that book collectors' seals are characteristic of East Asian books in general (Kornicki 1998, 398). Apart from China, a great deal of research on book collectors' seals has also been conducted in Japan, e.g. Ono 1943/1954, Watanabe and Gotō 2001 and Kokuritsu kokkai toshokan 2002. See also Lin Shenqing 2000b and Lai Fushun 1991, 151–152 for an overview of the relevant Japanese publications.

[8] Since the completion of this article two book-length studies on the topic of Chinese book collectors' seals have been published: Wang Yuelin 2014; Wu Qinfang, Xie Quan 2015.

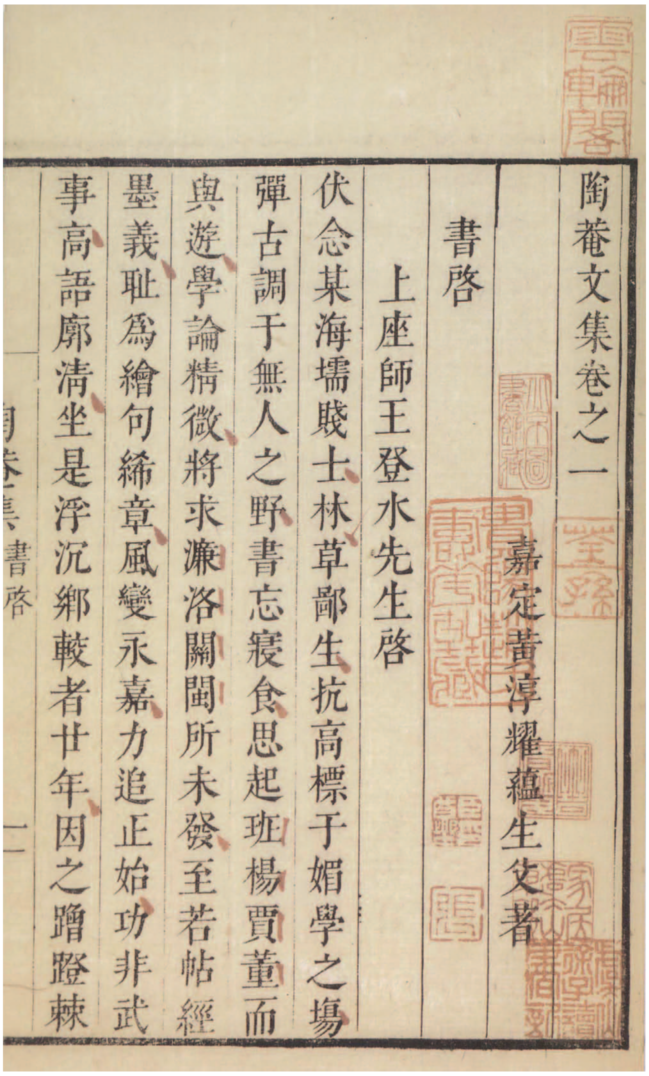

陶菴文集卷之一
嘉定黃淳耀蘊生父著
書啓
上座師王登水先生啓
伏念某海壖賤士林草鄙生抗高標于媚學之場
彈古調于無人之野書忘寢食思起班楊賈董而
與遊學論精微將求濂洛關閩所未發至若帖經
墨義耻爲繪句絺章風變永嘉力追正始功非武
事高語廓清坐是浮沉鄉較者廿年因之蹭蹬棘

Fig. 1: Print (Kangxi, 1662–1722) of the 'Selected Writings by Tao An'.

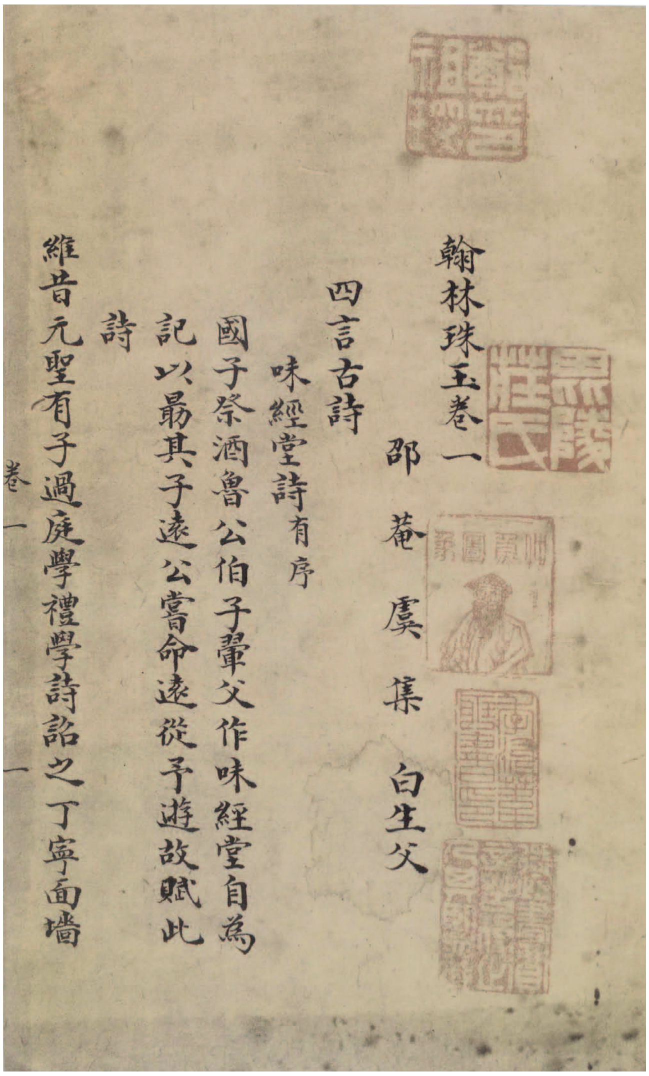

翰林珠玉卷一
邵菴虞集白生父
四言古詩
味經堂詩有序
國子祭酒魯公伯子翬父作味經堂自爲
記以易其子遠公嘗命遠從予遊故賦此
詩
維昔元聖有子過庭學禮學詩詒之丁寧面墻
卷一 一

Fig. 2: Manuscript (Qing, 1644–1911) of the 'Literary Treasures of the Hanlin Academy'.

consists of five parts. As book collectors' seals are just one specific way in which seals were used in China in bygone days, the first part provides a brief overview of Chinese seals in general. Part two, which is divided into two sections, provides a chronological presentation of the history of Chinese book collectors' seals. Section one covers the beginnings up to the eleventh century, a period in which there seems to be no clearly defined boundary between seals used exclusively for books and those used on other objects. It is only in the eleventh century that we find more concrete evidence of seals being used exclusively in books. This is the subject of section two, which traces developments up to the present day. Part three is concerned with the places where seals were applied in books and includes a description of certain rules for affixing such imprints. Part four discusses the rich variety of seal legends one encounters. Finally, part five discusses the purpose of books collectors' seals beyond being mere marks of ownership.

1. Chinese seals

The use of seals in China has a long history and book collectors' seals are just one specific area of application. In terms of their size and shape, book collectors' seals are no different than any other seals, therefore it will be helpful to give a brief overview of Chinese seals in general to begin with.[9] Although the origins are still disputed among scholars, judging by the many archaeological finds dating back to the fifth to third century BCE, it is safe to assume that seals were already in wide use at this time.[10] They were employed in official and private settings from early on. Institutional seals served to authenticate official

[9] The most extensive work on Chinese seals in a Western language is still Wagner 1994. A recent Chinese publication by Sun Weizu 2010 has been translated into English: Sun 2010. Van Gulik 1958, 417–457, is still very useful. On the early history, see also Veit 1985. Short general introductions are provided by Lauer 1996 and Wagner 1997.

[10] Wagner 1994, 83–107; 1997, 205. See also Veit 1985.

documents such as deeds and were also a symbol of authority. No official was deemed to be in possession of executive power before he had adopted the seals of office used by his predecessor.[11] Private or personal seals could be used in business contracts as a way of providing a degree of security for both parties. In the eleventh century, private seals started to be used as signatures.[12] Besides the more utilitarian purpose of seals as tokens of proof and trust, painters now started to sign their artwork this way.[13] Later, in the fifteenth and sixteenth century, private seals even developed into specimens of fine art. Seal cutting (*zhuanke* 刻篆), or the art of the 'iron brush' (*tiebi* 筆鐵), was referred to as 'the sister of calligraphy'.[14] It has remained a vibrant form of art to this day and has many admirers in East Asia.[15]

Nowadays, the common word for 'seal' in Chinese, *yinzhang* (印章), is often used to designate a seal as an object, i.e. as a tool, as well as meaning the imprint it makes.[16] A variety of materials were used to make such a tool. For a long period in Chinese history, bronze was the standard material employed in official and private seals. Precious metals like gold and silver were reserved for high-ranking officials and generals, while jade was only allowed to be used by the Emperor.[17] As of the fifteenth century, the use of relatively soft stones also became popular. This material made it possible for the literati, i.e. members of the educated elite, not only to design seals, but to produce them themselves. Before this became possible, the production of seals was limited to specialised craftsmen who cast or engraved bronze seals and carved hard materials like jade with the aid of special implements. Soft stones, on the other hand, could be cut easily with a seal knife (a kind of sharpened chisel, actually).[18]

The area for carving the seal – the seal face – is essential for the seal imprint. This is what is used to imprint the seal legend (*yinwen* 印文) on different bases. Early seals were impressed on clay. These 'sealing clays' (*fengni* 封泥), as they are known, were used to seal letters and documents. Since it is impossible to attach clay directly to bamboo or wood, which were writing supports that were commonly used at the time, they were usually affixed with the help of a cord.[19] With the gradual shift to paper as writing support in the third or fourth century CE,[20] however, seals were able to be impressed directly on the material after having been inked with a red pigment. In the beginning, water-based ink was used for this purpose. Honey was added later to attain a thick, plastic substance that allowed an exact impression to be made and prevented any smearing from occurring. From the early twelfth century onwards, further improved oil-based ink pastes were used.[21] Red was probably the preferred colour because the seal could be impressed over writing in black ink without obliterating it. Other colours like black were only used during periods of mourning, while blue was only to be used in the event of an emperor's death.[22]

Seal legends generally have either Chinese characters or a pictorial design on them – or a combination of both. Legends only containing characters make up the vast majority of imprints as most seals are actually name seals (names of individual people, offices or institutions). The number of characters ranges from one to over a hundred in rare cases, though four characters are particularly common. This has to do with the nature of Chinese personal names, the vast majority of which consist of two or three characters.[23] Frequently the character for the word 'seal' (*yin* 印) has been added. In a two-character name, a further character (the genitive particle *zhi* 之) is added in between, thus making up to four characters in all (see fig. 3). The order of the characters commonly follows the customary writing direction in China, i.e. vertically from right to left. However, so-called reversed seals (*huiwen yin* 回文印) are also not uncommon, especially for seals bearing a personal name,

11 Van Gulik 1958, 419, 425.

12 Wagner 1997, 209, 211.

13 Wagner 1994, 140.

14 Van Gulik 1958, 417, 429; Wagner 1997, 207.

15 In 2009, the art of Chinese seal engraving was included in the *Representative List of the Intangible Cultural Heritage of Humanity*: http://www.unesco.org/culture/ich/index.php?lg=en&pg=00011&RL=00217 (accessed on 21 Jan. 2014).

16 On the historical development of terms used to denote seals, see Wagner 1994, 114–128, 139. See also Veit 1985, 99–103.

17 Wagner 1994, 264–268; 1997, 210.

18 Van Gulik 1958, 429f.; Wagner 1994, 277–281; 1997, 210–211. For details of the production techniques, see Wagner 1994, 316–346.

19 Veit 1985, 10–11; Wagner 1994, 282–290; 1997, 209. For more information on sealing clays, see Sun Weizu 2002 and Tsien 2004, 57–61.

20 Tsien 1985, 42–47.

21 Van Gulik 1958, 420–421; Wagner 1994, 291–298.

22 Wagner 1997, 207.

23 On Chinese names, see Bauer 1959 and Jones 1997.

之 安
印 國

Fig. 3: 'Seal of An Guo' (*An Guo zhi yin*) . Personal seal of An Guo (1481–1534).

慎 查
行 印

Fig. 4: 'Cha Shenxing's Seal' (*Cha Shenxing yin*). Personal seal of Cha Shenxing (1650–1727).

Fig. 5: Imprints of the 'Seal of Yongxing prefecture' (*Yongxing jun yin*) on the back of *Za'apitanxin lun*.

郡 永
印 興

Fig. 6: 'Seal of Yongxing prefecture' (*Yongxing jun yin*).

because this allows the family name and the given name to be depicted in separate columns (see fig. 4).[24]

There is no rule about what script to apply for seal legends, but the *zhuanshu* 篆書 is by far the most common, which is also the reason why it is generally translated as 'seal script'. This script goes back to what was allegedly the commonly used script up to the third century BCE when it was gradually replaced by the more convenient clerical script (*lishu* 書隸). Subsequently it was mainly reserved for inscriptions on stelae (mostly just the headings) and on mirrors, bronze objects, roof tiles and seals.[25] Other scripts employed include the 'nine-folded style' (*jiudie wen* 九疊文) for official seals and the standard script (*kaishu* 楷書). Seals using other writing systems such as the Mongolian or the Manchu script are also prevalent.[26]

The legend could either be cut in intaglio, the characters appearing in white on a red background (*baiwen* 白文), or in relief with the characters in red on a white background (*zhuwen* 朱文). A combination of both styles in one legend was also possible. There is a wide range of forms – round, oval, heart-shaped, angular, etc. – but rectangular and square forms are by far the most prominent, both for private and official seals.[27] The size of seals can vary from less than 2.5 cm across to around 10 cm. There were strict regulations for official seals, which changed substantially over time. The normal size for official seals of the Han dynasty (206 BCE–220 CE) was one *cun* 寸 (approx. 2.3–2.5 cm), but they were generally larger from the seventh century onwards. Again, there were no rules regarding private seals, but even so, very large private seals are rather uncommon.[28]

2.1. The history of book collectors' seals – from the beginning to the eleventh century

When exactly book collectors' seals first came into use is difficult to say. The oldest extant seal imprint on paper is found on a manuscript from Dunhuang 敦煌, an incomplete scroll with a copy of the *Samyuktābhidharma-hṛdaya-śāstra* (*Za'apitanxin lun* 雜阿毗曇心論), a Buddhist text translated into Chinese by Samghavarman 僧伽跋摩 sometime after 478. The imprint stems from a seal cut in a relief with a size of 5.4 x 5.4 cm. It is found on the back and at the end of the scroll and reads 'Seal of Yongxing Prefecture (永興郡印)' (see figs. 5 and 6).[29] Luo Fuyi 羅福頤 (1905-1981), who first mentioned it, dated it to the Southern Qi dynasty (479–502) since the dynastic history notes that a Yongxing prefecture was established in Ningzhou 州寧 (modern Yunnan) in the year 494.[30] However, this dating has been challenged by several scholars, who all place it in the sixth century. They remark that the style and size of the seal correspond to the larger official seals that came into use during the Sui dynasty (581–618). Most importantly, they have pointed to the fact that the majority of manuscripts from Dunhuang originated

[24] Wagner 1994, 235–240; 1997, 208.

[25] Ledderose 1970, 3–4, 17. The development and use of the script is much more complicated, of course. For a detailed study on the development of the seal script, see Veit 1985, which is now a little outdated, though, due to the growing archeological evidence uncovered in recent decades. For details of more recent studies on the development of the Chinese script, see Qiu 2000, 59–149 and Galambos 2006.

[26] Wagner 1994, 63–64, 477–481, 483–486.

[27] Wagner 1994, 234–245. For an overview of the variety of forms, see van Gulik 1958, 440–442.

[28] Wagner 1994, 461–463, 472–474.

[29] *Guojia tushuguan*: BD 14711 (*Guojia tushuguan cang Dunhuang yishu* 2010, vol. 132: 167).

[30] Luo Fuyi 1981, 71–72. *Nan Qi shu* 15:305–306. *Zhongguo lishi diming dacidian* 1995, 325.

from the surrounding area and that it is rather unlikely that a manuscript from a place as far away as Yunnan in the south-west found its way to Dunhuang in the north-west. Furthermore, they found textual evidence that Dunhuang belonged to a Yongxing prefecture in the period from 561 to 583.[31] However, this evidently is an official seal whose use was probably not confined to books alone.

It is quite obvious that the emergence of collectors' seals is closely related to the shift to paper as a writing support. Although specimens of paper have been discovered from as early as the Western Han (206 BCE–9 CE), it was not until the fourth or fifth century CE that paper became the dominant writing material.[32] Nonetheless, some scholars have dated the emergence of collectors' seals to the Western Han.[33] The evidence presented by them is not very convincing, though. One scholar's argumentation is solely based on an anecdote that cannot be attested in any historical sources. According to this, Liu Xiang 劉向 (77–8 BCE) once lent a rare book to his friend Ji Xiangru 稽相如 who took great pleasure in the book and therefore had a seal cut for it bearing the legend 'The addiction to books and the love of money are one and the same kind of greed; scholars store books like merchants store money (嗜書好貨，同為一貪，賈藏貨貝，儒為此耳)'.[34] Another scholar mentions two examples of excavated seals dated to the Western Han, which are said to have shown traces of red ink on the seal's face. This, together with the few early paper specimens we know of, is taken as proof of the practice of impressing seals with red ink onto paper.[35] However, these traces could just as well have come from coloured clay as it is known that different colours of clay were used for different purposes.[36] Finally, it has been rightly argued that, apart from the lack of textual and physical evidence, it is technically impossible to permanently apply seals with red ink on them to wood or bamboo, which were commonly used for writing during the Han period.[37]

Philological evidence suggests that collectors were putting seals on paintings by the late third century. Zhang Yanyuan 張彥遠 (c. 815–after 875) mentions this in his *Record of the Painters of All the Dynasties* (*Lidai minghua ji* 歷代名畫記):

> 諸好事家印，有東晉僕射周顗印，古小雌字。
>
> Seals of various amateurs of the arts. [Among them] is the seal of the Vice President of the Department of State Affairs Zhou Yi (269–322) of the Eastern Jin dynasty, with antique small female (i.e. intaglio) characters.[38]

These seals probably developed from signatures which were added when admiring the paintings.[39] The earliest archaeological evidence of a collector's seal, not just the imprint, was found in a tomb dated to 845: a seal with the legend '*Bohai tushu* 渤海圖書' was found in the tomb of a certain Li Cun 李存. The epitaph describes the tomb owner as a bibliophile, hence the seal has been interpreted as a book collector's seal.[40]

---

31 Nonetheless, there are minor discrepancies in the exact dating: Yuan Shi 1994 and Zhang Xiying 2000 both date the seal to the years 581 to 583 since it clearly resembles other known seals of the Sui dynasty (581–618). Li Zhitan 2010, on the other hand, dates it to the years 561 to 574 by drawing attention to the persecution of Buddhism under Emperor Wu of the Northern Zhou (557–581) as of 574. Shen Leping 2012, 96 suggests the years 578 to 581, i.e. after the death of Emperor Wu and before the establishment of the Sui.

32 Tsien 1985, 42–47; Pan Jixing 1979, 25–30, 52–61.

33 Wang Aixi 2002, 48; Xiong Yan 2003, 60; Wang Dongming 1987, 44. Other scholars, however, duly admit that there is no evidence of this: Liu Ning et al. 2007, 77; Yang Yanyan 2011, 57.

34 Wang Dongming 1987, 44. The anecdote states that although Liu Xiang repeatedly tried to reclaim his book, Ji refused to return it. In the end, Liu Xiang appealed to Emperor Cheng 成帝 (r. 33–7 BCE), with the result that the book was ultimately incorporated into the imperial collection. Liu Xiang and Emperor Cheng are well-known and well-attested historical figures, but I was unable to identify any person named Ji Xiangru. What's more, the allegedly lent-out ancient book entitled *Dengqian suilu* 燈前隨錄 is not attested anywhere. With a minor exception, the alleged legend of the seal is a combination of expressions found in Xu Fei's 許棐 (?–1249) *Meiwu shumu xu* 梅屋書目序 (in: *Xianchou ji* 獻醜集2A/3B) and Fei Gun's 费衮 *Liangxi manzhi* 梁谿漫志 3:29. At best, the anecdote is a much later fictive story, if not entirely the product of Wang Dongming's imagination, as he fails to provide any references. It has nonetheless found its way into a recent popular work on the history of books: Cai Jiayuan 2012, 46.

35 Zhang Xiying 2000, 158–159. Cao Jinyan 2002, 21–23 gives a more cautious interpretation. Drawing on additional textual and archeological evidence, he argues that seals were already being applied on silk during the Han period. Among the manuscripts from Dunhuang there is indeed an example of a silk fragment with a seal imprint (British Library Or.8211/539a; Chavannes 1913, No. 539, p. 118), but this should not be taken as an example of a book collector's seal.

36 Wagner 1994, 287.

37 Hua Jifen 2004, 105. Clay seals were predominantly used to seal books off and were not directly stamped onto writing material (Wagner 1994, 282–283).

38 *Lidai minghua ji* 3:42 (translation: Acker 1954, 232).

39 Sha Menghai 1987, 73; Hua Jifen 2004, 105. *Lidai minghua ji* 3:37 (translation: Acker 1954, 216) mentions the 'ornamental signatures of the connoisseurs and art experts of the time (當時鑒識藝人押署)'.

40 Jia Zhigang 2011, 86. There is yet another excavated seal, which probably

Chinese scholars generally agree that collectors' seals had become widely used by the beginning of the seventh century.[41] Again, this is based on Zhang Yanyuan's findings – he clearly states that official collectors' seals were not in use until the early seventh century:

前代御府，自晉宋至周隋，收聚圖畫，皆未行印記[...]。

In the Imperial Storehouse of former dynasties – from Jin and Song times down to the (later) Zhou and Sui (c. middle third century to early seventh) – it was not yet the practice to affix seals to the paintings assembled in them [...].[42]

However, according to Zhang, the early Tang emperors used seals not only for paintings (*tuhua* 圖畫), but also for books (*shu* 書) in their collection. As the word *shu,* stemming from the meaning 'to write', can be used to denote anything written,[43] a clear distinction between manuscript books and calligraphies as pieces of art is not possible. Zhang further mentions the Emperor's private seals as well as official seals of different imperial institutions:

太宗皇帝自書貞觀二小字作二小印，貞觀。玄宗皇帝自書開元二小字成一印，開元。又有集賢印、祕閣印、翰林印。{各以判司所収掌圖書定印。}[...]又有弘文之印，恐是東觀舊印。印書者，其印至小。

Emperor Taizong (598–649) had the two small characters *zhen* (true) and *guan* (contemplation) written in his own hand made into two small seals, *zhenguan*. Emperor Xuanzong (685–762) had the two small characters *kai* (to open) and *yuan* (origin) made into a seal written in his own hand: *kaiyuan*. Also there are the seals of the [Hall of the] Assembled Worthies, of the Secret Pavilion, and of the Academy of the Forest of Writing Brushes. {[Gloss:] In each case the pictures and books received and cared for by the authorities [of these institutions] were stamped with these seals.} […]. There are also seals [with the characters] *Hongwen* (standing for Hongwen guan, i.e. College for the Development of Literature). I suppose that these were old seals from the Eastern Tower. Those used for stamping books are very small.[44]

The general practice of applying seals to pictures and books at the Tang court is also attested in a poem by Wang Jian 王建 (767–830):

集賢殿内圖書滿 / 點勘頭邊御印同 / 真跡進來依數字 / 別收鎖在玉函中[45]

The Hall of the Assembled Worthies is full of pictures and books / Carefully examining their front, the imperial seal is identical / Authentic works enter according to the amount of characters / They are separately gathered and locked in jade caskets.

However, evidence from administrative sources suggests that the practice of affixing seals to books in the imperial collection of the Tang was discontinued at some point, probably due to the disruptive An Lushan 安祿山 rebellion (755–763). At least, this is suggested by two memorials from the early ninth century, in which the casting of new seals for this purpose is requested:

長慶三年四月，祕書少監李隨奏。當省請置祕書閣圖書印一面，伏以當省御書正本。開元天寶以前，並有小印印縫。自兵難以來，書印失墜。今所寫經史，都無記驗。伏請鑄造，勅旨依奏。[46]

In the fourth month of the third year of the Changqing era (823), Li Sui, Vice-Director of the Palace Library, memorialised the Emperor: 'This department (i.e. *bishu sheng* 祕書省, Palace Library) requests to set up a Palace Library book seal to imprint the originals of the imperial books in this department. Before the eras of Kaiyuan (713–

also dates back to the Tang dynasty, with the legend '*Wuwei xiyu tushu* 武威習御圖書'. This has also been interpreted as a book collector's seal. See also Shen Leping 2013, 103.

[41] Wang Jing 1979, 59; Cao Zhi 1992, 490; Xu Xi 1995, 58; Lin Shenqing 1997, 1; Hua Jifen 2004, 105; Bai Shuchun 2011, 62; Cheng Qianfan, Xu Youfu 1998, 364; Sun Xuelei et al. 2004, vol. 1: 3–4.

[42] *Lidai minghua ji* 3:37 (translation, modified: Acker 1954, 216).

[43] Cha Qisen 1994, 27.

[44] *Lidai minghua ji* 3:42 (translation, modified: Acker 1954, 231–232). On the institutions mentioned here, which all had libraries of their own, see Drège 1991, 70–82. The two emperors' private seals are very famous (Wagner 1994, 133). For reproduced imprints of these, see Zhong Yinlan 2008, 403, 416.

[45] *Yuding Quan Tang shi* 302:2B, in: *Siku quanshu* 1426, 57.

[46] *Tang huiyao* 65:1125.

741) and Tianbao (742–756), a small seal had to be imprinted on the seam. This book seal has been lost ever since the chaos of war (i.e. the An Lushan rebellion, 755–763). None of the canonical and historical works copied today have any marks on them. I therefore humbly request to cast one.' An imperial decree approved the request.

開成元年四月，集賢殿御書院請鑄小印一面，以御書為印文，從之。[47]

In the fourth month of the first year of the era Kaicheng (836), the Imperial Academy of the Hall of the Assembled Worthies requested to cast one small seal with 'imperial book' as its legend. The request was approved.

According to Zhang Yanyuan, private collectors also embraced this practice. He lists a number of private seals, eight of which have the character *shu* 書 in their legend.[48] This probably indicates their use as book collectors' seals. The term *tushu* 圖書 is often employed in the legends, as in the case of the excavated seal belonging to Li Cun, which has been mentioned above.[49] Also a generic term for books in general, this has frequently been interpreted as an alternative colloquial term for private seals.[50] Others believe the term is used to highlight the function of the seal, being used exclusively for pictures (*tu*) and books (*shu*).[51] This reinforces the assumption that no collectors' seals were used exclusively for books initially. However, an absolute distinction between picture (*tu*) and writing (*shu*) seems doubtful anyway. Maggie Bickford, for instance, although working on slightly later material, has shown that what modern scholars classify as pictures are actually illustrated manuscripts.[52] Furthermore, the term *tu* 'might designate almost any form of graphic representation including charts, diagrams, maps and illustrations in general'.[53] The *locus classicus* for the concept of *tu* in the *Book of Changes* (*Yijing* 易經) also mentions *shu* at the same time: 'The [Yellow] River brought forth a chart (*tu*) and the Luo [River] brought forth a writing (*shu*); the sages took these as models (河出圖，洛出書，聖人則之)'.[54] This shows the close connection between the two.[55]

'Sutra collecting seals' (*cangjingyin* 藏經印) from Buddhist monasteries are yet another case. Imprints of these are found on some of the Dunhuang manuscripts. Seals of eight different monasteries have been identified and are said to have been in use from the seventh to the early eleventh century.[56] They were probably reserved for marking scriptures once kept in the monastic libraries.[57] Among the Dunhuang manuscripts there are also numerous imprints of the 'Seal of the great sutras of Gua and Sha Prefectures (瓜沙州大垩印)'. This is only found on copies of sutras and is believed to have been the ownership mark of a private collector.[58]

[47] *Tang huiyao* 64:1121.

[48] *Lidai minghua ji* 3:42–46 (translation Acker 1954, 232–240). The eight seals are: *Pengcheng hou shuhua ji* 彭城侯書畫記, *Liushi shuyin* 劉氏書印, *Shuyin* 書印, *Ye hou tushu kezhang* 鄴侯圖書刻章, *Mashi tushu* 馬氏圖書, *Xiao gong shuyin* 蕭公書印, *Chushi shuyin* 褚氏書印 and *Yuanshu* 遠書. Zhang Yanyuan was unable to identify the collectors of the last three, while only Li Bi 李泌 (722–789), the owner of the second seal, is known to have collected works (see Fan Fengshu 2009, 39, 42). Further evidence of the use of book collectors' seals by private collectors is found in a poem by Pi Rixiu 皮日休 (c. 834–883): 'Lu Wang xiti shuyin nang fenghe ciyun 魯望戲題書印囊奉和次韻' (*Yuding Quan Tang shi* 615:5A, in: *Siku quanshu* 1429, 219).

[49] Apart from the two excavated seals (Jia Zhigang 2011, 86), one also finds a seal imprint with the legend '*Xuanyushi tushu yin* 宣諭使圖書印' on some Dunhuang manuscripts. See Shen Leping 2013, 102–103.

[50] Bai Shuchun 2011, 62. According to Wagner 1994, 133, 139, it originally only denoted book collectors' seals. Later on, it also became a general term for seals. Sha Menghai thinks this usage of the term is inadequate (Sha Menghai 1987, 16, 73–74). A similar verdict is found in *Yindian* 印典 (5:24A, in: *Siku quanshu* 839, 926), where the origins of the term are traced back to Song times.

[51] Cao Jinyan 2002, 139–140; Jia Zhigang 2011, 86.

[52] Bickford 2006.

[53] Clunas 1997, 107 (quoting John B. Henderson [1994], 'Chinese Cosmographical Thought. The High Intellectual Tradition', in J. B. Harley and D. Woodward [eds.], *The History of Cartography*, vol. 2, bk. 2, Chicago: University of Chicago Press, 214); see also 104–105.

[54] *Yijing zhengyi*, in *Shisanjing zhushu* 7:341. Clunas 1997, 107.

[55] The statesman and philosopher Song Lian 宋濂 (1310–1381) states in his essay *The Origins of Painting* (*Huayuan* 源畫) that 'writing and painting are not different Ways, but are as one in their origin' (Clunas 1997, 109).

[56] Shen Leping 2013, 101–102, 104–105 further specifies that the seals of the Baoen 報恩 and Longxing 龍興 monasteries were in use between the seventh and eleventh century, while those of the Kaiyuan 開元, Jingtu 淨土, Sanjie 三界 and Liantai 蓮台 monasteries only came into use in the eighth century and those of the Xiande 顯德 and Qianming 乾明 monasteries only in the tenth century. He also observed that the imprints of legends in seal script are in red, while those in regular script (*kaiti* 楷體) are in black. According to Shen, this rule began to be observed from the 830s/840s onwards.

[57] Rong 2013, 487–488 (transl. of Rong Xinjiang 2002, 344); Shen Leping 2013, 101–102, 104–105. Drège 1991, 216–217 remarks that inscriptions stating the name of a monastery are actually more common. For a list of these marks and seal imprints in the major collections, see Drège 1991, 238–245. On the St Petersburg collection, see Chuguevskii 1999, 145, 148. See also Ch'en 1960, 8, 11, 12.

[58] Rong 2013, 487–488 (transl. of Rong Xinjiang 2002, 344). Ch'en

Evidence on collectors' seals from the period of disunity following the Tang still suggests that there is no clear distinction between collectors' seals for books and those for pieces of art. Chen Shidao 陳師道 (1053–1102) mentioned an old catalogue with a seal imprint, which belonged to the collection kept by Li Bian 李昪 (888–943), the first emperor of the Southern Tang (937–976):

> 澄心堂，南唐烈祖節度金陵之宴居也，世以為元宗書殿，誤矣。趙內翰彥若家有《澄心堂書目》，才二千餘卷，有建業文房之印，後有主者，皆牙校也。

> The Hall of Clarifying the Heart was the pleasure palace in the capital, Jinling (i.e. Nanjing), used by Emperor Liezu of the Southern Tang (i.e. Li Bian) when acting as Military Commissioner [before becoming Emperor]. Later generations believed it to be the library of Emperor Yuanzong (i.e. Li Jing 李璟, 916–961). This is wrong. The family of the Palace Writer Zhao Yanruo[59] possessed the *Book Catalogue of the Hall of Clarifying the Heart*, [which records] a total of more than two thousand *juan*[60], with [an imprint of] the 'Seal of the Jianye Study'. Later owners were all inferior military officers.[61]

The same seal is also mentioned by Shen Kuo 沈括 (1031–1095) in his *Dream Pool Essays* (*Mengxi bitan* 夢溪筆談). Shen mostly talks about this and two other seals being found on pieces of art (calligraphy and paintings) which once belonged to Li Yu 李煜 (937–978), the last emperor of the Southern Tang and known as a poet and lover of art.[62] However, one of the other seals mentioned – the 'Seal of the Library of the Assembled Worthies Academy (集賢殿書院印)' – points to an educational institution already mentioned by Zhang Yanyuan. This institution was first established in 725 and served as an advisory college. Under the Tang, it is said to have had the largest collection of books (invariably manuscripts at that time) after the imperial library.[63] It is safe to assume that this seal was predominantly used for books, although maybe not exclusively.

2.2. The history of book collectors' seals – from the twelfth century to the present day

Book collectors' seals became increasingly common in the eleventh century – their use specifically in books is slightly more evident than in earlier times.[64] This period witnessed an upsurge in the availability of books that is probably related to the emergence of printed books.[65] Nonetheless, the manuscript remained dominant. The proliferation of printed books does not seem to have reached every tier of society, but was restricted to the elite, who could afford to buy them.[66] It also seems that the term *tushu* 圖書, sometimes at least, may now be understood to stand for books in general. A Chinese scholar has estimated that in the period roughly from the eleventh to the early twentieth century, there were more than 1,100 scholars who put their collectors' seals on books.[67] Mi Fu's 米芾 (1051–1107) *History of Calligraphy* (*Shushi* 書史)

1960, 9, Drège 1984, 55–56 and Chuguevskii 1999, 144 read the legend as 'Seal of the great king of Gua and Sha prefectures (瓜沙州大王印)'. Drège and Chuguevskii identify the 'great king' with the Cao family, which is known to have used the title 'king'. According to Drège, this is probably Cao Yijin 曹議金, who is believed to have governed the two prefectures from 914 to 935. Shen Leping 2013, 101 convincingly argues against this reading from a palaeographic viewpoint as well as a historical one.

59 That is, Zhao Yuankao 趙元考, a contemporary of Chen Shidao (Chang Bide 1974, 3532). On the translation of the title, see Hucker 1988, 4178.

60 This term originally designated a scroll made of bamboo slips, silk or paper (Tsien 1985, 228–231). The term was preserved even after scrolls were superseded by the codex format. Since it no longer corresponds to the physical unit, it should be understood as a chapter (Wilkinson 2012, 914). Nonetheless, although it might correspond to one physical volume, it very often does not.

61 *Houshan tancong* 後山談叢 2:36. Later in the same work, there is an almost identical passage; what is most striking here is that the names are different: instead of the *Book Catalogue of the Hall of Clarifying the Heart*, it is *Jianye Study's Book Catalogue*, but with only slightly more than a thousand *juan*; instead of 'Seal of the Jianye Study', it is 'Seal of the Jinling library (金陵圖書院印)'. This was already noticed by the editors: *Houshan tancong* 3:45. The imprint of 'Seal of the Jianye Study' is found in Zhong Yinlan 2008, 394.

62 Mengxi bitan 夢溪筆談, *bu bitan* 補筆談 2:957, no. 566. These and other seals are also mentioned in *Shaoshi wenjian houlu* 邵氏聞見後錄 27:215–216 by Shao Bo 邵博 (?–1158) and in Guo Ruoxu's 郭若虛 (c. 1060–1110) *Tuhua jianwen zhi* 圖畫見聞誌 6:11A/B.

63 Drège 1991, 72–76; McMullen 1988, 15–16, 222–223. There is yet another, slightly different seal, namely the 'Imperial Book Seal of the Hall of the Assembled Worthies (集賢院御書印)'. See *Zhongguo lidai jiancangjia yinjian shujuku* 中國曆代鑒藏家印鑒數據庫 2011.

64 Qu Mianliang 1988, 90 argues that the use of specific book collectors' seals only began in the Song period.

65 The impact of printed books in this period is undisputed. However, scholars like Inoue Susume argue that contrary to older views, the Song did not witness a printing revolution, but the manuscript still remained dominant. A radical transformation to the printed book only occurred in the sixteenth century when large collections of works were made up of more prints than manuscripts. Brokaw 2005a provides a summary of Inoue's work. See also McDermott 2005; 2006, 43–81 and Brokaw 2005b, 23–24; 2007, 259–262.

66 Brokaw 2005a, 150; 2007, 260–261; Lee 1995, 194.

67 Bai Shuchun 2011, 63.

informs us in detail about the seals used by the early Song emperors. Nonetheless, as far as imperial use is concerned, there still seems to be no clear distinction between seals for books and seals for paintings and calligraphies:

> 印文須細，圈須與文等，我太祖祕閣圖書之印，不滿二寸，圈文皆細。上閣圖書字印亦然。仁宗後，印經院賜經，用上閣圖書字大印，粗文。若施於書畫，占紙素，字畫多有損於書帖。近三館祕閣之印，文雖細，圈乃粗如半指，亦印損書畫也。[68]

> The seal legend should be delicate and the edge should be equal to the legend. The 'Book Seal of the Secret Pavilion' used by our Emperor Taizu (reigned 960–976) is less than two inches long and both the edge and legend are delicate. The characters of the seal 'Books of the Upper Pavilion' are in the same [style]. After Emperor Renzong (r. 1022–1063), one would use a large seal with the characters 'Books of the Upper Pavilion' for the classics issued by the Classics Printing Bureau,[69] the legend [being carved rather] roughly. When applied on books and paintings on the paper's blank area, the characters' strokes are very harmful to the calligraphy. Recently, although legends of the seals of the Three Institutes and the Secret Pavilion are delicate, their edges were very rough – as thick as half a finger. These seals are also harmful to books and paintings.

When the Jurchen conquered the capital of the Northern Song in 1127, they captured 38 'book seals of the Palace Treasury (內府圖書印)'.[70] Apart from the Emperor's seals and those used in the capital, there are also extant seal imprints of regional government institutions. The legend of one of these reads as follows:

> 嘉興府府學官書，依條不許借出，系知府何寺正任內發下，嘉定甲戌七月　日記。[71]

> In accordance with the regulations, books belonging to the prefectual school of Jiaxing Prefecture are not allowed to be lend out. This was issued during the term of office of prefect He Sizheng, marked on day [ ], the seventh month in the year *jiaxu* of the Jiading era [1214].

Similar repeated bans on lending out books, which was a continuous threat to the integrity and survival of government collections, are known to have been issued in the capital (the first in 999). '[I]n 1228, book theft had become so common that some scholarly officials were said to be flogging off for a profit the books they had removed from court libraries and then impressed with their private seal.'[72] This reveals the increasing evidence of private book collectors' seals. During the Song period (906–1279), bibliophilism grew among the elite. Thomas H. C. Lee identifies 'the beginnings of serious book collecting' in this period. This love of books not only derived from the increased emphasis on education as this was demanded by the imperial civil-service examinations, but also from a passion for books 'simply for knowledge and self-cultivation'.[73] It became a main characteristic of all literati, and 'throughout the rest of the imperial period – that is, until 1911 – possession of, or at least access to, books was essential to respectability in Chinese society'.[74]

The following anecdote on Fu Bi 富弼 (1004–1082) is clearly about a privately collected book, which was imprinted with a seal bearing the owner's official title:

> 《元和姓纂》，富鄭公家書。甲子歲，洛陽大水，公第書無慮萬卷，率漂沒放失，市人得而鬻之，鎮海節度印章猶存。是書尚帙數卷，以鄭公物藏之。[...]卷首有鎮海軍節度使 印，富韓公家舊本也。[75]

> The *Register of the Great Families from the Yuanhe Era* (806–820) was a book from the home of Fu, Duke of Zheng (i.e. Fu Bi). In the year *jiazi* (1024 or 1084) there was a big flood in Luoyang and around ten thousand *juan* from

[68] *Shushi* 31B–32A. On the different imperial libraries of the Song, see Winkelman 1974.

[69] Hucker 1988, 7979.

[70] *Jinshi* 金史 31:764. For extant imprints of official seals of the Song, see Lin Shenqing 1997, 261–263 and Sun Beixin and Li Zhizhong 1998.

[71] Fan Jingzhong 2001, 143–144. See also Zhang Lijuan and Cheng Youqing 2002, 93. There is a similar seal imprint belonging to the same institution dated to 1266.

[72] McDermott 2006, 130.

[73] Lee 1995, 193, 214. The oldest seal imprints recorded in the *Tianlu linlang shumu* – the catalogue of Emperor Qianlong's private book collection, which is the first catalogue to include detailed records on book collectors' seals – are also from Song collectors (Lai Fushun 1991, 144–145, 232).

[74] Brokaw 2007, 254.

[75] *Dongguan yulun* 東觀餘論 by Huang Bosi 黃伯思 (1079–1118), cited from *Cangshu jishi shi* 藏書紀事詩, 1:17.

> his official residence were quickly washed away and lost. A merchant found and sold [parts of] it. The 'Seal of the Military Commissioner of Zhenhai' was still to be found [on it]. There are still some scattered *juan* of this book kept as objects belonging to the Duke of Zheng. […] At the front there is the 'Seal of the Military Commissioner of Zhenhai' – an old copy from the home of Fu, Duke of Han [i.e. Fu Bi].[76]

A seal that undoubtedly belonged to a private collector is mentioned in this Ming-period description of a precious edition of the *Grand Scribe's Records* (*Shiji* 史記):

> 宋人小楷《史記》，松雪翁物。計十帙，紙高四寸，字類半黍。不惟筆精墨妙，中間絕無偽謬。每帙有舊學史氏及碧沚二印，宋通直郎史守之所用。[77]

> The *Grand Scribe's Records* in small, regular script by a Song man belonged to the old man Pine Snow (i.e. Zhao Mengfu). It amounts to ten volumes, the paper [of each one] is four inches in size and the characters are the size of half a grain of millet. Not only is the calligraphy excellent, but there are absolutely no mistakes in it. Each volume has the two seals 'Old Learning of the Shi Family' and 'Green Islet', which were used by Shi Shouzhi (1166–1224), Court Gentleman for Comprehensive Duty of the Song.[78]

The mentions and anecdotes involving book collectors' seals are too numerous to all be cited here.[79] The number of seals owned by a single collector also increased. One of the most famous book collectors of the Yuan dynasty (1271–1368), who was also a renowned painter and calligrapher of the time, was Zhao Mengfu 趙孟頫 (1254–1322). He had at least 26 different seals. A significant number of them have identical legends, only cut in different styles: there are five different seals with 'Mr Zhao Zi'ang (趙氏子昂)', four with merely the character 'Zhao (趙)' and three with 'Zhao Mengfu's seal (趙孟頫印)'.[80] He probably did not use all of the seals on books. However, whether there were seals reserved to be used on books and others just on paintings or calligraphies remains an open question and can only be answered by studying all his paintings and books in detail.

It has been rightly pointed out that many of the seals found on books could also be applied to other objects as their legends do not necessarily mark them as being exclusively intended for books.[81] Furthermore, many book collectors were also collectors of art or even artists themselves, as in the case of Zhao Mengfu.[82] An explicit comment on the clear distinction between seals used for books and those used for objects of art is only to be found in the *Decalogue of Book Collecting* (*Cangshu shiyue* 藏書十約), a manual for book collectors that was written by Ye Dehui 葉德輝 (1864–1927) and published in 1911: '[Y]ou should have separate seals for your collection of bronzes and stone inscriptions, calligraphic masterpieces and paintings, Han dynasty tiles and bricks, ancient coins, etc. (金石、書畫、漢瓦、漢磚、古泉之類，當別為一印).'[83]

[76] Fu Bi was bestowed both the honorary title Duke of Zheng and Duke of Han (Chang Bide 1974, 2785–2786). Regarding the translation of the title, see Hucker 1988, 772.

[77] *Qinghe shuhuafang* 清河書畫舫 by Zhang Chou 張丑 (Ming), cited from *Cangshu jishi shi*, 1:47.

[78] Both seal legends go back to imperial presents. Emperor Xiaozong 孝宗 (1162–1189) gave Shi Shouzhi's grandfather, Shi Hao 史浩 (1106–1194), a calligraphy with the two characters 'Classical Learning', and Shi Shouzhi received the two characters 'Green Islet' written by Emperor Ningzong 寧宗 (1194–1224) (Pan Meiyue 1995). For more on Shi Shouzhi and his seals, see *Cangshu jishi shi*, 1:47–48. On Zhao Mengfu, see Lin Shenqing 1997, 2; Wang He 1991, 304–305. On the translation of the title, see Hucker 1988, 7473.

[78] Other collectors of the Song and Yuan periods known to have had book collectors' seals include Liu Xizhong 劉羲仲 (c. 1059–1120): *Cangshu jishi shi*, 1:19–20; Wang He 1991, 115–116. Lou Yao 樓鑰 (1137–1213): *Cangshu jishi shi*, 1:44; Wang He 1991, 424. Jia Sidao 賈似道 (1213–1275): *Cangshu jishi shi*, 1:54; Lin Shenqing 1997, 1; Wang He 1991, 333. Zhou Mi 周密 (1232–1298): Lin Shenqing 1997, 2; Wang He 1991, 275. Yu Yan 俞琰 (1258–1314/1327) and his grandson Yu Zhenmu 俞貞木: *Cangshu jishi shi*, 1:54–55; Lin Shenqing 1997, 3; Wang He 1991, 312. Yuan Yi 袁易 (1262–1306): Lin Shenqing 1997, 4; Wang He 1991, 336. Yang Weizhen 楊維楨 (1296–1370): Lin Shenqing 1997, 4–5; Wang He 1991, 153. Zhang Wen 張雯 (1293–1356): *Cangshu jishi shi*, 2:61; Wang He 1991, 237. Lu You 陸友 (Yuan): *Cangshu jishi shi*, 2:62–63; Wang He 1991, 225. Further collectors not mentioned by Ye Changchi in his *Cangshu jishi shi* have been identified by Lai Fushun 1991, 175–176, 203–204, 232–233.

[80] Zi'ang is Zhao Mengfu's style name (*zi*): Wang He 1991, 304–305. Zhao is famous for his paintings of landscapes and horses: Sullivan 2008, 216. For a recent study on the artist, see McCausland 2011. Zhao did not cut the seals himself (Sha Menghai 1987, 94–96). *Zhongguo lidai jiancangjia yinjian shujuku* 2011 lists a total of 26 seals, Contag, Wang 1966, 524–526 has 14 seals and Zhong Yinlan 2008, 702–703 mentions 15 of them. *Cangshu jishi shi*, 2:59–60 mentions four seals, Jiang Fucong 1937, 2 has 13 seals, Lai Fushun 1991, 233 counts 14 seals and Lin Shenqing 1997, 2–3 mentions five seals. It is safe to say that the seals mentioned by the latter four authors were used on books since their publications focus on book collectors. Whether they were exclusively affixed to books is yet another question, though.

[81] Lai Fushun 1991, 139–140.

[82] Lai Fushun 1991, 149, 162–163, 183–184.

[83] *Cangshu shiyue*, 14 (translation, modified: Fang 1950, 157). For more on Ye Dehui, see Zheng Weizhang 1999, 1307–1314.

The culture of private book collectors' seals flourished in the late Ming period (in the sixteenth to early seventeenth century). The vast majority of the aforementioned 1,100 private collectors lived during this time and the ensuing Qing dynasty (1644–1911).[84] The reasons for this increase are as follows. Firstly, the introduction of relatively soft stones used as material for seals made it possible for the literati to cut their own seals, which made private seals increasingly popular.[85] Secondly, although there had been relatively large private collections in previous periods, these were few in number. It was only by the late Ming that various private collections came into existence that were much larger. Numerous factors such as a drop in the price of block-cutting and paper, a wider audience for books and an increase in the number of potential authors led to the proliferation of commercial publishing. The wider availability of books made it possible for more people to build up their own collections. It is believed that the number of imprints in large book collections surpassed those of manuscripts for the very first time in this period.[86] This transition in China's book culture needs to be seen against the backdrop of the general social and economic changes of the late Ming era. Increasing wealth due to the commercialisation of the economy and rapid urbanisation allowed more people to take an interest in books. Book collecting, once a hobby pursued by scholars and the imperial family, also became possible for wealthy merchants and landowners now. These collectors and bibliophiles produced annotated catalogues of their own collections and appended colophons or postscripts (*tiba* 題跋) to their books during the Qing period, in particular.[87] The imprints of collectors' seals are frequently mentioned in both catalogues and colophons. The eighth point in Ye Dehui's *Decalogue of Book Collecting* is on colophons; here he mentions the catalogue of the Qianlong emperor's private collection (r. 1735–1796) as the preferred model for recording seal inscriptions:

> [...]以及收藏前人之姓名、印記，並仿《欽定天祿琳琅》之例。
>
> [...] and in recording the names and seals of its former possessors, you should follow the model of the *Gems of Heavenly Favour* [library catalogue] compiled by order of the Emperor.[88]

This catalogue – actually there are two, the first compiled in 1775 and the second in 1779 after the original collections had been lost in a fire[89] – contains very detailed entries on every book in the collection, including their colophons, the names of former owners and elaborate descriptions of their seal imprints. It is, in fact, the first book catalogue with detailed and systematic information on seal imprints.[90] In the introduction it is explained that the 'recording of their [i.e. the former owners'] seal imprints then follows the example of *The Clear Water Pleasure Boat of Painting and Calligraphy*, inserting transcriptions of all [imprints by] using regular script to serve as a means of scholarly evidence (錄其印記則仿《清河書畫舫》之例，皆用真書摹入以資考據)'.[91] The detailed transcription of the imprints consists of

[84] Wang Jing 1979, 59. This is also evident in the special albums of book collectors' seal imprints: Lin Shenqing 1989, 2000a. Unlike his other two publications, Lin Shenqing 1997 is not restricted to Ming and Qing seals, but nonetheless, the majority are imprints from that period. See also *Shanben cangshu yinzhang xuancui* 1988; Zhang Jianlun 2004; Chen Xianxing and Shi Fei 2009, 102–292. The largest collection of book collectors' seals to date, which has been catalogued by the National Library of China in Beijing, contains close to 6,000 seal imprints that are all from Ming and Qing times. Not only the imprints are reproduced here, but the whole page on which the imprint was made. The seal imprints are transcribed, but their owners are not identified: Sun Xuelei et al. 2004. Other useful works, although not exclusively assembling book collectors' seals, are Zhong Yinlan 2008 and *Zhongguo lidai jiancangjia yinjian shujuku* 2011, which is a database hosted at Zhejiang Library assembling data on many of the albums listed here as well as other works.

[85] Cao Zhi 1992, 491–492 further states a rising interest in epigraphy (*jinshixue* 金石學), especially in the Qing, as another factor shaping a generally growing interest in seals.

[86] Brokaw 2005a, 152–154; 2005b, 24–27; McDermott 2005, 76–90; 2006, 43–81.

[87] Brokaw 2007, 254, 256. Obviously there had been catalogues of private collections before, but they are far fewer in number and many of them are only known by title today. For a list of catalogues of private collections from the Tang (618–907) to the Qing period (1644–1911), see Yuan Qingshu 2003, 225–248.

[88] *Cangshu shiyue*, 12 (translation, modified: Fang 1950, 153).

[89] Yang Guolin 2006, 123–124. *Qinding Tianlu linlang shumu* 欽定天祿琳瑯書目 and *Qinding Tianlu linlang shumu xubian* 欽定天祿琳瑯書目續編.

[90] Lai Fushun 1991, 178. Lai Fushun 1991 is a very detailed study of the seal imprints recorded in the catalogue, including numerous indices on all the seal legends (4–136), their owners (128–253), the owners' place of origin (155–160) and whose seals are to be found in which entry of the two catalogues (162–170, 185–194). This study is the conflation of Lai's earlier publications: Lai Fushun 1987; 1989; 1990.

[91] *Qinding Tianlu linlang shumu*, Fanli: 2A/B. *The Clear Water Pleasure Boat of Painting and Calligraphy* (*Qinghe shuhuafang*) is a catalogue of paintings compiled by Zhang Chou 張丑 (1577–1643) (Brown and Hutton 2011, 309).

Fig. 7: *Qinding Tianlu linlan shumu* 欽定天祿琳瑯書目, 6:31B/32A.

the reproduction of the seal's shape by drawing the outline into which the characters – following the original order of the legend – are copied in regular script (see fig. 7). This is supplemented with further information on their style (intaglio or relief), where they have been affixed in the book and what colour they are (which is only mentioned if it is not red).[92] And the compilers furthermore endeavoured to identify the respective owners of the seal imprints.[93] Many catalogues of private collections equally include descriptions of seal imprints[94] generally consisting of the following features: their location, shape, style of legend and a transcription of the seal legend in regular script, but no exact copy of the seal.[95]

Sun Congtian 孫從添 (1692–1767), the compiler of another, earlier manual for book collecting, recommended only recording seal imprints in the catalogue reserved for rare Song and Yuan editions, which were considered the most precious ones of all.[96] He is explicit about adding seal imprints, but does not go into any detail: 'The seal which you may stamp in one corner of your books should be small (小用角圖章)'.[97] Ye Dehui, who names Sun Congtian's work as his model,[98] devotes the entire final paragraph of his manual to the matter of seals and leaves no doubt about the necessity to affix seals: 'Books in your collection must have seals on them (藏書必有印記)'.[99]

Collectors' and bibliophiles' obsession with obtaining rare books, especially, albeit not exclusively, Song and Yuan editions, for which they were willing to pay high prices, made forgeries of these a very profitable business. Besides dying the paper, rebinding the book and 'adding boastful notes in imitation calligraphy of famous scholars and collectors about the value and rarity' of a particular book, adding forged seal imprints was an important way of fabricating a rare and precious book.[100] According to a study by Wu Qinfang 吳芹芳, fabricated rare books and therefore also forged seals started to be produced in large quantity from the Jiajing 嘉靖 era (1521–1567) onwards. Apart from forged seals, which were mostly cut in wood, regardless of whether they were official seals or those of famous collectors and scholars, he also draws attention to the possibility for book dealers to add

[92] Both catalogues follow the same style in their entries. According to Lai Fushun, the transcriptions of the seal imprints were executed by hand in other versions than the printed edition from 1884. In the case of an extant manuscript edition of the earlier catalogue, seals with the transcribed legends written in standard script were cut to be impressed (Lai Fushun 1991, 209).

[93] *Qinding Tianlu linlang shumu* records 902 different seal imprints (with a total of 1,278 records), only a third of the owners of which were identified by the compilers. The second catalogue records 1,019 different seal imprints (with a total of 1,200 records), not even 20% of which were identified. See Lai Fushun 1991, 179, 205, 211. Lai Fushun has now identified most of the owners of the 1,922 different seals.

[94] There are simply too many private catalogues to form a definitive judgement as to whether all of them include information on seal imprints. Yuan Qingshu 2003, 228–248 lists 105 for the Ming and 315 for the Qing period, but this list is probably not even complete. Quite a number of catalogues are actually said to have used the *Qinding Tianlu linlang shumu* as a model (Lai Fushun 1991, 2).

[95] Van Gulik 1958, 439–440 writes about catalogues of paintings, but this also holds true for catalogues of books. In fact, as has been mentioned above, the former were the model for the *Tianlu linlang shumu*.

[96] *Cangshu jiyao*, 44 (translation: Fang 1951, 244). On the rather incomplete biography of Sun Congtian, see Fang 1951, 215–218.

[97] *Cangshu jiyao*, 45 (translation: Fang 1951, 242).

[98] See the author's preface in *Cangshu shiyue*, 3 (translation: Fang 1950, 133).

[99] *Cangshu shiyue*, 13 (translation, modified: Fang 1950, 156). He himself, though, admits to not having 'stamped seals on most of the books in my collection (余之藏書多未鈐印)', *Cangshu shiyue*, 13 (translation: Fang 1950, 156).

[100] Edgren 2006, 199.

imprints with the original seal of a famous collector, because these were sometimes sold by his descendants.[101] The case of the seals belonging to Li Shengduo 李盛鐸 (1859–1937) is a good example illustrating this. Li was a well-known private collector of genuine Dunhuang manuscripts. Most of these were sold to Japan in 1935. After Li's death the remains of his rare book collection were sold to Beijing University Library. The Library did not buy his seals, however. Those subsequently came into the hands of booksellers who affixed Li's original seals to old books with the aim of increasing their value as it was long known that Li's collection included a large number of rare and unique works. Other dealers who were not in the possession of the original seals 'copied several of them (maybe three or four) and used them to stamp both original and forged manuscripts'.[102] 'The disappearance of the original seals [thus] created an ideal condition for forgers who could affix the genuine seal onto a forged scroll, or make a fake seal and affix it onto an authentic but less valuable manuscript, using the reputation of the Li collection to increase its value.'[103]

Wu Qinfang furthermore describes cases where seal imprints were cut out from one book and pasted onto another, or cases of copying imprints using a brush.[104] Finally he elaborates on the delicate task of identifying forged imprints. The methods he describes range from (a) careful examination of the whole book in order to see whether the age of the imprint conforms to other features of the book, (b) comparison of the imprint with other attested imprints of the same seal, (c) close inspection of the legend's style and colour of the ink as well as the position of the imprint on the book, to (d) the final option of consulting catalogues, if available, to check whether the book with the imprint in question was once in the possession of that particular collector.[105]

The compilers of the above-mentioned catalogue of Qianlong's collection already identified and described forged seal imprints. In one case, they clearly state that the alleged imprint of the Song emperor Huizong 徽宗 (reigned 1100–1126) is a 'bookseller's forgery (書賈偽作)'.[106] While Sun Congtian only mentions the problem of forged seals briefly,[107] Ye Dehui finds much more drastic words: he decries booksellers for adding forged seal imprints and puts this practice in the same light as the infamous biblioclasm of the first Chinese emperor in the second century BCE:

> 曾見宋元舊刻，有為書估偽造各家印記以希善價者，有學究、市賈強作解事，以惡刻閒印鈐滿通卷者。此豈白璧之微瑕，實為秦火之餘厄。
>
> I have seen some with forged seals of collectors that booksellers have affixed to ancient Song and Yuan prints with an eye to making them fetch high prices, some of them stamped all over with badly cut seals containing idle, pseudo-elegant phrases picked up by pedantic schoolmasters and vulgar tradesmen with a pretense to knowledge and taste. This assuredly is more than a trifling flaw on an immaculate jade ring; nay, it is nothing less than a continuation of the Qin burning of books.[108]

How widespread forged seals were among booksellers well into the twentieth century can be seen from an anecdote cited by Wu Qinfang, according to which the National Museum of Chinese History (*Zhongguo lishi bowuguan* 中國歷史博物館) purchased over 1,000 forged seals from Liulichang

---

[101] Wu Qinfang 2013, 114–118.

[102] Rong 2002, 66–67 (Engl. version of Rong Xinjiang 1997). On Li's seals, see also Chen Tao 2010. Li Shengduo is said to have used more than twenty different seals. For more on 12 of these, see Lin Shenqing 1997, 230–231; Zhong Yinlan 2008, 415; see also *Zhongguo lidai jiancangjia yinjian shujuku* 2011. Chen Hongyan and Lin Shitian 2007a and 2007b provide an overview of seal imprints of private collectors found on Dunhuang manuscripts in Chinese and Japanese collections.

[103] Rong 2013, 516 (transl. of Rong Xinjiang 2001, 364).

[104] Wu Qinfang 2013, 114–118. See also Chen Xianxing and Shi Fei 2009, 67–71, whose focus is on forged seals found on manuscripts, for which they describe a number of examples. Chen Xianxing 2003, 268 presents original and forged imprints belonging to Chen Zhan 陳鱣 (1753–1817) side by side. Lai Fushun 1991, 140 mentions the practice among collectors of using ancient seals of the Qin and Han period.

[105] Wu Qinfang 2013, 118–120. Lai Fushun 1991, 145–146 also discusses how to identify forged seals. Liu Xiangchun 2013, 44–45 emphasises the importance of identifying the seal owners in order to tell whether a seal imprint is genuine or not. At the same time, he points to the problem of identical legends used by many different collectors. How difficult it is to identify the owners can be seen in fig. 1: six of the nine imprints have still not been assigned to their owners yet.

[106] *Qinding Tianlu linlang shumu*, 6:17B. For further cases, see 8:12A, 8:33A. See also Wu Qinfang 2013, 115–116; Lai Fushun 1991, 178–179. For cases in the *Qinding Tianlu linlang shumu xubian*, see Lai Fushun 1991, 204–205.

[107] *Cangshu jiyao*, 38 (translation: Fang 1951, 229).

[108] *Cangshu shiyue*, 14 (translation, modified: Fang 1950, 157). The use of forged seals in fabricating early editions is also mentioned in *Shulin qinghua*, 10:264.

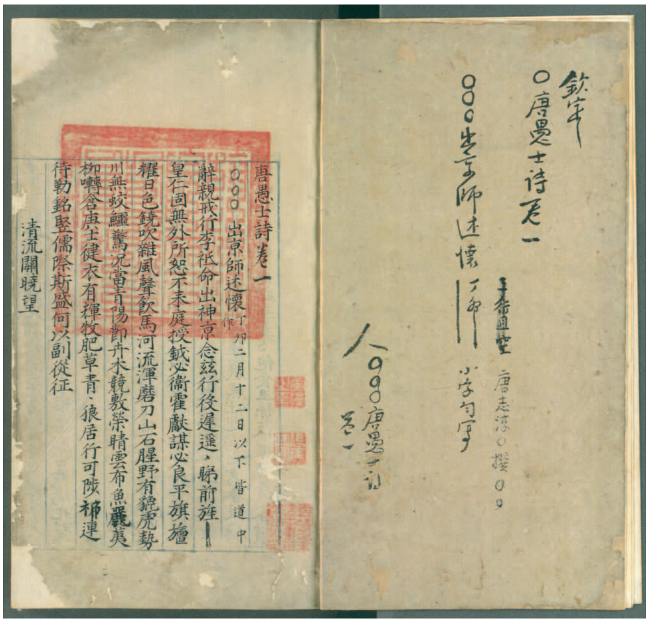


Fig. 8: Manuscript with imprint of 'Hanlin Academy's Seal' (*Hanlin yuan yin* 翰林院印).

琉璃廠 in 1952; this is the quarter in Beijing where bookstalls and antique dealers are traditionally found.[109] Not only forged seals, but seal imprints in general are an important means of authenticating rare Chinese books, of course.[110] However, seal imprints are only secondary evidence since, unlike paper, ink and calligraphy, they always constitute a later addition to a manuscript or printed book.[111] As such, one should not forget that a forged seal imprint does not necessarily imply that the manuscript itself has been faked; a forged seal might be found on a genuine manuscript, and a genuine seal might be affixed to a forged manuscript.[112]

Official book collectors' seals continued to be used by different administrative institutions throughout the Yuan (1271–1368), Ming (1368–1644) and Qing (1644–1911) periods. These seals are often considerably larger than those of private collectors and had to be affixed in a specific position (more on this below).[113] To name but one example, all books sent to the court for the monumental *Complete Library of the Four Treasuries* (*Siku quanshu* 四庫全書) – the largest of all collections in the history of imperial China, for which books from all over the country were sent to the capital as of 1773[114] – were imprinted with the words 'Hanlin Academy's Seal (翰林院印)' on their first page upon their arrival. This is a rectangular seal in relief with a bilingual legend in Manchu and Chinese (see fig. 8).[115] Of course, the Qianlong emperor, who is known to have 'plastered' paintings and calligraphies in his collection with scores of seal imprints and notes,[116] likewise had the books in his personal collection imprinted with seals. The catalogue states that each volume (*ce* 冊) of a book should be imprinted with two different imperial seals at the front and back.[117] In the same manner, modern libraries, which came into existence in China at the beginning of the twentieth century, continued the practice of affixing seal imprints to the works in their possession. Take the regulations for the Second Public Library of Zhili Province (直隸省), for example, which include the following clause: 'All books provided by the Library have to be affixed with its seal to prevent any loss (凡館中所列圖書，均蓋本館圖記，以防遺失)'.[118] In the largest work on book collectors' seal imprints published so far, which was issued by the National Library of China *(Zhongguo guojia tushuguan* 中國國家圖書館), the seal imprint of the National Library is frequently found.[119]

---

[109] Wu Qinfang 2013, 118.

[110] Li Zhizhong 1990, 207–211; Lai Fushun 1991, 148.

[111] Wang Jing 1979, 59.

[112] Rong 2013, 516–517 (transl. of Rong Xinjiang 2001, 364).

[113] Reproductions of some seal imprints from these three dynasties are found in Sun Beixin and Li Zhizhong 1998 and Lin Shenqing 1997, 264–270. Taking the example of just the first volume of Sun Xuelei et al. 2004, one frequently finds the bilingual (Manchu and Chinese) imprint of the 'Seal of the Books from the Ministry of Education (學部圖書之印)' (vol. 1: 9, 90, 100, 101, 111, 130, 193, 199), but also an example of the 'Directorate of Education's Seal (國子監印)' (vol. 1: 38), the Directorate of Education being the predecessor of the Ministry of Education founded in 1905 (*Qingshi gao*, 24:953). The library of the Ministry of Education was established in 1910 (*Qingshi gao*, 25:975).

[114] See Guy 1987.

[115] Liu Qiang 2006. See also Wu Qinfang 2013, 114–115.

[116] Bronson and Ho 2004, 221.

[117] *Qinding Tianlu linlang shumu*, Fanli: 2B. The two seals are 'Treasure Personally Viewed by Emperor Qianlong (乾隆御覽之寶)' and 'Gems of Heavenly Favour (天祿琳琅)'. See Lin Shenqing 1997, 268. However, there is evidence of more than these two seals; see National Palace Museum 2007 and Lai Fushun 1991, 212–213.

[118] Li Xibi and Zhang Jiaohua 1996, 283 cited from *Zhejiang gongli tushuguan nianbao* 浙江公立圖書館年報 7:22 (1922), 179. The regulations for the Zhejiang Public Library from 1917 and a decree by the Ministry of Eduction for the library in Beijing from 1915 both include the use of seals. Li Xibi and Zhang Jiaohua 1996, 323, 211. On the establishment of modern libraries in China, see Pélissier 1971 and Li Xuemei 1999.

[119] Besides the seal of the National Library of China (e.g. Sun Xuelei et al. 2004, vol. 1: 86 and many more), there also are those of other libraries such as the Beijing Library or the Capital Library, the predecessor of the National Library (Sun Xuelei et al. 2004, passim). One also finds modern

Private collectors continued the tradition of affixing collectors' seals to their books well into the middle of the twentieth century. The tradition of imprinting book collectors' seals waned with the establishment of the People's Republic in 1949, as the acquisition of private property was discouraged and private book collections were gradually transferred to state institutions.[120] However, like many other traditional practices, book collecting and book collectors' seals have recently witnessed a revival. There is a popular auction market for old books, in fact. In 2012, a set of 179 rare books from an old family collection was sold for a spectacular 216 million RMB.[121] A modern manual on collecting books was also published recently, in which the author not only outlines the history of book collectors' seals, but also gives detailed instructions on how to impress one's own seal on a page.[122] Wei Li 韋力 (born in 1964), who has recently been named the largest private collector of rare books (*shanben* 善本) in China and who is also the editor of the journal *The Book Collector* (*Cangshujia* 藏書家), imprints his books among others with the following seal: 'Once in Wei Li's home (曾在韋力家)'.[123]

3. Where a seal is placed

The decision about where to put a seal on a painting or piece of calligraphy is largely based on aesthetic considerations. It has 'to harmonize with the spacing of the picture'. By the Ming period, certain rules had been made as to where to affix seals.[124] Similar considerations were also valid for books. Ye Dehui emphasises the need to 'look for some empty space (尋隙處)' for one's seal imprint.[125] Collectors' seals should not be put on paintings above the artist's name, and they should be impressed in books below the name of the author if possible.[126] The places in books where imprints are regularly found are as follows: (1) they are commonly situated in a blank space in the lower right-hand corner of the first page or (2) on the upper margin (*tiantou* 天頭) of the same page; (3) with the preface (*xu* 序); (4) on the last page of each volume (*ce* 冊) or chapter (*juan* 卷) in the lower part of the last line; (5) in other blank spaces such as after colophons or postscripts (*tiba* 題跋) or on the frontispiece (*fengmian* 封面), flyleaf (*huye* 護頁), etc.[127] Seal imprints need not be restricted to just one of these places, of course. It is not unusual to find imprints at various spots throughout a book.[128] The monastic seals encountered on Dunhuang manuscripts are normally found at the beginning and end of a scroll.[129] Later collectors added their seals above those of previous owners. If there was no more space for a seal above the imprints made by previous collectors, then it would be impressed to the left of the first imprint. Ideally, the imprints are thus found in chronological order from bottom to top and from right to left. This can also be helpful in identifying forged imprints or ones added later as these often do not appear in chronological order.[130]

Most collectors not only had one seal, but a number of them, and some did not just use one seal, but two of them – or even more. For instance, the use of two seal imprints – an intaglio seal given the style name (*zi* 字) on top and a relief seal with the family and personal name (*xingming* 姓名) below – is a common convention found in collectors' seals used on paintings and calligraphies and may also be observed in book collectors' seals.[131] There were no clearly

library stamps sporadically (e.g. Sun Xuelei et al. 2004, vol. 2: 2, 214, 242). It should be noted that the imprints of all modern libraries, regardless of whether they are traditionally styled seal imprints or modern library stamps, are never transcribed by the compilers of the publication. For more on seals and stamps of modern libraries, see Dai Longji 2003 as well.

120 Edgren 1997, 64.

121 Mei Jia and Wang Kaihao 2012. Qian Jun 1998, 157–163 provides an overview of prices obtained at auctions of old books, which range from 5,500 to 418,000 RMB.

122 Qian Jun 1998, 78–87.

123 Wei Li 2009; Zhou Xiaodong 2007. *Cangshujia* was first published in 1999 and ceased to be published in 2004 after only ten issues. Another six issues were published from 2006 until 2009, and publication was resumed again just recently in 2013. http://www.guoxue.com/?p=15017 (accessed on 7 May 2014). Wei Li has also published a manual for collecting ancient books, which includes a chapter on collectors' seals and a presentation of his own seals (Wei Li 2004, 109-122).

124 Van Gulik 1958, citation 425; on the rules, see 437–438.

125 *Cangshu shiyue*, 14 (translation: Fang 1950, 157–158).

126 Van Gulik 1958, 425.

127 Bai Shuchun 2011, 64. Ye Dehui mentions the upper margin, final page and flyleaf. *Cangshu shiyue*, 11, 14 (translation: Fang 1950, 152, 158).

128 E.g. Sun Xuelei et al. 2004, vol. 1: 24–26, 30–32, 60–62, 84–88, 239–242, 246–250 and many more.

129 Shen Leping 2013, 101; Drège 1984, 55.

130 Wu Qinfang 2013, 120.

131 Van Gulik 1958, 437. Chen Zhan 陳鱣 (1753–1817) frequently used a relief seal with his portrait and his style name (Zhongyu 仲魚) together with an intaglio seal bearing the legend 'I endured a great deal of hardship to obtain this book; may later generations appreciate my effort (得此書費辛苦後之人其鑑我)'. Liu Xiangchun 2013, 48. On the seal imprints, see Lin Shenqing 1997, 134 and Chen Xianxing 2003, 268. For an example, see

defined rules, of course, but rather cultural conventions that left room for individual preferences. Zhou Shutao 周叔弢 (1891–1984), an entrepreneur and book collector, described his principles in the following way in 1926:

> 余所得善本書每鈐《曾在周叔弢處》六子朱文印，蓋收書只以遮眼，本無世藏之心，非好為曠達之語以欺人。今此印刓敝，不堪復用，遂改鈐《周暹》二字白文小印，[...]。[132]
>
> On each of the rare books I obtained, I affixed the six-character relief seal 'once in Zhou Shutao's place', since I [started] gathering books just as an alibi and originally had no intention of collecting them my whole life and I don't like to bother people with broad-minded sayings. Now this seal is worn out and I can't bear to use it any longer, so I have switched to affixing the small two-character intaglio seal 'Zhou Xian' instead (i.e. Zhou Shutao's personal name), [...].

This also means that it is possible to reconstruct the chronological sequence of Zhou's acquisition of books by the use of his seals.[133] In fact, collectors might use certain seals just to mark their most precious pieces. Some even had seals cut just to be affixed to one specific book.[134]

In his collectors' guide, Ye Dehui unambiguously writes: 'wherever there is text, relief and intaglio seals are out of place (凡書有字處，朱文白文俱不相宜)'.[135] However, that does not hold true for official seal imprints; these had to be impressed in the upper centre of the first page above the text (see fig. 8).[136] Naturally, emperors had the privilege of being able to affix their seals in very prominent places.[137] In general, books in the imperial collections of the Ming and Qing period would be impressed with a seal on the first and last page of each volume, after the imperial preface (*yuzhi xuwen* 御製序文), if present, and the flyleaves at the front and back of the book.[138] Many book catalogues not only give transcriptions of the seals' legends, but also add information on their position within the book. The most detailed work in this respect is the catalogue of Qianlong's private book collection. The transcription of each imprint is followed by information on where it is found in the book: along with the preface (*xu*) or table of contents (*mulu* 目錄), in exactly which chapter (*juan*) or volume (*ce*) it appears, at the end or beginning of a chapter (*juan zhong* 卷終 or *juan shou* 卷首),[139] in each chapter (*ge juan* 各卷) or volume (*ge ce* 各冊), on a flyleaf (*fuye* 副葉), after a colophon or postscript (*ba mo* 跋末) and so on. If the seal imprint is found in multiple places, they are all listed in detail.[140]

Ye Dehui, however, is not only concerned about locating the correct place to imprint one's seal, but equally with the composition of the different imprints:

> 凡書流傳愈久者，其藏書印愈多。朱紫縱橫，幾無隙紙。是宜移於書眉卷尾，以免齟齬。亦或視各印之大小朱白，間別用之。小印朱文重迭，尚無不可。若白文與大印聚於一行，則令閱者生厭矣。
>
> The longer a book has been transmitted, the more will be the seals of its possessors. Red and purple will run crisscross to such an extent that you may have hardly any blank space. Therefore the best thing to do would be to have seals stamped on the upper margin and at the very end of each volume, so that disharmony may be avoided. Also you must make allowance for the different sizes of the seals as well as the

fig. 2, first and third seal imprint. Li Shengduo (1859–1937) imprinted most of his Dunhuang manuscripts with three different seals, some of them with four or five and one with as many as nine (three times three different seals). Chen Tao 2010, 76–78.

[132] Cited from Liu Xiangchun 2013, 48. On Zhou Shutao, see Zheng Weizhang 1999, 1618–1622.

[133] Liu Xiangchun 2013, 48. Zhou Shutao actually had more than just these two seals; see Lin Shenqing 1997, 258. There are at least two different seals with Zhou Xian as a legend; see Zhong Yinlan 2008, 559. Chen Tao 2010, 78–81 has done a chronological reconstruction for the seals used in Li Shengduo's collection of Dunhuang manuscripts.

[134] Liu Xiangchun 2013, 49–50.

[135] *Cangshu shiyue*, 14 (translation: Fang 1950, 158).

[136] This was the case for the Hanlin Academy Seal (翰林院印) (Wu Qinfang 2013, 114; Liu Qiang 2006, 60). It is also very obvious for the 'Book Seal of the Ministry of Education (學部圖書之印)' (i.e. Sun Xuelei et al. 2004, vol. 1: 9, 90, 100, 101, 111, 130, 193, 199).

[137] As in the case of paintings and calligraphies (van Gulik 1958, 425, 438).

[138] Ren Jiyu 2001, 272.

[139] This 'also has the very specific meaning of caption title (the title as it appears in the first column of the first page of text) or the caption area (including the first few columns of the first page of text, often containing authorship and/or publishing information)' (Edgren 1993, 136).

[140] *Qinding tianlu linlang shumu*, passim. However, Qianlong's own seal imprints are never recorded.

> difference between relief and intaglio engravings; you must discriminate when using them. It is permissible to have small seals or relief-script seals stamped one after another, but the reader of your book will be disgusted to see intaglio-script seals or larger seals crowding the same column.[141]

The aesthetic devaluation caused by too many seals being used was lamented very clearly by Jiang Shaoshu 姜紹書 (died c. 1680) in his criticism of the collector Xiang Yuanbian 項元汴 (1525–1590)[142]:

> 墨林生嘉隆承平之世，資力雄贍。出其緒餘。購求法書名畫，三吳珍秘，歸之如流。每得名跡，以印鈐之，累累滿幅。譬如石衛尉以明珠精鏐聘得麗人，而虞其他適，則黥面記之。抑且遍黥其體無完膚，較蒙不潔之西子，更為酷烈矣。[143]

> Molin (i.e. Xiang Yuanbian) lived in the peaceful time of the Jia[jing] (1522–1666) and Long[qing] (1567–1572) emperors. He disposed of strong financial means and took his surplus to buy model calligraphies and famous paintings. Precious and rare works from the Three Wu[144] came to him like an [endless] stream. Every time he obtained a work of a famous hand, he would affix his seal to it, again and again all over it. This is like the Chamberlain for the Palace Garrison named Shi, who got possession of pretty girls using brilliant pearls and pure gold. Afraid they might desert him, he marked their faces with a tattoo. He even had their whole bodies tattooed, leaving not a fleck of skin untouched. Compared to the defilement of Xizi this was even more cruel.[145]

There are some books with countless imprints, especially very rare and old editions that were considered extremely precious and had been in the possession of many different collectors. Take, for example, the Song print of the *Collected Poems of the Tang Maiden Yu Xuanji* (*Tang nülang Yu Xuanji shji* 唐女郎魚玄機詩集), which has over 100 seal imprints on it and once belonged to such well-known collectors as Zhu Chengjue 朱承爵 (1480–1527), the above-mentioned Xiang Yuanbian, Huang Pilie 黃丕烈 (1763–1825), Yuan Kewen 袁克文 (1890–1931) and numerous others.[146] Another impressive example is the fragmentary print from 1213 of the *Annotated Poems of Mr Dongpo* (*Zhu Dongpo xiansheng shi* 註東坡先生詩), which contains at least 30 imprints.[147] Nonetheless, judging from the largest publications on collectors' seals imprints to date, which have been produced by the National Library of China and cover seal imprints found in over 1,800 books from Ming and Qing times (both printed works and manuscripts), the vast majority of books only have two or three imprints on them.[148]

4. Legends

A bewildering variety of legends are to be found on book collectors' seals. Most research undertaken by Chinese scholars actually concentrates on categorising the different types of legends based on their content. Although all scholars

---

141 *Cangshu shiyue*, 14 (translation, modified: Fang 1950, 158).

142 On Xiang Yuanbian, see Wang He 1991, 308. Lin Shenqing 1997, 36–38 reproduces as many as 41 seal imprints made by this collector. His seals are also very prominent in the *Tianlu linlang shumu* with 26 different imprints (Lai Fushun 1991, 240–241). See also van Gulik 1958, 438. There are over ten of his seal imprints on a Song print of the *Tang nülang Yu Xuanji shiji* 唐女郎魚玄機詩集 (Zhang Xiuyu 2012, 26). For more on this book, see below.

143 *Yunshizhai bitan* 韻石齋筆談 cited from *Cangshu jishi shi*, 3:247.

144 This is a loose term without a clear definition and points to different cities in the lower Yangzi region (*Zhongguo lishi diming dacidian* 1995, 19–20).

145 I was unable to identify the source of the story of the tattooed women. However, Ye Dehui uses a similar allusion: *Cangshu shiyue*, 14 (translation: Fang 1950, 156–157). It might be related to the story of Shi Chong 石崇 (249–300) and his concubine, Green Pearl 珠綠, who committed suicide when Shi had to give her up for a more powerful man (*Jinshu* 晉書, 33:1008). In a different anecdote, Green Pearl refers to Shi Chong as Chamberlain for the Palace Garrison (*Taiping guangji*, 489:4020). Xizi, better known as Xishi 施西, was a legendary beauty of Chinese antiquity (*Hanyu dacidian*, vol. 8: 744–745). I have used parts of Achilles Fang's translation here (Fang 1950, 171).

146 Zhang Lijuan and Cheng Youqing 2002, 95–97. Zhang Xiuyu 2012 provides a detailed description of all the owners. *Tang nülang Yu Xuanji shi* 2003 is a reproduction of the original kept at the National Library of China in Beijing. The work merely consists of 25 folios, only 12 of which bear the actual text; the rest of them are the title page, forewords and colophons by various collectors. The main text alone bears 66 seal imprints on the first and last folios.

147 Guojia tushuguan tecangzu 2011, 136. Today, this print is kept by the National Central Library in Taipei. Another fragment of the same work, currently kept at the National Library of China in Beijing, probably belongs to the same book since some of the fragmentary seal imprints are complementary to each other (Zhang Lijuan and Cheng Youqing 2002, 96–98. See also Edgren 1997, 58–60). Fan Jingzhong 2001, 142 mentions another book with over 70 imprints. Li Xuemei 1999, 220–221 mentions further examples of Song editions with many seal imprints.

148 In my analysis of the two first volumes, which span a total of 536 pages, each reproducing one original page with seal imprints on it, I found that 66% of the pages contain two or three imprints, 15% have only one, 11% have four and the rest contain anything between five and ten imprints. However, the 110 or so cases where more than one page of a book has been reproduced (mostly two pages, in fact) were not taken into consideration here. Sun Xuelei et al. 2004, vol. 1 and 2.

seem to have devised their own typology,[149] they all agree that the majority of the legends bear names, as is the case with Chinese seals in general.[150] These might be names of individual people in all their variations – ranging from the family name (*xing* 姓) and personal name (*ming* 名) to the style name (*zi* 字) or literary name (*hao* 號) – or the name of a collector's studio (*zhai* 齋), study (*shi* 室), two-storey building (*lou* 樓), pavilion (*ge* 閣) or hall (*tang* 堂) where his collection was stored. These are by far the most common options. Furthermore, the name on a legend might also be a place name (often that of the collector's home), an official rank (*guanzhi* 官職), an academic qualification obtained by passing civil-service examinations, or in case of official seals, the name of a government agency or imperial library. In many cases, instead of the character for 'seal' (*yin* 印), the name is followed by a character standing for 'collecting' (*cang* 藏). Like the meaning of *ex libris*, it must be understood as 'collected by …' or 'from the collection of …'. Other than names, one finds dates (including a collector's date of birth or the date a particular book was acquired, for example), poems, maxims, idioms and the like. Seal legends which many scholars subsume under the category of connoisseurship (*jianshang* 鑒賞) are not uncommon. These might bear information on who has evaluated (*jianbie* 鑒別), collated (*jiaodu* 校讀) or simply enjoyed looking at the book (*guanshang* 觀賞 or *guoyan* 過眼).[151] Needless to say, all kinds of combinations are common, especially those involving different types of names.

Another quite common type of legend is one that contains exhortations to later generations to safeguard the owner's book. This practice goes back to a famous dictum of Du Xian's 杜暹 (died in 740), who declared: 'loaning or selling off [a book] is an unfilial act (鬻及借人為不孝)'.[152] Here are a few typical legends of this kind: 'May [my] children and grandchildren protect it [this book] (子孫保之)', 'May [my] children and grandchildren protect [this book] forever (子孫永保)'[153] and the rather more elaborate 'Buying this book was not easy. I bequeath it to my children and grandchildren – don't discard it lightly (購此書甚不易，遺子孫弗輕棄)'.[154] One also finds more sophisticated examples: 'Grandfather's and father's books are for the education of children and grandchildren. Selling and loaning them to others is a highly unfilial act. Received family rule of the Chu family from Yunjian (祖父書籍，子孫是教。鬻及借人，大為不孝。雲間褚氏，世家垂訓)'.[155] Other collectors even threaten their descendants with 'execution by the gods', 'expulsion from the ancestral hall' or a whipping.[156]

It is generally assumed that legends became more complex over time. This has already been remarked by Li Kang 李康, a Qing-time author:

> 古印只有姓名與字，唐宋稍著齋室名，元時尚未闌入成語，至明代則某科進士某官職，無不羼入。[157]
>
> In antiquity, seals only bore the family, personal or style name. In Tang (618–907) and Song (960–1279) times, there were some using the name of their studios or study-rooms.

[149] It seems that only Liu Shangheng and Lai Fushun have taken any notice of previous typologies. Liu discusses those of Wang Jing 1979, Lai Fushun 1991 and Lin Shenqing 1997 by contrasting their different categories in a table before introducing his own (Liu Shangheng 2000, 48–49). Lai Fushun 1991, 138 summarises typologies of two Japanese scholars.

[150] Wang Jing 1979, 60–68; Qu Mianliang 1988; Wang Heting 1990; Lai Fushun 1991, 138–144; Cao Zhi 1992, 494–496; Xu Dongsheng 1994; Lin Shenqing 1997, 2–5; Zhou Shaochuan 1999, 252–259; Liu Shangheng 2000, 49–52; Ren Jiyu 2001, 261–271; Wang Aixi 2002; Sang Liangzhi 2002, 329–346; Xiong Yan 2003, 61–63; Sun Xuelei et al. 2004, vol. I: 9–11; Huo Manli 2004, 22–23; Bai Shuchun 2011, 63–64; Shi Wei 2012, 100–104; Liu Xiangchun 2013. Some typologies are based on seal legends from a certain region or collection: Fei Yuqing 2007, 124–125; Liu Ning et al. 2007, 77–78; Yang Yanyan 2011, 57–59. Jiang Fucong 1937 offers no typology – it is just a collection of seal legends of collectors from a specific area. Others categorise the legends of particular collectors: Peng Wenjing 2002, 77–79, 2003, 13–15. Van Gulik 1958, 451–457 offers a very detailed typology of seal legends in English, albeit not specifically for book collectors' seals.

[151] This is not restricted to the collector and owner of the book; the person in question might be someone other than the actual owner (Peng Wenjing 2002, 79). Lai Fushun objects to calling these book collectors' seals in a narrow sense for this reason (Lai Fushun 1991, 137).

[152] Fan Jingzhong 2001, 143. The translation is taken from McDermott 2006, 139. The brackets are my addition.

[153] Lin Shenqing 1997, 38, 65, 90, 152, 193. This formula clearly resembles the final dedications commonly found in ancient bronze inscriptions (Shaughnessy 1997, 70, 73–74, 76, 83).

[154] This seal belonged to Shen Tingfang 沈廷芳 (1692-1762) (Ren Jiyu 2001, 267). The legend actually imitates an earlier model; see Fan Jingzhong 2001, 153.

[155] Fan Jingzhong 2001, 144.

[156] McDermott 2006, 139. Fan Jingzhong 2001 has collected many more examples. Fan Jingzhong 2002 seems to be a slightly extended version of his earlier publication. See also Cao Zhi and Cao Xinzhe 2012.

[157] *Qianchen mengying lu* 前塵夢影錄 cited from Cheng Qianfan and Xu Youfu 1998, 367. Traditionally, Wen Peng (1498–1573) is credited as the first to have engraved longer legends, sayings or poems on seals (Wagner 1994, 271).

In Yuan times (1279–1368), sayings were not included yet, while in the Ming dynasty (1368–1644), all kinds of academic degrees and official ranks were invariably added as well.

A similar observation is shared by Ye Dehui, who at the same time condemns the trend of using ever-longer legends:

今人收藏印，多有以姓字齋堂、一切藏器累累至數十字者，此亦何異於自作小傳哉！余見宋元人收藏書籍、碑帖、字畫，多止鈐用姓名或二字別號、三字齋名，此正法也。明季山人墨客始用閒章，浸淫至於士大夫，相習而不知其俗，此最刺目之事。

Today's men, however, are prone to affix to their books seals consisting of the names of their studios and halls as well as of all the archaeological objects in their collections, altogether amounting to tens of characters. Is this practice any different from writing a short autobiography? Most of the books, rubbings of steles, calligraphic masterpieces and paintings which were once in the collections of the Song and Yuan, I have noticed, bear no more than a seal consisting of the given name and family names, two-character literary names or a three-character name of a studio. This is the proper usage. It was at the end of the Ming dynasty that scholars without official employment and men of letters began to use seals inscribed with idle words. This practice then gradually spread among the literati, who became so accustomed to it as to be unaware of its being bad taste. It is a most disgusting practice.[158]

Apart from the need to 'look for some empty space', Ye Dehui's second guiding principle in the use of seals is actually to 'remove idle words (去閒文)'. He advocates the use of short legends bearing only names:

姓名表字、樓閣堂齋，於是二三印，一印四五字足矣。

You may cut two or three seals containing your given and family names, your style name, the name of your two-storey building, pavilion, hall, or studio, each of the seals containing no more than four or five characters.[159]

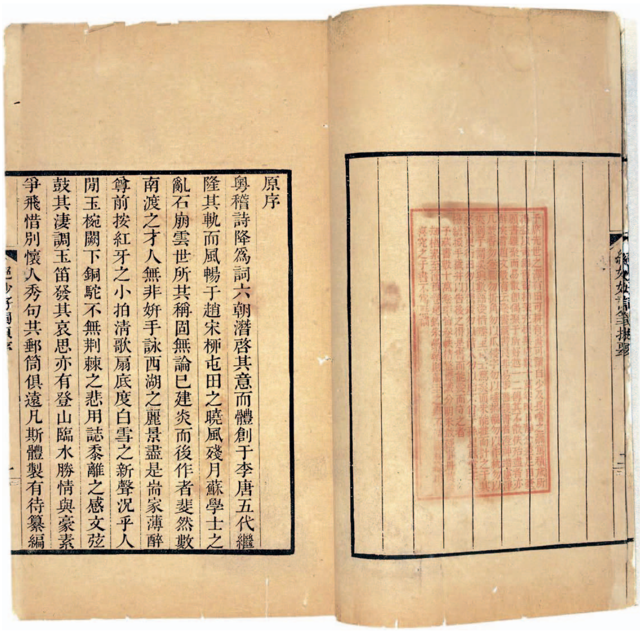


Fig. 9: Seal of Yang Jizhen 楊繼振 (1832–1893).

On the other hand, there are seal legends that contain whole pieces of prose. The most extreme example of this is probably that of Yang Jizhen 楊繼振 (1832–1893) and his rectangular relief seal with a legend consisting of 252 characters written in standard script – the imprint fills almost a whole page (see fig. 9) in which he admonishes his descendants to protect his (or rather, their) collection, including a quotation of Zhao Mengfu's well-known directive on how to handle books:[160]

聚書藏書，良非易事。善觀書者，澄神端慮，淨几焚香。勿卷腦，勿折角，勿以爪侵字，勿以唾揭幅，勿以作枕，勿以夾刺。[161]

Assembling and collecting books is really not an easy task. To enjoy books properly, clear your mind and let go of your worries, clean your desk and burn incense. Do not roll them up, do not make them dog-eared, do not approach the writing with [sharp] fingernails, do not use saliva to turn the pages, do not use them as a pillow and do not put bookmarks in them.

[158] *Cangshu shiyue*, 14 (translation, modified: Fang 1950, 157). Ye Dehui also devotes one chapter to the legends of book collectors' seals in his *Shulin qinghua* 10: 288–290.

[159] *Cangshu shiyue*, 14 (translation, modified: Fang 1950, 157).

[160] *Cangshu jishi shi*, 6:374; Fan Jingzhong 2001, 149–150; Ren Jiyu 2001, 270–271; McDermott 2006, 88. Lai Fushun (1991, 141, footnote 9, 10) lists two further examples of legends with over 100 characters. See also Qu Mianliang 1988, 95–97.

[161] Fan Jingzhong 2001, 150. The original includes two further points: 'do not handle [them] with dirty hands and do not exhibit them on the dining table (勿把穢手，勿展食案)'. There are numerous adaptations of these rules in seal legends (Fan Jingzhong 2001, 146–147).

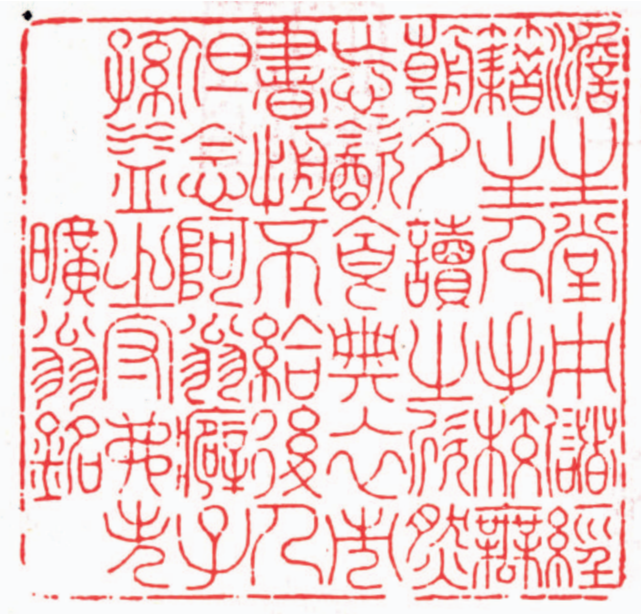


Fig. 10: Seal of Qi Chenghan 祁承㸁 (1563–1628), relief seal.

Yang himself further adds: 'do not sell them for money, do not lend them to others and do not bequeath them to unfilial sons and grandsons (勿以鬻錢，勿以借人，勿以貽不肖子孫)'. Another, less excessive, example is that of Qi Chenghan 祁承㸁 (1563–1628)[162] (see fig. 10):

> 澹生堂中儲經籍。主人手校無朝夕。讀之欣然忘飲食。典衣市書恒不給。後人但念阿翁癖。子孫益之守弗失。曠翁銘。[163]
>
> [Many] books are stored in the Dansheng hall. I, their owner, collated them by hand day and night. When reading them, I forgot to eat and drink out of sheer pleasure. Even pawning my clothes to buy [more] books didn't help, as I could never get enough of them; [I am afraid] my descendants will only remember their old man's craving. May [my] children and grandchildren get even more of them and guard them well so none of them get lost. Engraved by Old Man Kuang [i.e. Qi Chenghan].

The same high regard for books could also be expressed in fewer words: 'A single canonical work is worth more than a chestful of gold (黃金籯滿不如一經).'[164] Many more examples, both long and short, could be cited here to attest collectors' love of reading and studying as well as their concern about the future of their books, often combined with the wish for their descendants to preserve them.

5. Function

From the examples presented above, it will now have become quite clear that book collectors' seals not only served as marks of ownership, but were also used by their owners to express their views and attitudes and even to address their descendants. At the same time, the continuous addition of new imprints created a link between the different owners. Lothar Ledderose has put forward a hypothesis on the social function of calligraphy as a means of fostering social coherence among the literati in China, which also touches on the use of seals. According to him, the consecutive addition of collectors' seals on a piece of calligraphy established a 'quasi-physical relationship' among the different collectors and thus helped to stimulate a sense of belonging among members of the elite.[165] Like calligraphy, which was produced, collected and appreciated by the literati, books and book collecting were also part of their particular culture – not to speak of the difficult distinction between calligraphy and books. And just like in the realm of painting and calligraphy, seal imprints on books were considered to have an aesthetic value, adding beauty to the object. They became an integral part of a piece of art or a book. This is most obvious in Ye Dehui's treatment of the topic. As has been shown above, he clearly focuses on the aesthetic dimension of book collectors' seals. Aside from the right place for the imprint and its proper legend, he also draws attention to the style of the seal carving, which should comply to certain standards:

> 故不得工於仿漢及善松雪、文、何體，不如不印，免至名跡受污。
>
> Therefore, unless your seals skillfully imitate the Han style or closely follow the style of Songxue (i.e. Zhao Mengfu), Wen [Peng], or He [Zhen], it is better to have no seals at all; your books, priceless as they are, will at least be spared defilement.[166]

---

[162] On Qi Chenghan, see Lin Shenqing 2000a, 41–44; Wang He 1991, 95–96.

[163] Lin Shenqing 2000a, 44.

[164] This is the seal legend used by Xu Qianxue 徐乾學 (1631–1694); Lin Shenqing 2000a, 80–84. This is a saying found in *Hanshu* 73:3107.

[165] Ledderose 1986.

[166] *Cangshu shiyue*, 14 (translation, modified: Fang 1950, 158). Wen Peng 文彭 (1498–1573) was the eldest son of the famous painter and calligrapher Wen Zhengming 文徵明 (1470–1559). He Zhen 何震 (c. 1530–1604) was

The many examples of seal legends exhorting the owner's descendants to safeguard books might seem contradictory to the idea of a 'quasi-physical relationship' among the different collectors, but this is actually just a reflection of how unlikely it was to preserve a large book collection over many generations. In fact, there are very few prominent examples of families who were able to keep large collections across generations.[167] However, there are also examples of seal legends in which the owners acknowledge that their book is most likely to end up in the hands of a different collector one day. This was articulated most clearly by Xu Zeng 許增 (1824–1903):

> 得之不易失之易，物無盡藏亦此理。但愿得者如我輩，即非我有亦可喜。[168]
>
> It was not easy to obtain it, [but] it will be easy to lose it; the inexhaustible treasury [of the Creator] of Things also [follows] this principle.[169] I only wish that whoever obtains it is like me; even if I do not possess it, that is also gratifying.

This wish may also be expressed more plainly than this, as in the words of Sun Congtian: 'Treasure it, whoever obtained it (得之寶之)',[170] or 'Hope it will be circulated and passed on; do not defile or destroy it (願流傳勿污損)', as the seal legend of Wu Chao 吳焯 (1676–1733) and his son, Wu Yuchi 吳玉墀, declares.[171] The use of the phrase 'once in … (曾在)' or 'once collected by ... (曾藏)' reflects a collector's recognition of the fact that his book will sooner or later become part of another person's collection.[172] Affixing one's seal to a work was also a way of immortalising oneself, of course. This point is aptly expressed by Huang Pilie (1763–1825) in one of his many colophons on the books in his collection:

> 可知書不可無目，本書不可無圖記、題識，俾后之讀者一覽而知為誰之書。雖書不必仍為我有，而我與書俱存也。[173]
>
> Evidently, books should not be without a table of contents, and a book should [also] not be without a seal and colophon if it is to allow later readers to know whose book this is at a glance. Even if the book does not belong to me any more, I will be preserved together with the book [this way].

a student of Wen Peng. The emergence of seal cutting as an art of its own is closely related to these men (Wagner 1994, 275–277).

[167] McDermott 2006, 85–88. Cao Zhi and Cao Xinzhe 2012, 95–98 have found numerous cases of collections that were sold by a collector's descendants, but only mention a few contrasting examples of collections preserved over many generations.

[168] Fan Jingzhong 2001, 154–155.

[169] This alludes to a passage in the *Red Cliff Rhapsody* (*Chibi fu* 赤壁賦) by Su Shi 蘇軾 (1037-1101), see *Su Shi Wenji* 1:15 (transl. Mair 1994, 441): "Moreover, each thing within heaven and earth has its master. If I did not possess it, then I would not take even a hair of it. However, the pure wind over the river becomes sound when our ears capture it, and the bright moon between the mountains takes on form when our eyes encounter it. There is no prohibition against our acquiring them, and we can use them without ever consuming them. They are from the inexhaustible treasury of the Creator of Things, which you and I can enjoy together. (且夫天地之間，物各有主。苟非吾之所有，雖一毫而莫取。惟江上之清風，與山間之明月，耳得之而爲聲，目遇之而成色。取之無禁，用之不竭。是造物者之無盡藏也，而吾與子之所共適。)".

[170] Fang 1951, 217, 246. Achilles Fang remarks that this stands in opposition to the usual 'may children and grandchildren protect it' (Fang 1951, 260).

[171] Cao Zhi and Cao Xinzhe 2012, 99. On Wu Chao and his son, see Wang He 1991, 164, 168..

[172] Cao Zhi and Cao Xinzhe 2012, 99.

[173] From a colophon to a manuscript copy of the *Zaiye ji* 在野集, a selection of poems by Yuan Kai 袁凯 (?1316 – ?). Cited from Peng Wenjing 2003, 15.

LIST OF FIGURES

Fig. 1: Print (Kangxi, 1662–1722) of the 'Selected Writings by Tao An' (Tao An wenji 陶庵文集) by Huang Chunyao 黃淳耀 (1605–1645), 1:2B. (Held by National Library of China in Beijing: / 96108. Image taken from Sun Xuelei et al. 2004, vol. 6: 162). Nine seal imprints: 1: Zhang 張, not identified. 2: 'Subject Kui's seal' (*Chen Kui yin* 臣夔印), not identified. 3: 'Collected in the Shouhua Studio of the Zhao family from Guiyang' (*Guiyang Zhao shi Shouhua xuan cang* 貴陽趙氏壽華軒藏), not identified. 4: 'Bookmark of Master Xu from Yushan' (*Yushan Xuzi dushuji* 虞山徐子讀書記), not identified. 5: 'Stay idly at home in the eastern suburbs of Yushan' (*Jia ju Yushan dongguo* 家居虞山東郭), not identified. 6: Jin Kui 晉夔, not identified. 7: Quansun 荃孫, by Miao Quansun 繆荃孫 (1844–1919). 8: 'Cloud-wheel pavilion' (*Yunlunge* 雲輪閣), by Miao Quansun. 9: 'From the collection of the Beijing Library' (*Beijing tushuguan cang* 北京圖書館藏).

Fig. 2: Manuscript (Qing, 1644–1911) of the 'Literary Treasures of the Hanlin Academy' (*Hanlin zhuyu* 翰林珠玉) by Yu Ji 虞集 (1272–1348), 1:1B. (Held by National Library of China in Beijing: / 102857. Image taken from Sun Xuelei et al. 2004, vol. 6: 71). Five seal imprints (from bottom to top): 1: 'To obtain this book I endured much hardship. May later generations appreciate me' (得此書費辛苦後之人其鑒我), by Chen Zhan 陳鱣 (1753–1817). 2: 'Book collector's seal belonging to Ji Cangwei' (*Ji Cangwei cangshuyin* 季滄葦藏書印), by Ji Zhenyi 季振宜 (1630–1674). 3: 'Portrait of Zhongyu' (*Zhongyu tuxiang* 仲魚圖像), by Chen Zhan. 4: 'The Zhuang family of Kunling' (*Kunling Zhuang shi*昆陵莊氏), not identified (possibly Zhuang Zuji 莊祖基 (1843–1890). 5: 'Zheng Zuchen's seal' (*Zheng Zuchen yin* 鄭祖琛印), by Zheng Zuchen (1784–1851).

Fig. 3: 'Seal of An Guo' (*An Guo zhi yin* 安國之印). Personal seal of An Guo (1481–1534), intaglio seal (image taken from Zhong Yinlan 2008, 197).

Fig. 4: 'Cha Shenxing's Seal' (*Cha Shenxing yin* 查慎行印). Personal seal of Cha Shenxing (1650–1727) with a legend in reverse style, intaglio seal (image taken from Zhong Yinlan 2008, 650).

Fig. 5: Imprints of the 'Seal of Yongxing prefecture' (*Yongxing jun yin* 永興郡印) on the back of *Za'apitanxin lun* 雜阿毗曇心論 (Held by National Library of China in Beijing: BD 14711) [Image taken from http://www.nlc.gov.cn/newzqwqhg/dhtz/wjbz/gcdhysjc/nbc/, seen at 30 May 2014].

Fig. 6: 'Seal of Yongxing prefecture' (*Yongxing jun yin* 永興郡印), relief seal (image taken from http://www.mebag.com/paper/paper31.htm, accessed on 30 May 2014).

Fig. 7: *Qinding Tianlu linlan shumu* 欽定天祿琳瑯書目, 6:31B/32A.

Fig. 8: Manuscript with imprint of 'Hanlin Academy's Seal' (*Hanlin yuan yin* 翰林院印). 'Poems by Tang Yushi' (*Tang Yushi shi* 唐愚士詩) (Held by National Palace Museum in Taipei: 平圖013602).

Fig. 9: Seal of Yang Jizhen 楊繼振 (1832–1893), relief seal in standard script with 252 characters. (Found in print [Daoguang, 1820–1850, *Airixuan kanben* 愛日軒刊本] of the 'Extremely Marvellous Words' (*Juemiao haoci* 絕妙好詞) edited by Zhou Mi 周密 (1232–1298) auctioned in 2009 (http://pmgs.kongfz.com/detail/16_84189/, accessed on 30 October 2014).

Fig. 10: Seal of Qi Chenghan 祁承㸁 (1563–1628), relief seal. (Image taken from Lin Shenqing 2000a, 44.)

REFERENCES

Acker, William Reynolds Beal (1954), *Some T'ang and pre T'ang Texts on Chinese Painting* (Leiden: E.J. Brill; Sinica Leidensia 8).

Bai Shuchun 白淑春 (2011), 'Cangshu yinzhang chushi 藏書印章初識', *Tushuguan lilun yu shijian* 圖書館理論與實踐, 2: 61–65.

Bauer, Wolfgang (1959), *Der chinesische Personenname. Die Bildungsgesetze und hauptsächlichsten Bedeutungsinhalte von Ming, Tzu und Hsiao-Ming* (Wiesbaden: Harrasssowitz).

Bickford, Maggie (2006), '*Tu* and *Shu*: Illustrated Manuscripts in the Great Age of Song Printing', in Ming Wilson and Stacey Pierson (eds.), *The Art of the Book in China*, (London: University of London, Percival David Foundation of Chinese Art, School of Oriental and African Studies; Colloquies on art & archaeology in Asia 23), 61–81.

Brokaw, Cynthia Joanne (2005a), 'Publishing, Society and Culture in Pre-Modern China. The Evolution of Print Culture', *International Journal of Asian Studies,* 2.1: 135–165.

—— (2005b), 'On the History of the Book in China', in Cynthia J. Brokaw and Kai-wing Chow (eds.) *Printing and Book Culture in Late Imperial China* (Berkeley: University of California Press; Studies on China 27), 3–54.

—— (2007), 'Book History in Premodern China. The State of the Discipline I', *Book History,* 10: 253–290.

Bronson, Bennet and Ho, Chuimei (2004), *Splendors of China's Forbidden City. The Glorious Reign of Emperor Qianlong,* published on the occasion of the Exhibition Splendors of China's Forbidden City, The Glorious Reign of Emperor Qianlong, The Field Museum, Chicago, 12 March – 12 September 2004, (London: Merrell).

Brown, Rebecca M. and Hutton, Deborah S. (2011), *A Companion to Asian Art and Architecture*, Chichester (Malden: Wiley-Blackwell; Wiley-Blackwell Companions to Art History 3).

Cai Jiayuan 蔡家園 (2012), *Shu zhi shu* 書之書 (Beijing: Jincheng chubanshe 金城出版社).

Campbell, Duncan M. (2009), 'The Heritage of Books, Collecting and Libraries', *China Heritage Quarterly,* 20 (http://www.chinaheritagequarterly.org/editorial.php?issue=020; accessed on 9 April 2014).

Cangshu jishi shi 藏書紀事詩 [1909], by Ye Changchi 葉昌熾 (Shanghai: Gudian wenxue chubanshe 古典文學出版社, 1958).

Cangshu jiyao 藏書紀要 [1812], by Sun Congtian 孫從添, (Shanghai: Gudian wenxue chubanshe 古典文學出版社, 1957).

Cangshu shiyue 藏書十約 [1911], by Ye Dehui 葉德輝, in Qian Gurong 錢谷融 (ed.), *Ye Dehui shuhua* 葉德輝書話 (Hangzhou: Zhejiang renmin chubanshe 浙江人民出版社, 1998), 3–14.

Cao Jinyan 曹錦炎 (2002), *Gudai xiyin* 古代璽印 (Beijing: Wenwu chubanshe 文物出版社).

Cao Zhi 曹之 (1992), *Zhongguo guji banbenxue* 中國古籍版本學, (Wuhan: Wuhan daxue chubanshe 武漢大學出版社).

Cao Zhi 曹之 and Cao Xinzhe 曹新哲 (2012), 'Mai shu ren you mai shu sun 買書人有賣書孫, Zisun yong bao cangshuyin jiexi《子孫永寶》藏書印解析', in *Shandong tushuguan xuekan* 山東圖書館學刊, 2: 95–99, 108.

Cha Qisen 查啟森 (1994), 'Shuo shu 說《書》', in Cheng Huanwen 程煥文 (ed.), *Zhongguo tushu lunji* 中國圖書論集, (Beijing: Shangwu yinshuguan 商務印書館), 27–34.

Chang Bide 昌彼得 (ed.) (1974), *Songren zhuanji ziliao suoyin* 宋人傳記資料索引 (Taipei: Dingwen shuju 鼎文書局).

Chavannes, Édouard (1913), *Les documents chinois découverts par Aurel Stein dans les sables du oriental* (Oxford: Imprimerie de l'Université).

Chen Hongyan 陳紅彥 and Lin Shitian 林世田 (2007a), 'Dunhuang yishu jinxiandai jiancang yinzhang jishu (shang) 敦煌遺書近現代鑒藏印章輯述 (上)', *Wenxian* 文獻, 2: 33–52.

—— (2007b), 'Dunhuang yishu jinxiandai jiancang yinzhang jishu (xia) 敦煌遺書近現代鑒藏印章輯述 (下)', *Wenxian* 文獻, 3: 129–142.

Chen Tao 陳濤 (2010), 'Riben Kyoū shōku cang Dunhuang miji zhong Li Shengduo cangshuyin guanjian 日本杏雨書屋藏《敦煌秘笈》中李盛鐸藏書印管見', *Beijing shifan daxue xuebao* 北京師范大學學報, 4: 74–81.

Chen Xianxing 陳先行 (2003): *Dakai jinkui shishi zhi men. Guji shanben* 打開金匱石室之門. 古籍善本 (Shanghai: Shanghai wenyi chubanshe 上海文藝出版社).

Chen Xianxing 陳先行 and Shi Fei 石菲 (2009), *Ming Qing gao chao jiao ben jianding* 明清稿抄校本鑒定, (Shanghai: Shanghai guji chubanshe上海古籍出版社).

Ch'en Tso-lung 陳祚龍 (1960): 'Liste alphabétique des impressions des sceaux sur certains manuscrits retrouvés à Touen-houang et dans les régions avoisinantes', in *Mélanges publiés par l'Institut des Hautes Études Chinoises,* Tome 2 (Paris: Presses universitaires de France), 5–14.

Cheng Qianfan 程千帆 and Xu Youfu 徐有福 (1998), *Jiaochou guangyi* 校讎廣義. *Diancang bian* 典藏編 (Jinan: Qilu shushe 齊魯書社).

Chuguevskii, Leonid I. 丘古耶夫斯基 (1999), 'E cang Dunhuang hanwen xiejuan zhong de guanyin ji siyuan yinzhang 俄藏敦煌漢文寫卷中的官印及寺院印章', translated by Wei Yingchun 魏迎春譯, *Dunhuang xue jikan* 敦煌學輯刊, 1: 142–148.

Clunas, Craig (1997), *Pictures and Visuality in Early Modern China*, (Princeton, N. J: Princeton University Press).

Contag, Victoria and Wang Jiqian (1966), *Seals of Chinese Painters and Collectors of the Ming and Ch'ing Periods*, (Hong Kong: Hong Kong University Press) (first published as *Sammler-Stempel aus der Ming- und Ch'ing-Zeit,* The Commercial Press, 1940).

Dai Longji 戴龍基 (ed.) (2003), *Qunyu liuhen* 群玉留痕. *Jinian Beijing daxue tushuguan yibai zhounian cangshupiao* 紀念北京大學圖書館一百周年藏書票 (Beijing: Wenwu chubanshe 文物出版社).

Drège, Jean-Pierre (1984), 'Éléments méthodologiques pour l'étude des documents de Dunhuang', in *Les peintures murales et les manuscrits de Dunhuang,* Colloque franco-chinois organisé par la Fondation Singer-Polignac à Paris, les 21, 22 et 23 février 1983 (Paris: Editions de la Fondation Singer-Polignac), 53–59.

—— (1991), *Les bibliothèques en Chine au temps des manuscrits. Jusqu'au Xe siècle* (Paris: Ecole française d'Extrême-Orient ; Publications de l'Ecole française d'Extrême-Orient 161).

Edgren, James Sören (1993), 'Some Thoughts on Traditional Chinese Bibliograpic Terminology', *East Asian Library Journal* 101, 135–138.

—— (1997), 'Cangshu: The Tradition of Collecting Books in China', in Gunilla Jonsson (ed.), *Biblis 1995/1996. The Georg Svensson Lectures 1993, 1994 & 1995* (Stockholm: Föreningen för bokhantverk).

Edgren, James Sören (2006), 'The Authentication and Dating of Chinese Rare Books', in Ming Wilson and Stacey Pierson (eds.), *The Art of the Book in China* (London: University of London, Percival David Foundation of Chinese Art, School of Oriental and African Studies; Colloquies on art & archaeology in Asia, 23), 193–205.

Fan Fengshu 范鳳書 (2009), *Zhongguo sijia cangshu shi* 中國私家藏書史, (Zhengzhou: Daxiang chubanshe 大象出版社).

Fan Jingzhong 范景中 (2001), 'Cangshu mingyin ji 藏書銘印記', in *Cangshujia* 藏書家, 3: 142–157.

Fan Jingzhong 范景中 (2002), 'Cangshu mingyin ji 藏書銘印記', (Beijing: Zhongguo meishu xueyuan chubanshe 中國美術學院出版社).

Fang, Achilles (1950), 'Bookman's Decalogue (Ts'ang-shu shih-yüeh 藏書十約)', translated by Achilles Fang, *Harvard Journal of Asiatic Studies,* 13: 1/2, 132–173.

—— (1951), 'Bookman's Manual (Ts'ang-Shu Chi-Yao 藏書紀要)', by Sun Ts'ung-t'ien 孫從添, translated by Achilles Fang, *Harvard Journal of Asiatic Studies,* 14: 1/2, 215–260.

Fei Yuqing 費愉慶 (2007), 'Suzhou cangshujia de cangshuyin 蘇州藏書家的藏書印', *Tushuguan lilun yu shijian* 圖書館理論與實踐, 1: 124–126.

Gacek, Adam (1987), 'Ownership Statement and Seals in Arabic Manuscripts', in *Manuscripts of the Middle East*, 2: 88–95.

Galambos, Imre (2006), *Orthography of Early Chinese Writing. Evidence from Newly Excavated Manuscripts* (Budapest: Department of East Asian Studies, Eötvös Loránd University; Budapest Monographs in East Asian Studies, 1).

Guojia tushuguan cang Dunhuang yishu 國家圖書館藏敦煌遺書 (2010), 146 volumes (Beijing: Beijing tushuguan chubanshe 北京圖書館出版社).

Guojia tushuguan tecangzu 國家圖書館特藏組 (ed.) (2011), *Guoli zhongyang tushugan tecang xuanlu* 國立中央圖書館特藏選錄 (Taipei: Guojia tushuguan 國家圖書館).

Guy, R. Kent (1987), *The Emperor's Four Treasuries. Scholars and the State in the Late Ch'ien-lung Era* (Cambridge, Mass.: Harvard University Press).

Hanshu 漢書 (Beijing: Zhonghua shuju 中華書局, 1983).

Hanyu dacidian 漢語大詞典 (1991), 12 volumes, (Shanghai: Hanyu dacidian chubanshe 漢語大詞典出版社).

Houshan tancong 後山談叢 [1090], by Chen Shidao 陳師道, (Beijing: Zhonghua shuju 中華書局, 2007).

Hua Jifen 華濟芬 (2004), 'Cangshuzhang jiujing shiyu heshi 藏書章究竟始於何時? ', *Jiangsu tushuguan xuebao* 江蘇圖書館學報, 34: 4, 105.

Huang Zhiguang 黃志光 (2011), 'Tan cangshuyin yu cangshupiao 談藏書印與藏書票', *Dongwu zhongwen xianshang xueshu lunwen* 東吳中文線上學朮論文, 15: 139–162.

Hucker, Charles (1988), *A Dictionary of Official Titles in Imperial China,* Reprint, (Taipei: Southern Materials Center).

Huo Manli 霍曼麗 (2004), 'Cangshuyin de neirong ji jiazhi 藏書印的內容及價值', *Tushu yu qingbao* 圖書與情報, 2: 22–24.

Jia Zhigang 賈志剛 (2011), 'Cong chutu wenwu guankui Tangdai sijia cangshuyin 從出土文物管窺唐代私家藏書印', *Jianghan kaogu* 江漢考古, 2: 83–89.

Jiang Fucong 蔣復璁 (1937), 'Liangzhe cangshujia yinzhang kao 兩浙藏書家印章考', *Wenlan xuebao* 文瀾學報, 3.1: 1–25.

Jinshu 晉書 (Beijing: Zhonghua shuju 中華書局, 1974).

Jinshi 金史 (Beijing: Zhonghua shuju 中華書局, 1975).

Jones, Russell (1997), *Chinese Names. The Traditions Surrounding the Use of Chinese Surnames and Personal Names*, (Petaling Jaya, Selangor Darul Ehsan, Malaysia: Pelanduk Publications).

Kokuritsu kokkai toshokan 國立國會図書館 (ed.) (2002), *Hito to zōsho to zōshoin* 人と蔵書と蔵書印*, kokuritsu kokkai toshokan shozōhon kara* 國立國會図書館所蔵本から, (Tokyo: Yūshodō 雄松堂).

Kornicki, Peter Francis (1998), *The Book in Japan. A Cultural History from the Beginnings to the Nineteenth Century* (Leiden: Brill; Handbuch der Orientalistik, section 5: Japan, vol. 7).

Lai Fushun 賴福順 (1987), 'Qingdai Tianlu linlang shumu cangshuyin kao 清代天祿琳瑯書目藏書印考', *Shixue huikan* 史學彙刊, 15: 53–120.

—— (1989), 'Qingdai Tianlu linlang shumu xubian cangshuyin kao 清代天祿琳琅書目續編藏書印考', *Huagang wenke xuebao* 華岡文科學報, 17: 263–355.

—— (1990), 'Qingdai Tianlu linlang shumu cangshuyin zhi yanjiu 清代天祿琳瑯書目藏書印之研究', *Shixue huikan* 史學彙刊, 16: 161–204.

—— (1991), *Qingdai tianlu linlang cangshuyin yanjiu* 清代天祿琳琅藏書印記研究 (Taipei: Zhongguo wenhua daxue chubanbu 中國文化大學出版部).

Lauer, Uta (1996), 'Chinese Seals', in Jane Turner (ed.), *The Dictionary of Art,* vol. 13 (London: Macmillan Publishers), 128–131.

Ledderose, Lothar (1970), *Die Siegelschrift (Chuan-shu) in der Ch'ing-Zeit. Ein Beitrag zur Geschichte der chinesischen Schriftkunst*, (Wiesbaden: Steiner; Studien zur ostasiatischen Schriftkunst 1).

Ledderose, Lothar (1986), 'Chinese Calligraphy. Its Aesthetic Dimension and Social Function', *Orientations*, Oct., 35–50.

Lee, Thomas H. C. (1995), 'Books and Bookworms in Song China. Book Collection and the Appreciation of Books', *Journal of Sung-Yuan Studies*, 25: 193–218.

Li Xibi 李希泌 and Zhang Jiaohua 張椒華 (eds.) (1996), *Zhongguo gudai cangshu yu jindai tushuguan shiliao* 中國古代藏書與近代圖書館史料 (Beijing: Zhonghua shuju 中華書局).

Li Xuemei 李雪梅 (1999), *Zhongguo jindai cangshu wenhua* 中國近代藏書文化 (Beijing: Xiandai chubanshe 現代出版社).

Li Yunjing 李允經 (2000), *Zhongguo cangshupiao shihua* 中國藏書票史話, Changsha: Hunan meishu chubanshe 湖南美朮出版社.

Li Zhitan 李之檀 (2010), 'Dunhuang xiejing yongxing jun foyin kao 敦煌寫經永興郡佛印考', *Dunhuang yanjiu* 敦煌研究, 3: 108–110.

Li Zhizhong 李致忠 (1990), *Gushu banbenxue gailun* 古書版本學概論 (Beijing: Shumu wenxian chubanshe 書目文獻出版社).

Liangxi manzhi 梁谿漫志 [1192], by Fei Gun 费衮 (Shanghai: Shanghai guji chubanshe 上海古籍出版社; Song Yuan biji congkan 宋元筆記叢刊 1985).

Lidai minghua ji 歷代名畫記 [847], by Zhang Yanyuan 張彥遠. (Beijing: Renmin meishu chubanshe 人民美术出版社, 2005).

Liebrenz, Boris (2011), 'Lese- und Besitzvermerke in der Leipziger Rifaiya-Bibliothek', in Andreas Görke, Konrad Hirschler (eds.), *Manuscript Notes as Documentary Sources* (Würzburg: Ergon Verlag; Beiruter Texte und Studien 129), 141–162.

Lin, Shenqing 林申清 (1989), *Ming Qing cangshujia yinjian* 明清藏書家印鑒 (Shanghai: Shanghai shudian 上海書店).

—— (1997), *Zhongguo cangshujia yinjian* 中國藏書家印鑒 (Shanghai: Shanghai shudian 上海書店).

—— (2000a), *Ming Qing zhuming cangshujia cangshuyin* 明清著名藏書家藏書印 (Beijing: Beijing tushuguan chubanshe 北京圖書館出版社).

—— (2000b), *Riben cangshuyin jian* 日本藏書印鑒, Beijing: (Beijing tushuguan chubanshe 北京圖書館出版社).

Liu Ning 劉寧, Geng Bo 耿波 and Qin Yurong 秦玉蓉 (2007), 'Gudai cangshuyin chuyi 古代藏書印芻議', *Tushuguan zazhi* 圖書館雜志, 11: 77–78.

Liu Qiang 劉薔 (2006), 'Hanlinyuan yin yu siku jinchengben zhenwei zhi panding 《翰林院印》與四庫進呈本真偽之判定', *Tushuguan gongzuo yu yanjiu* 圖書館工作與研究, 1: 60–62.

Liu Shangheng 劉尚恆 (2000), 'Gudai sijia cangshu yinjian de zhonglei he hanyi 古代私家藏書印鑒的種類和含義', *Jiangsu tushuguan xuebao* 江蘇圖書館學報, 3: 48–52.

Liu Xiangchun 柳向春 (2013), 'Xue ni hong zhao, shuji zhong de yinji 雪泥鸿爪, 书籍中的印记', *Shoucangjia* 收藏家, 1: 43–50.

Liu Zhong 劉鐘, Xia Rongmin 夏榮敏 and Dong Caifeng 董彩鳳 (2001), 'Cangshupiao yu cangshuyin 藏書票與藏書印', *Hebei nongye daxue xuebao (nonglin jiaoyu ban)* 河北農業大學學報(農林教育版), 4: 71,77.

Luo Fuyi 羅福頤 (1981), *Gu xiyin gailun* 古璽印概論 (Beijing: Wenwu chubanshe 文物出版社).

Mair, Victor (ed.) (1994), *Columbia Anthology of Traditional Chinese Literature* (New York: Columbia University Press; Translations from Asian Classics).

McCausland, Shane (2011), *Zhao Mengfu. Calligraphy and Painting for Khubilai's China* (Hong Kong: Hong Kong University Press).

McDermott, Joseph (2005), 'The Ascendance of the Imprint in China', in Cynthia J. Brokaw / Kai-wing Chow (eds.): *Printing and Book Culture in Late Imperial China*, (Berkeley: University of California Press; Studies on China 27), 55–104.

—— (2006), *A Social History of the Chinese Book. Books and Literati Culture in Late Imperial China* (Hong Kong: Hong Kong University Press).

McMullen, David (1988), *State and Scholars in T'ang China*, (Cambridge: Cambridge University Press).

Mei Jia, Wang Kaihao (2012), 'By the Book', *China Daily*, 8 Jan. 2012: 18.

Mengxi bitan 夢溪筆談 [1088], by Shen Kuo 沈括, Hu Daojing jiaozheng 胡道靜校證 (Shanghai: Shanghai guji chubanshe 上海古籍出版社, 1962).

Nan Qi shu 南齊書 (Beijing: Zhonghua shuju 中華書局, 1972).

National Palace Museum (2007), 'The T'ien-lu Lin-lang Library. Marks of Connoisseurship by Collectors', http://www.npm.gov.tw/exh96/treasurebook/index4_en.html, (accessed on 27 Jan. 2014).

Ono Noriaki 小野則秋 (1943), *Nihon zōshoinkō* 日本藏書印考 (Tokyo: Bunyūdō shoten 文友堂書店).

—— (1954), *Nihon no zōshoin* 日本の藏書印, (Tokyo: Geibunsha 藝文社).

Pan Jixing 潘吉星 (1979), *Zhongguo zaozhi jishushi gao* 中國造紙技朮史稿 (Beijing: Wenwu chubanshe文物出版社).

Pan Meiyue 潘美月 (1995), 'Bizhi 碧沚', *Tushuguanxue yu zixun kexue da cidian* 圖書館學與資訊科學大辭典, http://terms.naer.edu.tw/detail/1680369/ (accessed on 29 May 2014).

Pearson, David (1994), *Provenance Research in Book History. A Handbook* (London: British Library; The British Library Studies in the History of the Book).

Pélissier, Roger (1971), *Les Bibliothèques en Chine pendant la première moitié du 20e siècle* (Paris: Mouton; Le monde d'outre-mer passé et présent, Série 4, Bibliographies 9).

Peng Wenjing 彭文靜 (2002), 'Jianlun Ye Dehui de cangshuyin yu yongyin sixiang 簡論葉德輝的藏書印與用印思想', *Changde shifan xueyuan xuebao* 常德師范學院學報, 2: 77–79.

—— (2003), 'Huang Pilie cangshuyin kaolun 黃丕烈藏書印考論', *Gaoxiao tushuguan gongzuo* 高校圖書館工作, 1: 13-15, 24.

Qian Jun 錢軍 (1998), *Cangshu* 藏書, (Shenyang: Liaoning jiaoyu chubanshe 遼寧教育出版社).

Qinding Tianlu linlang shumu 欽定天祿琳瑯書目, Changsha Wangshi kanben 長沙王氏刊本, Guangxu shi nian 光緒十年 [1884].

Qinding Tianlu linlang shumu xubian 欽定天祿琳瑯書目續編, Changsha Wangshi kanben 長沙王氏刊本, Guangxu shi nian 光緒十年 [1884].

Qingshi gao 清史稿 (Taipei: Dingwen 鼎文, 1981).

Qiu Xigui (2000), *Chinese Writing*, translated by Gilbert L. Mattos and Jerry Norman, Berkeley: Society for the Study of Early China and the Institute of East Asian Studies (University of California; Early China special monograph series 4).

Qu Mianliang 瞿冕良 (1988), 'Fengfu duocai de cangshu zhuanyin 丰富多采的藏書專印', *Tushuguanxue yanjiu* 圖書館學研究, 3: 90-97, 50.

Ren Jiyu 任繼愈 (ed.) (2001), *Zhongguo cangshulou* 中國藏書樓, 3 vols. (Shenyang: Liaoning renmin chubanshe 遼寧人民出版社).

Rong Xinjiang 榮新江 (1997), 'Li Shengduo cangjuan de zhen yu wei 李盛鐸藏卷的真與偽', *Dunhuang xue jikan* 敦煌學輯刊, 2: 1–18.

—— (2001), *Dunhuang xue shiba jiang* 敦煌學十八講 (Beijing: Beijing daxue chubanshe 北京大學出版社).

—— (2002), 'The Li Shengduo Collection: Original or Forged Manuscripts?', in Susan Whitfield (ed.), *Dunhuang Manuscript Forgeries* (London: British Library (The British Library Studies in Conservation Science 3), 62–83.

Rong Xinjiang 榮新江 (2013), *Eighteen Lectures on Dunhuang*, translated by Imre Galambos (Boston: Brill; Brill's Humanities in China Library 5).

Sang Liangzhi 桑良至 (2002), *Zhongguo cangshu wenhua* 中國藏書文化 (Beijing: Zhongguo caizheng jingji chubanshe 中國財政經濟出版社).

Sha Menghai 沙孟海 (1987), *Yinxue shi* 印學史 (Hangzhou: Xiling yinshe 西泠印社).

Shanben cangshu yinzhang xuancui 善本藏書印章選粹 (1988) (Taipei: Guoli zhongyang tushuguan 國立中央圖書館).

Shaoshi wenjian houlu 邵氏聞見後錄, by Shao Bo 邵博 (?–1158). (Beijing: Zhonghua shuju 中華書局, 1983; Tang Song shiliao biji congkan 唐宋史料筆記叢刊).

Shaughnessy, Edward L. (1997), 'Western Zhou Bronze Inscriptions', in idem (ed.) *New Sources of Early Chinese History. An Introduction to the Reading of Inscriptions and Manuscripts* (Berkeley: Society for the Study of Early China and the Institute of East Asian Studies, University of California; Early China Special Monograph Series 3), 57–84.

Shen Leping 沈樂平 (2012), 'Dunhuang yishu yinjian congkao (shang) 敦煌遺書印鑒叢考 (上)', *Shufa* 書法, 12: 96–99.

—— (2013), 'Dunhuang yishu yinjian congkao (xia) 敦煌遺書印鑒叢考 (下)', *Shufa* 書法, 1: 100–105.

Shi Wei 施薇 (2012), 'Guji cangshuyin jianxi 古籍藏書印淺析', *Guojia tushuguan xuekan* 國家圖書館學刊, 4: 100–105.

Shulin qinghua 書林清話 [1911], by Ye Dehui 葉德輝. (Beijing: Zhonghua shuju 中華書局, 1999).

Shushi 書史, by Mi Fu 米芾 (1051–1107), in *Baichuan xuehai* 百川學海 6, *Baibu congshu jicheng* 百部叢書集成 2, Banqiao (Taipei: Yiwen yinshuguan 藝文印書館, 1965).

Su Shi wenji biannian jianzhu 蘇軾文集編年箋注 (Chengdu: Bashu shushe 巴蜀書社, 2011).

Sullivan, Michael (2008), *The Arts of China,* 5th ed. (Berkeley: University of California Press).

Sun Beixin 孫蓓欣 and Li Zhizhong 李致忠 (eds.) (1998), *Beijing tushuguan cangshupiao* 北京圖書館藏書票. *Zhongguo lidai huangjia cangshu yinjian* 中國曆代皇家藏書印鑒 (Beijing: Beijing tushuguan chubanshe 北京圖書館出版社).

Sun Weizu 孫慰祖 (2002), *Fengni* 封泥. *Faxian yu yanjiu* 發現與研究 (Shanghai: Shanghai shudian 上海書店).

—— (2010), *Zhongguo yinzhang* 中國印章. *Lishi yu yishu* 曆史與藝朮 (Beijing: Waiwen chubanshe 外文出版社).

Sun Weizu 孫慰祖 (2010), *The History and Art of Chinese Seals* (Beijing: Foreign Languages Press).

Sun Xuelei 孫學雷 and Dong Guanghe 董光和 (eds.) (2004), *Zhongguo guojia tushuguan guji cangshuyin xuanbian* 中國國家圖書館古籍藏書印選編, 10 volumes (Beijing: Xianzhuang shuju 線裝書局).

Taiping guangji 太平廣記 (Beijing: Zhonghua shuju 中華書局, 1961).

Tang huiyao 唐會要 (Beijing: Zhonghua shuju 中華書局, 1955).

Tang nülang Yu Xuanji shi 唐女郎魚玄機詩. *Ju zhongguo guojia tushuguan cang Song Lin'anfu Chen zhai shujipu ke ben yingyin* 據中國國家圖書館藏宋臨安府陳宅書籍鋪刻本影印 (2003), (Beijing: Beijing tushuguan chubanshe 北京圖書館出版社; Zhonghua zaizao shanben, Tang Song bian: jibu 中華再造善本，唐宋編：集部).

Tsien, Tsuen-hsuin [錢存訓] (1985), *Science and Civilisation in China, Vol. 5: Chemistry and Chemical Technology, Pt. 1: Paper and Printing* (Cambridge: Cambridge University Press).

—— (2004), *Written on Bamboo & Silk. The Beginnings of Chinese Books & Inscriptions*, 2nd ed. (Chicago: University of Chicago Press).

Tuhua jianwen zhi 圖畫見聞誌, by Guo Ruoxu 郭若虛 (c. 1060–1110), Sibu congkan xubian, zibu 四部叢刊續編, 子部, (Shanghai: Shangwu yinshuguan 商務印書館, 1935).

Van Gulik, Robert Hans (1958), *Chinese Pictorial Art as Viewed by the Connoisseur. Notes on the Means and Methods of Traditional Chinese Connoisseurship of Pictorial Art, Based upon a Study of the Art of Mounting Scrolls in China and Japan* (Roma: Istituto Italiano per il Medio ed Estremo Oriente; Serie orientale Roma 19).

Veit, Willibald (1985), *Siegel und Siegelschrift der Chou-, Ch'in- und Han-Dynastie* (Stuttgart: F. Steiner Verlag Wiesbaden; Studien zur ostasiatischen Schriftkunst 4).

Wagner, Lothar (1994), *Die ganze Welt in einem Zoll. Ein Beitrag zur chinesischen Siegelkunde* (Ann Arbour, Michigan: UMI).

—— (1997), 'Chinese Seals', in Dominique Collon (ed.), *7000 Years of Seals* (London: British Museum Press) 205–222.

Wang Aixi 王愛喜 (2002), 'Zhongguo chuantong sijia cangshuyin 中國傳統私家藏書印', *Dang'an yu jianshe* 檔案與建設, 4: 48–49.

Wang Dongming 王東明 (1987), 'Cangshuyin yu cangshupiao shihua 藏書印與藏書票史話', *Tushu qingbao gongzuo* 圖書情報工作, 3: 44–45.

Wang He 王河 (ed.) (1991), *Zhongguo lidai cangshujia cidian* 中國歷代藏書家辭典 (Shanghai: Tongji daxue chubanshe 同濟大學出版社).

Wang Heting 王鶴廷 (1990), 'Cangshuyin yinwen de biaoshu tezheng ji zuoyong 藏書印印文的表述特徵及作用', *Henan tushuguan xuekan* 河南圖書館學刊, 1: 58–60.

Wang Jing 王競 (1979), 'Cangshuyin yu banben jianding gaishuo 藏書印與版本鑒定概說', *Tushuguan jianshe* 圖書館建設, 1: 59–70.

Wang Yuelin 王玥琳 (2014), Zhongguo gudai cangshuyin xiaoshi 中國古代藏書印小史 (Beijing: Chang'an chubanshe 長安出版社).

Watanabe Morikuni 渡邊守邦 and Gotō Kenji 後藤憲二 (eds.) (2001), *Shimpen zōshoin fu* 新編蔵書印譜 (Tokyo: Seishōdō shoten 青裳堂書店; Nihon shoshigaku taikei 日本書誌學大系 79).

Wei Li 韋力 (2004), Gushu shoucang 古書收藏 (Shenyang: Wanjuan chuban gongsi 萬卷出版公司).

——, (2009), 'Lingering Traces. In Search of China's Old Libraries, Introduced and translated by Duncan Campbell', *China Heritage Quarterly* 18, http://www.chinaheritagequarterly.org/scholarship.php?searchterm=018_oldlibraries.inc&issue=018 (accessed on 28 Jan. 2014).

Wilkinson, Endymion Porter (2012), *Chinese History. A New Manual* (Cambridge, MA: Harvard University Asia Center; Harvard-Yenching Institue monograph series 84).

Winkelman, John H. (1974), 'The Imperial Library in Southern Sung China, 1127–1279. A Study of the Organization and Operation of the Scholarly Agencies of the Central Government', *Transactions of the American Philosophical Society, N. S.,* 8: 1–61.

Wolf, Sylvia (1993), *Exlibris, 1000 Beispiele aus fünf Jahrhunderten = 1000 Examples from Five Centuries*, 2nd ed. (Munich: Bruckmann [Novum Press]).

Wu Qinfang 吳芹芳 (2013), 'Cangshuyin zuowei de leixing yu bianbie fangfa 藏書印作偽的類型與辨別方法', *Daxue tushuguan xuebao* 大學圖書館學報, 3: 113–121.

—— and Xie Quan 謝泉 (2015), Zhongguo gudai de cangshuyin 中國古代的藏書印 (Wuhan: Wuhan daxue chubanshe 武漢大學出版社).

Xianchou ji 獻醜集, by Xu Fei 許棐 (?–1249), in Zuoshi baichuan xuehai 左氏百川學海 19, yiji xia 已集下 (Beijing: Zhongguo shudian 中國書店, 1927).

Xiong Yan 熊焰 (2003), 'Cangshuyin de yuanliu leixing ji gongneng 藏書印的源流類型及功能', *Shoucangjia* 收藏家, 9: 60–64.

Xu Dongsheng 徐東生 (1994), 'Cangshuyin zhongzhong 藏書印種種', *Jiangxi tushuguan xuekan* 江西圖書館學刊, 3: 88–90.

Xu Xi 徐昕 (1995), 'Cong cangshuyin kan Ming Qing cangshujia de cangshuguan 從藏書印看明清藏書家的藏書觀', *Shandong tushuguan jikan* 山東圖書館季刊, 4: 58–61.

Yang Guolin 楊果霖 (2006), 'Qing Qianlong shiqi Tianlu linlang cangshu de tedian jiqi xianxiang 清乾隆時期《天祿琳琅》藏書的特點及其現象', *Guojia tushuguan guankan* 國家圖書館館刊, 95. 2: 127–144.

Yang Yanyan 楊艷燕 (2011), 'Guji cangshu yinzhang de neirong ji jiazhi 古籍藏書印章的內容及價值', *Jintu xuekan* 晉圖學刊, 3: 57–60.

Yijing zhengyi 易經正義, in *Shisanjing zhushu* 十三經註疏 (Beijing: Beijing daxue chubanshe 北京大學出版社, 2000).

Yindian 印典 [1722], by Zhu Xiangxian 朱象賢, in *Siku quanshu* 四庫全書 839, *zibu* 子部 145 (Shanghai: Shanghai guji chubanshe, 1985) 853–978.

Yuan Qingshu 袁慶述 (2003), *Banben muluxue yanjiu* 版本目錄學研究 (Changsha: Hunan shifan daxue chubanshe 湖南師范大學出版社).

Yuan Shi 元石 (1994), 'Yongxing jun yin kaobian 永興郡印考辨', *Zhongguo shufa* 中國書法, 2: 59–60.

Yuding Quan Tang shi 御定全唐詩, in *Siku quanshu* 四庫全書 1423-1431, jibu 集部 (Shanghai: Shanghai guji chubanshe 上海古籍出版社, 1985) 362–270.

Zhang Jianlun 張建崙 (ed.) (2004), *Haining cangshujia yinjian* 海寧藏書家印鑒 (Hangzhou: Xiling yinshe chubanshe 西泠印社出版社).

Zhang Lijuan 張麗娟 and Cheng Youqing 程有慶 (2002), *Song ben* 宋本 (Nanjing: Jiangsu guji chubanshe 江蘇古籍出版社; Zhongguo banben wenhua congshu 中國版本文化叢書).

Zhang Xiuyu 張秀玉 (2012), 'Nan Song shupeng ben Tang nülang Yu Xuanji shi liuchuan kaoshu 南宋書棚本《唐女郎魚玄機詩》流傳考述', *Tushuguan jie* 圖書館界, 3: 26–29.

Zhang Xiying 張錫瑛 (2000), 'Yongxing jun yin de niandai yiji xiangguan wenti 《永興郡印》的年代以及相關問題', in Wang Rencong 王人聰 and You Xuehua 游學華 (eds.), *Zhongguo gu xiyin xue guoji yantaohui lunwenji* 中國古璽印學國際研討會論文集, *International Symposium on Chinese Archaic Seals*, (Hong Kong: Xianggang zhongwen daxue wenwuguan 香港中文大學文物館) 153–159.

Zheng Weizhang 鄭偉章 (1999), *Wenxianjia tongkao (Qing - xiandai)* 文獻家通考 (清-現代), 3 vols. (Beijing: Zhonghua shuju 中華書局).

Zhong Yinlan 鐘銀蘭 (ed.) (2008), *Zhongguo jiancangjia yinjian daquan* 中國鑒藏家印鑒大全, 2 vols. (Nanchang: Jiangxi meishu chubanshe 江西美朮出版社).

Zhongguo lidai jiancangjia yinjian shujuku 中國曆代鑒藏家印鑒數據庫 (2011), http://diglweb.zjlib.cn:8081/zjtsg/zgjcj/index1.htm (accessed on 4 Oct. 2013).

Zhongguo lishi diming dacidian 中國曆史地名大辭典 (1995), (Guangzhou: Guangdong jiaoyu chubanshe 廣東教育出版社).

Zhou Shaochuan 周少川 (1999), *Cangshu yu wenhua* 藏書與文化, *Gudai sijia cangshu wenhua yanjiu* 古代私家藏書文化研究 (Beijing: Beijing shifan daxue chubanshe 北京師範大學出版社).

Zhou Xiaodong 周曉東 (2007), 'Wei Li: Minjian shoucang guji shanben zui duo de ren 韋力：民間收藏古籍善本最多的人', http://news.xinhuanet.com/book/2007-07/02/content_6317957.htm (accessed on 17 Mar. 2014).

Zhuang Yan 莊嚴 et al. (ed.) (1964), *Signatures and Seals on Painting and Calligraphy. The Signatures and Seals of Artists, Connoisseurs, and Collectors on Painting and Calligraphy since Tsin Dynasty,* compiled by the Joint Board of Directors of the National Palace Museum and the National Central Museum, Taichung, Taiwan, The Republic of China, 6 vols. (Hong Kong: Cafa Co.).

Article

The Manuscript Collection of Abbot Sathu Nyai Khamchan at the Monastery of Vat Saen Sukharam (Luang Prabang, Laos)*

Bounleuth Sengsoulin | Hamburg

Introduction

In the case of Laos (and other countries in Buddhist Southeast Asia as well), manuscripts (*nangsü*) can be considered an important primary source of information that can help us reconstruct the intellectual history of this culturally rich area. Manuscripts with texts pertaining to Buddhist teachings have been stored in monastic libraries or in the abodes of eminent abbots for centuries. One of the most influential abbots of the twentieth century who took a personal interest in manuscripts was Sathu Nyai Khamchan (the Venerable Phra Khamchan Virachitto) (1920–2007 CE). After his death, 392 manuscript fascicles or volumes were found in his abode. These items in his collection have been stored in cabinets there up to now. Many of the manuscripts state that he wrote them himself to commemorate important events in his own life. He kept some of them for private use.[1]

These manuscripts fulfilled different roles within the monastic culture. First of all, a monastery functions as a centre of knowledge, which is recorded in various types of manuscripts. Monks, novices and unordained Buddhist scholars all have access to the manuscripts. In various religious ceremonies, monks and novices read the Buddhist texts – mostly written as manuscripts – to laypeople. Buddha's teachings are generally supposed to be recorded on certain materials with specific forms, and such recorded materials have to be kept in sacred places. Thus, manuscripts that contain the teachings and are kept at a monastery become one of its main components.[2]

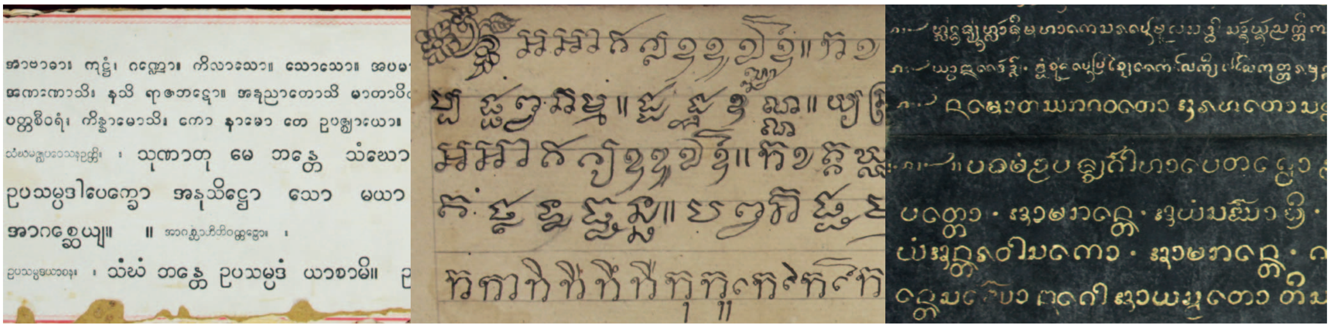
Regarding the materials used as writing support, the manuscripts in the aforementioned collection can be divided into two main groups: 280 palm-leaf fascicles and 112 paper manuscripts. Sathu Nyai Khamchan preferred to use the former while his collection of manuscripts for private use was mainly of the second type. The abbot seems to have followed the traditional Lao belief that Buddhist texts were supposed to be written on palm leaves. He first wrote, copied and collected manuscripts, then he donated some of them to the monastery. Lao Buddhists recognise these ritual acts as the 'making of a manuscript' (*kan sang nangsü*).

None of the paper manuscripts contain a note or passage saying they were made by him, but on two occasions, he left valuable information on the versos of the front and back covers of one paper manuscript in leporello format – no. BAD-13-2-018, entitled *Yattikammavācā* – which indicated that he had repaired its front and back covers and stated the length of time this manuscript had existed. He took good care of all the manuscripts in his responsibility, made from both palm leaf and paper, similar to a librarian.

* A preliminary version of this paper was published as *DORISEA Working Paper Series* no. 14 (2014) under the title 'Manuscripts Found in the Abode of the Venerable Abbot Phra Khamchan Virachitto, Vat Saensukharam, Luang Prabang, Laos'. The current research is being undertaken as part of research project EAP691: 'Rare manuscripts of great Buddhist thinkers of Laos: digitisation, translation and relocation at the Buddhist Archive of Luang Prabang' supported by the Endangered Archives Programme of the British Library, sponsored by Arcadia. Its manuscripts and documents are registered as Buddhist Archive Documents (BAD) with specific shelf marks. I would like to thank the Federal Ministry of Education and Research that has supported my research within the frame of the Dynamics of Religion in Southeast Asia (DORISEA) during the years 2011–2015. Finally my gratitude is due to the editorial team and Agnieszka Helman-Ważny of the Centre for the Study of Manuscript Cultures for their help in reworking the article.

1 Sathu Nyai Khamchan's personal collection was left undocumented by the Lao National Library's Preservation of Lao Manuscripts Programme in the 1990s (*Digital Library of Lao Manuscripts*, http://www.laomanuscripts.net/en/index) as it did not form part of the monastery's library, but remained restricted to the exclusive use of the late abbot himself.

2 Traditionally, a monastery was supposed to have at least four components: monks and novices, monastic buildings, images of Buddha, and manuscripts, especially manuscripts written in any type of Tham (Dhamma) script, such as Tham Lao, Tham Lü or Tham Lan Na.



Burmese script Khòm script Lan Na script

Fig. 1: Three types of scripts used for Buddhist texts.

With regard to scripts, a number of manuscripts in Sathu Nyai Khamchan's collection were written in Tham Lao (Dhamma)[3] and Lao Buhan (Old Lao) scripts. Apart from these, Tham Lü (Lü script used in northern Laos and southern China), Tham Lan Na (Lan Na script or *tua müang* used in northern Thailand), Khòm (an ancient Cambodian script), Burmese script, and modern Lao and Thai scripts also appear in some manuscripts. Most of the manuscripts written in Tham Lao and Lao Buhan scripts are in Lao and Pali. However, other languages such as Lü, Khòm, Burmese and Thai can be found in certain manuscripts as well. Most of the scripts used for writing the manuscripts are related to the traditional ideal of the sacred script, i.e. the script for recording Lord Buddha's teachings (fig. 1).

Buddhism was officially introduced into Laos twice: in 1359 and 1523 CE. The first time, Buddhism was introduced into the Kingdom of Lan Xang (modern Laos) from Müang Nakhòn Luang (i. e. Angkor in modern Cambodia) and Buddhist texts from this country were written in Khòm script. Much later, in 1523 CE, King Phothisalalat (r. 1520–1550 CE) sent his envoys to Chiang Mai to ask for the *Tipitaka* or Buddhist Canon to be given to his kingdom. The *Tipitaka* was brought from Chiang Mai, the capital of Lan Na kingdom at that time (Chiang Mai in modern-day Thailand), to Lan Xang kingdom.[4] It is said that the *Tipitaka* was written in Lan Na script on a number of fascicles of palm leaves. Later on, Tham Lao script was created to write and copy Buddhist texts; this script might have been developed from Lan Na script.[5]

Furthermore, a number of manuscripts in this collection indicate that they were influenced by modern writing techniques: some were written in columns and paragraphs, and some contain punctuation marks such as question marks and full stops, partly including other marks (such as parentheses) and abbreviations as well. Some palm-leaf books were written using a ball-point pen or even a typewriter.

Besides examining the contents of some of these manuscripts, this paper seeks to shed new light on Lao manuscript culture by analysing the process of copying and preserving manuscripts in a unique monastic environment.

Materials used as writing support

Palm leaf

Traditionally, and as the Report of the Lao Buddhist Fellowship Organization from 2007–2008 says (R-LBFO07-08), most monasteries in Laos have enough space in their vicinity for forestry and horticulture. Fruit trees and various plants used for medicinal purposes are often planted. In addition, numerous monasteries put great emphasis on the cultivation of palm trees (talipot palm, *Corypha umbraculifera*) because these provide the monks with sufficient material for producing manuscripts.

In order to make palm leaves (*bai lan*) fit for writing, the leaves have to be processed in a special manner.[6] In practice, several steps are necessary before the leaves can be used as material for writing. There are three main steps: first, the palm leaves are cut from the tree and their twigs

[3] The Pali term Dhamma refers to the teachings of Buddha and is therefore also used to denote the script in which these sacred teachings were written, hence Dhamma or Tham script. The earliest evidence for Dhamma script is an inscription from 1376CE; cf. Grabowsky 2011, 98f., and Veidlinger 2006, 15.

[4] Sila 2001, 45–46, 63.

[5] Pha Nya Luang Maha Sena undated, 47.

[6] Agrawal 1984, 27.

Table 1: Some features of palm-leaf manuscripts.

Long palm leaf	Short palm leaf
- Size: about 50–60 × 4–5.5 cm	- Size: about 30–40 × 4–5 cm
- Two holes for a string (*sai sanòng*), but generally only the left one is used	- One hole for a string (*sai sanòng*)
- No. of lines per Page: 4–6; only the top line and the bottom one are written in full length	- No. of lines per page: 4–5; only the top line and the bottom one are written in full length
- Scripts: Tham Lao (Dhamma), Lao Buhan (Old Lao), Tham Lü and Khòm	- Scripts: Tham Lao (Dhamma), Lao Buhan (Old Lao)
- Content: mostly religious texts	- Content: mostly non-religious texts[8]
- Paratexts: introductory text and colophon	- Paratexts: introductory text and colophon

are sliced off; next, all the leaves are boiled and dried to make them soft and durable; and finally, they are cut into particular shapes and sizes, depending on what they are ultimately going to be used for. Leaves cut this way are processed in two sizes: long ones and short ones.[7] These two types of palm leaves are used for different purposes and differ greatly in terms of their features (see table 1).

In the collection of manuscripts belonging to Sathu Nyai Khamchan, a short text was usually written on some leaves which were bound by a cord (*sai sanòng*) and called a fascicle (*phuk*). Some long stories and texts such as the *Story of Prince Vessantara* and the text of *Thutangkhavat* (Pali: *dhutaṅgavattī*; 'The Thirteen Ascetic Practices') were not written as a single fascicle of palm leaf; the former was, in fact, written on sixteen fascicles of long palm leaves (BAD-13-1-0114).

The number of fascicles of the latter text, *Thutangkhavat*, varies therefore, depending on the size of the leaves: if long leaves were used for writing, the text usually comprises two fascicles, whereas using short leaves for writing the same text increases the fascicle numbers up to six (BAD-13-1-0058).

Generally speaking, numerous fascicles of palm-leaf manuscripts – containing a longer version of the same text – were fastened together to form a bundle (*sum*) which was frequently enclosed by two wooden boards for protection. Usually, the bundle was wrapped in a piece of cloth and tied up with a piece of string. A wrapped bundle of fascicles is called *mat* in Lao. In fact, not only does a *mat* comprise a single bundle and one text, it can also consist of many bundles with many fascicles and texts as well.

Paper

Three types of paper manuscripts were found in the abode of abbot Sathu Nyai Khamchan: manuscripts made from mulberry paper[9] (*chia sa*), *khòi*[10] paper (*chia khòi*) and modern paper (*chia utsahakam*) (see table 2). The first two types are handmade products which are only produced occasionally (normally made after the harvest) because the production of paper is not the main occupation of local people, whereas the last type is an industrial product. Sathu Nyai Khamchan used the word *phap lan* (book in concertina format) to refer to all of them, however (BAD 13-2-066: 080).

Paper (*chia*) is more convenient for writing than palm leaf because it can be shaped, sized and coloured according

[7] For more details, see Buddhist Archive Documents (BAD), manuscript nos. BAD-13-1-0019, BAD-13-1-0023, BAD-13-1-0059, BAD-13-1-0061, BAD-13-1-0113, BAD-13-1-0162, BAD-13-1-0223, BAD-13-1-0230, BAD-13-1-0322, BAD-13-1-0329.

[8] Generally speaking, short palm leaves are used for writing non-religious texts, e.g. on traditional medicine, astrology, magic or fortune-telling. In addition to these, a number of Buddhist texts have also been written on short palm leaves. Any text could be found in this kind of manuscript known as *nangsü kòm tang khon tang mi* in Lao – literally, 'short palm-leaf manuscripts containing various texts according to their owners' or users' needs'.

[9] Mulberry paper is made from the soft inner bark of a plant called *Broussonetia papyrifera*; see Hunter 1978, 56ff.

[10] *Khòi* is a common name for trees whose bark is used for the making of paper. There are two types of *khòi* tree in Laos: a common and a thorny one. Its botanical name is *Streblus asper*. Cf. Huang 2006, 7, 13ff.

Table 2: Some features of mulberry, *khòi* and modern paper manuscripts.

Mulberry paper	*Khòi* paper	Industrially produced paper
- Size: various sizes/shapes Folded book format: generally 35–60 × 40–45 cm Concertina format: about 10–15 × 35–50 cm	- Size: about 30–40 × 10–15 cm	- Size: two sizes/shapes Similar to that of *khòi* paper (c. 40 × 15 cm) Similar to that of palm leaf (c. 4.5–5.5 × 40–45 cm)
- No. of lines per page: depends on the size of the manuscript	- No. of lines per page: about 4–10	- No. of lines per page: about 4–8
- Scripts: Tham Lü, Tham Lao (both Dhamma scripts) and Lao Buhan (Old Lao)	- Scripts: Tham Lü, Tham Lao (both Dhamma scripts) and Lao Buhan (Old Lao)	- Scripts: Tham Lao (Dhamma)
- Content: mostly non-religious texts	- Content: mostly non-religious texts	- Content: mostly religious texts
- Paratexts: introductory text and colophon (rarely)	- Paratexts: introductory text and colophon (rarely)	- Paratexts: introductory text and colophon
- Tables: rarely provided; depends on the text	- Images: some only contain texts, while others contain images as well	

to the user's requirements. As Agrawal states, 'manuscripts on paper could be bound in the modern book form, which was not possible for palm-leaf manuscripts'.[11] The various types of paper manuscripts were mostly written in black ink.[12] However, a number of them made of *khòi* paper were darkened with soot or black lacquer,[13] so they were usually written on in white chalk and sometimes in gold or yellow ink. Which paper was employed usually depended on the content of the text that was to be written on it.

Preservation

Sathu Nyai Khamchan was a manuscript-maker, collector and conservator. He regularly examined all types of manuscripts under his control to make sure they were in good condition and put their folios in the correct order. Moreover, they were wrapped in cloth and kept in various cabinets in his abode.[14]

To be able to check the spelling and content of manuscripts, a great deal of effort and knowledge of many subjects – i.e. those typically covered in Buddhist and non-Buddhist texts – is required. Furthermore, familiarity with various scripts and languages is also necessary. Sathu Nyai Khamchan had learnt to read a number of scripts: Old Lao script, Tham Lao script, Tham Lü script, Lan Na script, Burmese script, Khòm script and others as well. We can assume this because passages and texts written in various types of scripts believed to have been used by him can be seen in a large number of the folios of various manuscripts found in his abode.

Apart from the above-mentioned preservation aspect, Sathu Nyai Khamchan regularly checked if his longer manuscripts were arranged correctly; manuscripts containing different versions of the same text posed a challenge to the reader if they were too long for a single fascicle. If these different versions were not easy to distinguish, the fascicles might have got mixed up.

[11] Agrawal 1984, 127.

[12] The ink used has not been investigated yet. It remains to be seen whether it is carbon ink, which seems probable; cf. Huang 2006, 10.

[13] Cf. Igunma 2013, 631; for examples, see manuscripts nos. BAD-13-2-001, BAD-13-2-002, BAD-13-2-003, BAD-13-2-004, BAD-13-2-005, BAD-13-2-006, BAD-13-2-007.

[14] For more details about the manuscript collection of the great monk, see McDaniel 2009, 124–139; and for more about the care and conservation of palm-leaf manuscripts, see Agrawal 1982, 84–86.

Therefore, when using texts written on more than one fascicle, it was necessary to make sure that they were from the same version (fig. 2).

In fact, some long texts were written on a single fascicle in order to avoid the problem mentioned above, even if they comprised more than a hundred folios (*lan*). These texts were stories on the past lives of Lord Buddha or *jātaka* stories (*lüang sadok*), and most of them came with a pair of wooden covers (*mai pakap*) and a long holding string (*sai sanòng*).

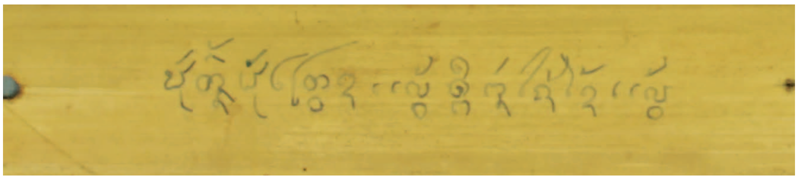


Fig. 2: Palm-leaf manuscript BAD 13-1-0321, fol. 25r: This note reads: 'The first and the second fascicles [of a longer text] have already been examined. They match each other (or: they are from the same version) and are ready to be used.'

Numerous palm-leaf manuscripts found in Sathu Nyai Khamchan's abode are multiple-text manuscripts (MTM). Others were not made as an MTM, but were created by threading numerous fascicles of manuscripts together. They were usually made by different people at different times. Later on, a collector who found out that they dealt with similar topics threaded them together as a single fascicle. These are composite manuscripts. Manuscript BAD-13-1-0280 is an example (fig. 3 and table 3).

Fig. 3: Palm-leaf manuscript BAD-13-1-0280, fols. 32v/33r. This manuscript comprises two texts: the first one (A) contains the Buddhist monastic code (Pali: *Bhikkhu pātimokkha, Lao: Phikkhu patimok)* and the other one (B) is on the process of ordination (Pali: *Vidhi-pabbajjā-upasampada, Lao: Vithi bapphasa upasombot).* Even though some parts of their contents are related to each other, these texts have some striking differences (see table 3).

Palaeography and philology

Writing system

The orthography of some words written in Sathu Nyai Khamchan's manuscripts differs from that of former times; we can observe a partial change in the orthographic system used in manuscripts over time. It is possible that some words written in line with old spelling systems may have led to misunderstandings.

Sathu Nyai Khamchan was one of several monks who contributed to the preservation and development of Lao phil-

Table 3: Differences between texts (A) and (B) in manuscript BAD-13-1-0280.

	(A)	(B)
Title	'Buddhist monastic code' *(Phikkhu patimok)*	'The process of ordination' *(Vithi bapphasa upasombot),* mostly *Nissaya*
Language	Pali	Lao (contains variants of Pali and Sanskrit words)
Date	be 2499 (1956 ce)	be 2490 (1947 ce)
Scribe	Sathu Phò Phan Phothipannyo	Sathu Nyai Khamchan
Donor (*sattha*)	Sathu Nyai Khamchan	Sathu Nyai Khamchan
Aim	To remark his 36th birthday To dedicate merit to Sathu Nyai Kaenchan and his senior relatives	To support Buddhism

Table 4: Sample of abbreviations and ligatures

Old spelling		New spelling		Romanisation	Lao	Meaning
Shape	Number of letters	Shape	Number of letters			
[illegible]	2	[illegible]	5	*an va*	ອັນວ່າ	-
[illegible]	4	[illegible]	7	*thang lai*	ທັງຫຼາຍ	all
[illegible]	2	[illegible]	3/3	*chak*	ຈັກ	will, shall
[illegible]	3	[illegible]	4	*ao*	ເອົາ	to get, take
[illegible]	5	[illegible]	7	*khao khòng*	ເຂົ້າຂອງ	thing; material; property
[illegible]	4	[illegible]	5	*katham*	ກະທຳ	to make, do
[illegible]	3	[illegible]	4	*kò di*	ກໍດີ	and; or; can be done
[illegible]	4	[illegible]	4/4	*kò ma*	ກໍມາ	(connector) + to come
[illegible]	3	[illegible]	4/4	*kò mi*	ກໍມີ	(connector) + to have
[illegible]	3/3	[illegible]	4	*kala*	ກາລະ	time, a period of time
[illegible]	3	[illegible]	4	*khili*	ຄີລີ	hill, mountain
[illegible]	3	[illegible]	4/5	*di li*	ດີຫຼີ	(final particle); good
[illegible]	4	[illegible]	4	*sü va*	ຊື່ວ່າ	to name

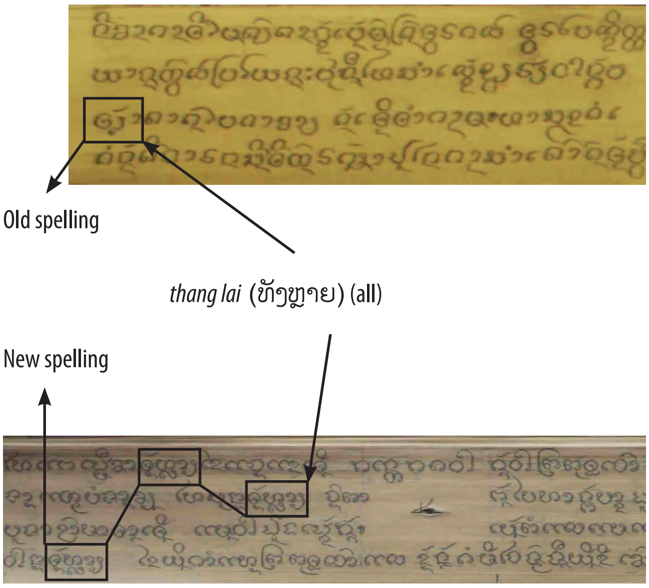


Fig. 4: Palm-leaf manuscripts BAD-13-1-0028, fol. 9r; BAD-13-1-0100, fol. 2r.

ology and orthography. Most texts in palm-leaf and paper manuscripts contain words written in different spellings, particularly ligatures (*kham nyò*) and tone marks (*hup vannanyut*) (see table 4). In the past, before the nineteenth century, the former were always used, but the latter were not used at all. However, during Sathu Nyai Khamchan's life, their usage changed: the former gradually stopped being employed, while the latter started being used in texts. In fact, replacing *kham nyò* with full words and writing tone marks have both become popular in manuscript-writing in Luang Prabang since the 1940s.[15] This period can be considered an important turning point in the development of the orthographic system used in manuscript-writing in Luang Prabang (see fig. 4).

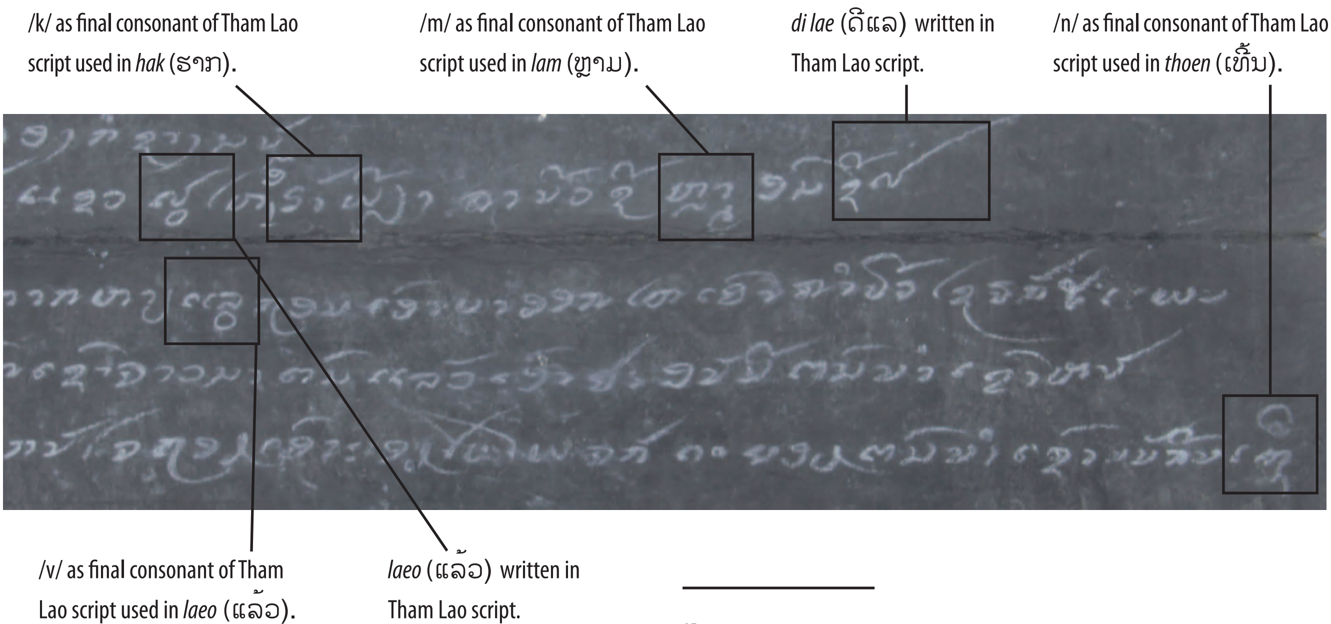


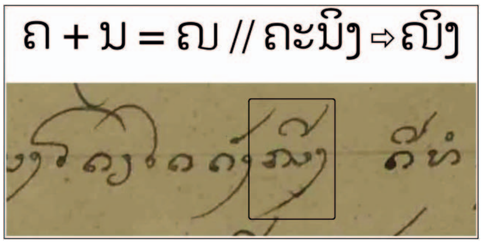
Fig. 5: Paper manuscript BAD-13-2-005, fols. 7v/8r.

[15] For more details, see the colophons of manuscripts BAD-13-1-0007, BAD-13-1-0008, BAD-13-1-0009, BAD-13-1-0010, BAD-13-1-0011, BAD-13-1-0012, BAD-13-1-0013, BAD-13-1-0128, BAD-13-1-0157, BAD-13-1-0164, BAD-13-1-0193, BAD-13-1-0195, BAD-13-1-0208 and BAD-13-1-0280.

Furthermore, some scribes just replaced the final consonants of the Old Lao script (*tua lao buhan/lao doem*) with final consonants of the Tham Lao script (*tua tham lao*). Even some words written in Tham Lao script were included into the main texts written in Old Lao script. These features are not unusual for the ancient writing style and should be considered an orthographic change as well. Both palm-leaf and paper manuscripts, resp. religious and secular texts, contain such features (fig. 5).

A valuable manuscript for the study of Lao philology and orthography is the astrological manuscript BAD 13-2-042 (see chapter 'Astrology' below). It contains a poetical composition, which was very popular in the past, especially during the sixteenth and seventeenth centuries, the apogee of the Lan Xang kingdom. Its ancient writing style is characterised by contractions of two letters. To take one example, the initial consonants in some two-syllable words, the first syllables of which include /a/ (ອະ), and where /n/, /m/, /ny/ (ນ, ມ, ຍ) function as the initial consonants of the second syllables, are combined to form a ligature (fol. 30r, line 2; fol. 59r, line 2; fol. 65r, line 2 etc.).

ຄະນຶງ /*kha-ning*/ (to imagine) is one such word. The verb *kha-ning* contains two syllables – the first one (ຄະ – *kha*) ends in the vowel ອະ /a/, while the second one (ນຶງ – *ning*) begins with a consonant, ນ /n/. According to the ancient orthography of Laos, the vowel ອະ in ຄະ will be deleted and the second half of the consonant ນ will be combined with the consonant ຄ to form a ligature of the two consonants. See the image below (BAD-13-2-042, e.g. fol. 30r, line 3):



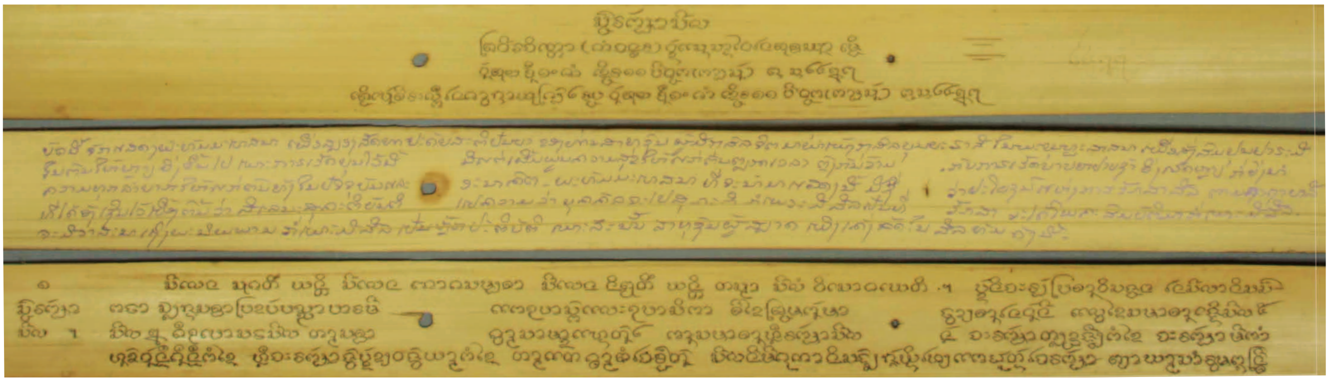


Fig. 6a: Palm-leaf manuscript BAD-13-1-0157, fols. 7r/8r/9r. The added text was written with a ballpoint pen in modern Lao, whereas the main text was written in Tham Lao script. Here, the text itself is an introduction.

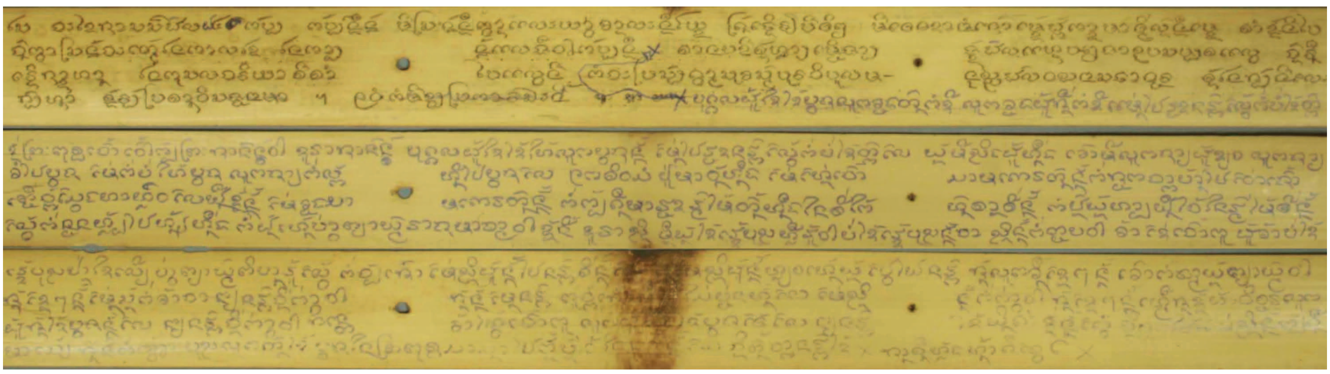


Fig. 6b: Palm-leaf manuscript BAD-13-1-0163, fols. 5r/6r/6v. The added text was written with a ballpoint pen in Tham Lao script, but with modern Lao orthography. Here, the additional text was inserted into the main text.

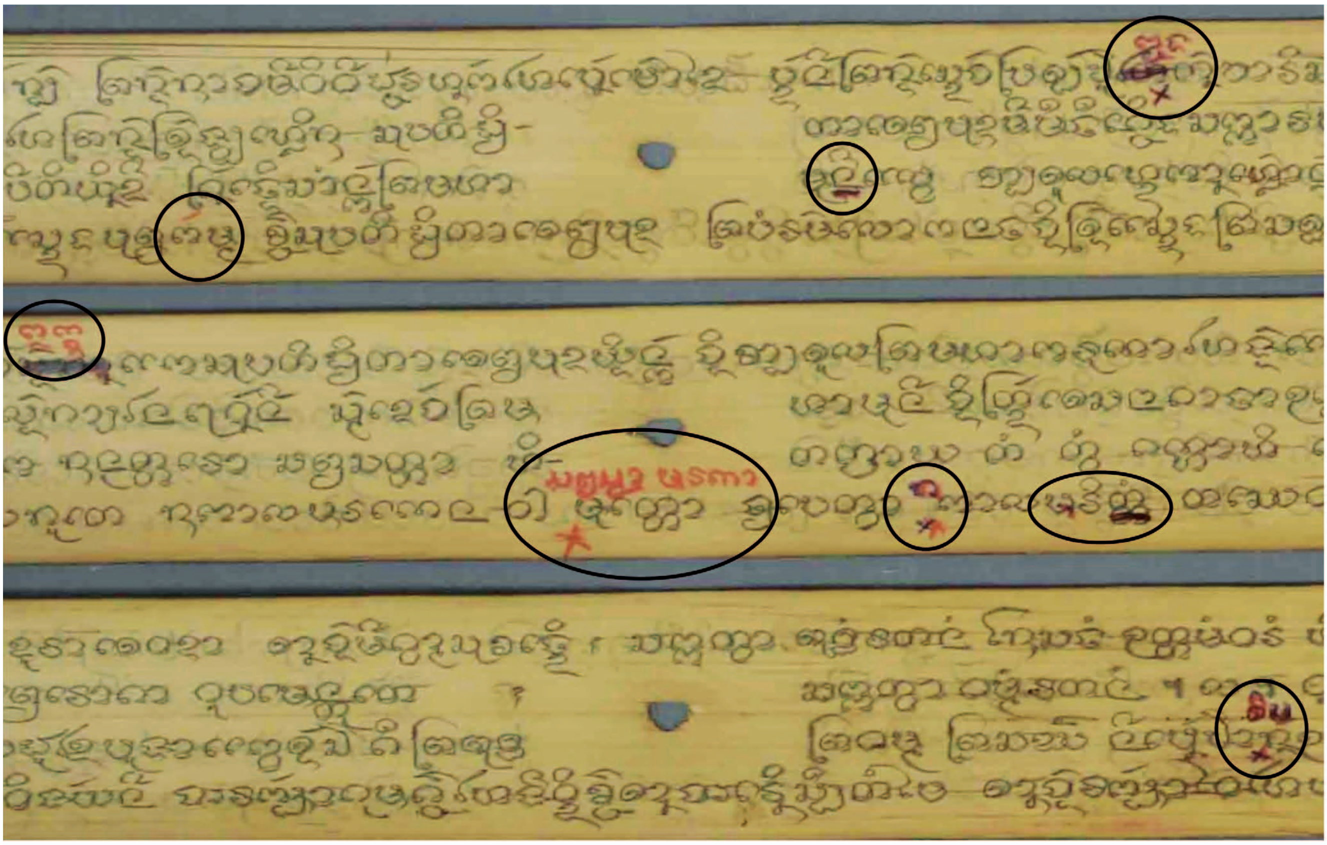
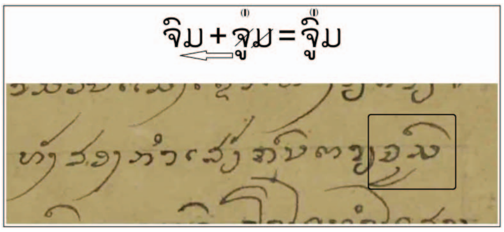


Fig. 7: Palm-leaf manuscript BAD-13-1-0208, fols. 2r/3r/4r: Corrections marked.

Furthermore, two syllables or words located next to each other, which have the same initial consonants, may be combined by a single initial consonant (BAD-13-2-042, fol. 30r, line 4; fol. 31r, line 1; fol. 59r, line 4 etc.).

The word ຈູ່ມຈົມ /chum chom/ (to dip, sink; to die) may serve as an example. This compound contains two words, ຈົມ /chom/ and ຈູ່ມ /chum/. Their initial consonants (ຈ – ch) and final consonants (ມ – m) are the same. Therefore, only one initial consonant and one final consonant are combined to form a ligature. See the image below (BAD-13-2-042, fol. 30r, line 2):



Apart from these items, the substitution of the initial consonants can easily be seen between the high and low group consonants and between short and long vowels. The shape of the vowel /a/ used in this text is also remarkable, as it is similar to that of the last part – the 'tail' – of the numeral 8 in Lao. Sometimes, a symbol similar to the shape of *mai kan* (ັ)[16] in Lao is written above this shape.

Paratexts

Besides colophons, some manuscripts found in Sathu Nyai Khamchan's abode contain additional texts, probably written by Sathu Nyai Khamchan himself. These texts were composed as introductions to the main texts or to explain and elaborate the main texts.[17] This shows that Sathu Nyai Khamchan himself had looked over most of the manuscripts kept in his abode, especially the frequently used

[16] The vowel /a/ in Lao can be represented by two symbols in writing: ະ and ັ. The former is used for words following the structure consonant – vowel, the latter for the structure consonant – vowel – consonant.

[17] See the colophons of manuscripts BAD-1-13-0004, BAD-1-13-0005, BAD-1-13-0157, BAD-1-13-0163, BAD-1-13-0175 and BAD-1-13-0223.

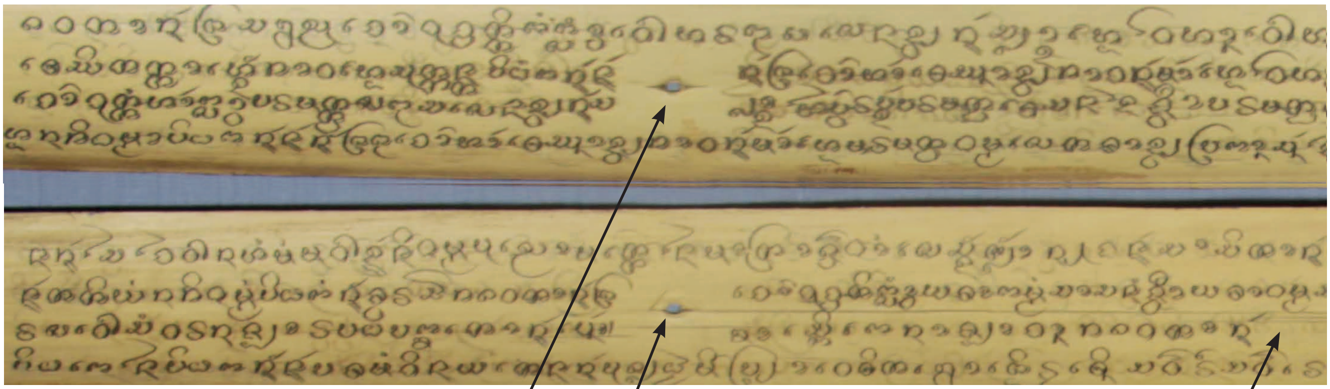


Fig. 8: Palm-leaf manuscript BAD-13-1-0296, fols. 1v/2r. These spaces were left for making the holes for holding strings (*sai sanòng*). This space was left because of a crack in the palm-leaf (*lan taek haeng*).

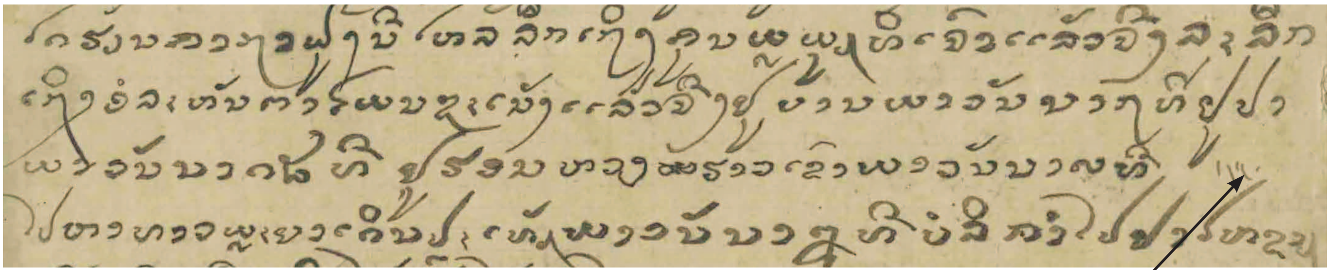


Fig. 9: Paper manuscript BAD-13-1-0296, fol. 1r. The space was probably left because some words (ໆ 'seven' and ຢູ່ 'in', 'at') written in the line above were occupying parts of the line below, and the beginning word of the next sentence (ໄປ 'to go') has two ascending letters.

ones, which should be considered his privately used manuscripts. Sathu Nyai Khamchan, while working with them had noted what should be added to the main text in order to help his readers understand its contents (see figs. 6a and b). A number of manuscripts found in his abode bear no signs of corrections or additional texts, however. Such manuscripts might have been given or donated by other people who wanted to perform meritable acts, and were only kept in his cabinets.

Textual criticism

It is particularly interesting that a number of manuscripts found in Sathu Nyai Khamchan's abode bear various types of corrections, such as crossed-out letters or words and additional words written above or beneath them, or crosses marking a place where a letter or word is thought to be missing, with the missing letter or word added above it. This must be regarded as an alteration of the way Buddhist texts were traditionally purified and passed on. The tool used in these emendations, however, was not the same one as that employed to write the original text, which was written with a stylus; writing any word on palm leaves with a stylus requires a considerable number of steps to be carried out in order to make that word visible as the incisions do not become legible immediately. If a manuscript was needed urgently, though, people who corrected texts written on palm leaves used a ballpoint pen for their work rather than a stylus.

According to traditional Buddhist belief, no matter whether they were written carefully or not, manuscripts should not be treated disrespectfully or kept in a demeaning place. The texts that manuscripts contain, especially the ritual ones, should not have any insertions or other writing added to them. Any person who breaks this rule will lose the respect of devout Buddhists. Furthermore, laywomen are not supposed to touch religious manuscripts directly, even if they are the persons who donate them. In the manuscript-making ceremony (*phithi sang nangsü*), the manuscript has to be enclosed in a cloth and placed on a bowl or platter (see chapter 'Manuscript making' below). The female donor can then move the manuscript by lifting up the bowl with her arms.

During Sathu Nyai Khamchan's life, even though manuscripts were still regarded as being sacred, they were permitted to be opened and studied scholarly. In the past, in contrast, the correctness of spelling was considered less

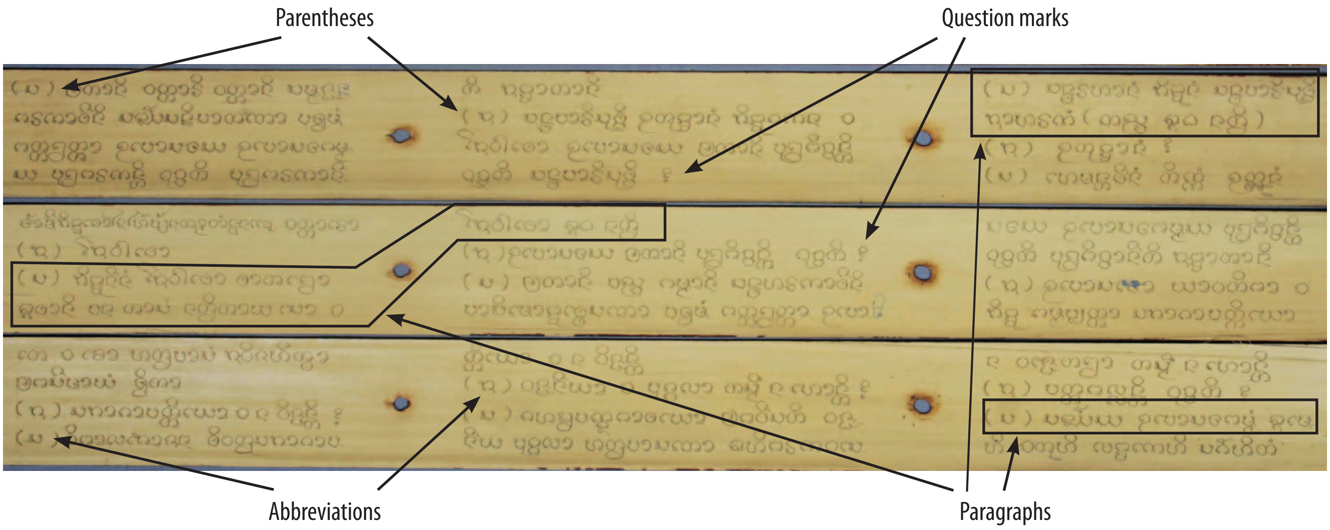


Fig. 10: Palm-leaf manuscript BAD-13-1-0280, fols. 3r/4r/5r. Texts written in three columns, influenced by a modern style of printing.

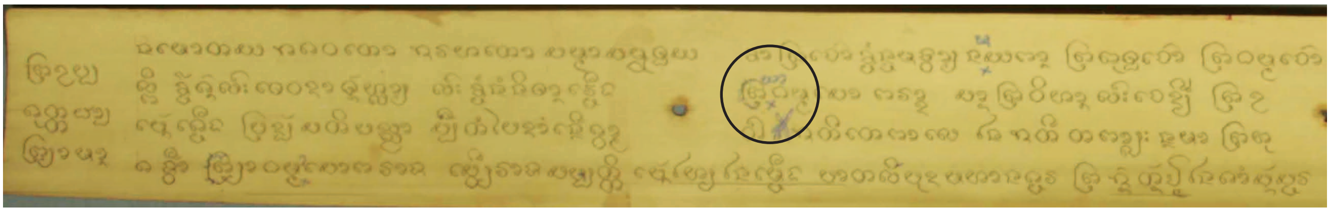


Fig. 11a: Palm-leaf manuscript BAD-13-1-0222, fol. 1r. Text corrected with ball-pen.

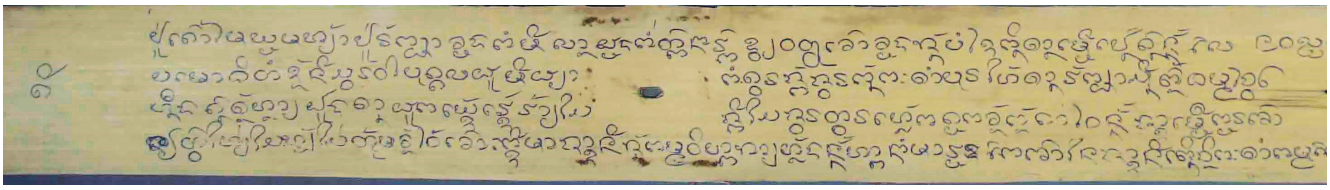


Fig. 11b: Palm-leaf manuscript BAD-13-1-0104, fol. 28r. Text written with ball-pen.

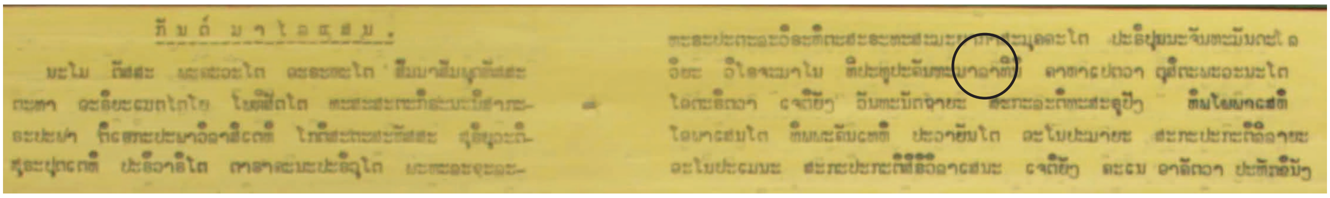


Fig. 11c: Palm-leaf book BAD-13-1-0111, fol. 1r. Text written with type-writer.

important than the sacredness of the Dhamma script.[18] In other words, the senior monks of Luang Prabang, who were concerned about the purity of the Buddhist texts, paid now much more attention to the variations of texts written on palm leaf and paper (see fig. 7).

Punctuation and Layout

Traditional style

Traditionally, manuscripts were written without any blank spaces between the words. If there was any space, it might have been due to other reasons, not related to any writing norms. Furthermore, punctuation marks such as commas, question marks and similar markings used in present-day writing were not used (see figs. 8 and 9).

[18] This phenomenon can be observed in at least sixty manuscripts, see e.g. BAD-13-1-0002, BAD-13-1-0014, BAD-13-1-0017, BAD-13-1-0023.

Modern style

Apart from manuscripts, a number of printed materials such as books, magazines and documents were also found in Sathu Nyai Khamchan's abode. Some manuscripts found in the same place may have been influenced by modern media and their layout. Numerous texts written on palm leaf and paper contained various types of punctuation marks and were written in a form similar to that of present-day techniques. This indicates that some scribes might have had access to different types of modern publications and considered texts written in the modern style more convenient for reading. Furthermore, they may have also been fascinated by the layout of such texts and therefore used similar styles in their own manuscripts. This should be understood as an important turning point in the production of manuscripts in Luang Prabang. Sathu Nyai Khamchan should be regarded as a key figure and main supporter of the introduction of these techniques to the circle of scribes in Luang Prabang (see fig. 10).

Writing instruments

Writing on a palm leaf requires a different technique than writing on a sheet of paper. The tool necessary for writing on palm-leaf folios is a stylus (*lek can*). A fascicle of a manuscript is not finished once the stylus has been used, however; after writing, all the scripts then have to be darkened (*long mük*). Both writing and darkening require considerable time and effort. Agrawal states: 'As the incision with a stylus is not easily legible, it is made visible by applying lamp-black or charcoal powder mixed with oil. The excess is wiped off with a cloth.'[19]

In fact, various manuscripts found in Sathu Nyai Khamchan's abode after his death testify to his accomplishment in using this traditional instrument.

Some of the manuscripts found in the abbot's rooms were not written with any type of stylus, however, but with various ballpoint pens. These were much more frequently used for making corrections than for writing or copying works.[20] Various modern tools were employed to write on palm leaf, such as ball-pens or even a type-writer (see figs. 11a to c).

[19] Agrawal 1984, 32.

[20] See the references listed in footnote 17.

Manuscripts for public usage

Secular texts

Traditionally, a monastery serves as a knowledge centre for the Buddhist community and is therefore the place where Buddhist texts — i.e. texts belonging to the Pali canon[21] — can be found. Nowadays, however, the lay community demands more from the monasteries than just spiritual guidance. Consequently, monks may even be asked to give advice concerning quarrels and other such disputes, and most monasteries not only keep Buddhist texts, but also have various other types of secular texts at hand for this reason.[22] Thus, it is not surprising that numerous manuscripts with non-religious content were found in Sathu Nyai Khamchan's abode after his death.

History

Some of the manuscripts found in the abbot's abode deal with historical events (*pavatsat* ປະຫວັດສາດ). These manuscripts were not written as a fascicle (*phuk*), but as single folios that could be attached to any fascicle or kept together with other fascicles in a bundle (*sum*). One example of this is seen in folio 54 of BAD-13-1-0188, which tells us that Chao Anurut built a stupa (*pha that*) on the top of Mount Phu Si (*chòm phu si*) in CS[23] 1166 (1804 CE).

Interestingly, a note was inserted in the colophon of a fascicle of *Thutangkhavat*. It is written at the end of the main text and reads: '[…] *phoen khün müa soek siang tung nan tae lae na* […]' (literally, '[…] [at the time] they went up for the war in Siang (Chiang) Tung, […]'.[24] This indicates that the circumstances at the time this manuscript was written might have been rather inconvenient for such a task. The manuscript comprises six fascicles, but only one text, and includes a hundred and eighty-four folios. It must

[21] The Pali Canon comprises three parts of Lord Buddha's teachings, which are known by the term *Tipiṭaka*: the *Vinaya Piṭaka*, *Suttanta Piṭaka* and *Abhidhamma Piṭaka*. The first part contains all the rules for governing the order of monks and nuns, the second part contains the discourses, and the last one deals with an exposition of all realities in detail. For more information, see Gorkum 1975.

[22] Terwiel 2012, 243.

[23] *Chunlasakkarat* (the 'Minor Era'; abbreviated CS; Pali: *cuḷāsakarāja*), which started in 638 CE in present-day Myanmar, was a calendar used in South-East Asian countries before the onset of European colonialism in the nineteenth century. In Laos, this calendar still appears in manuscripts made up to the twentieth century. For more details about the Minor Era, see Chao Phetsarat 2001, 34–42.

[24] Ms. BAD-13-1-0058, fol. 54. Cf. Techasiriwan (in print).

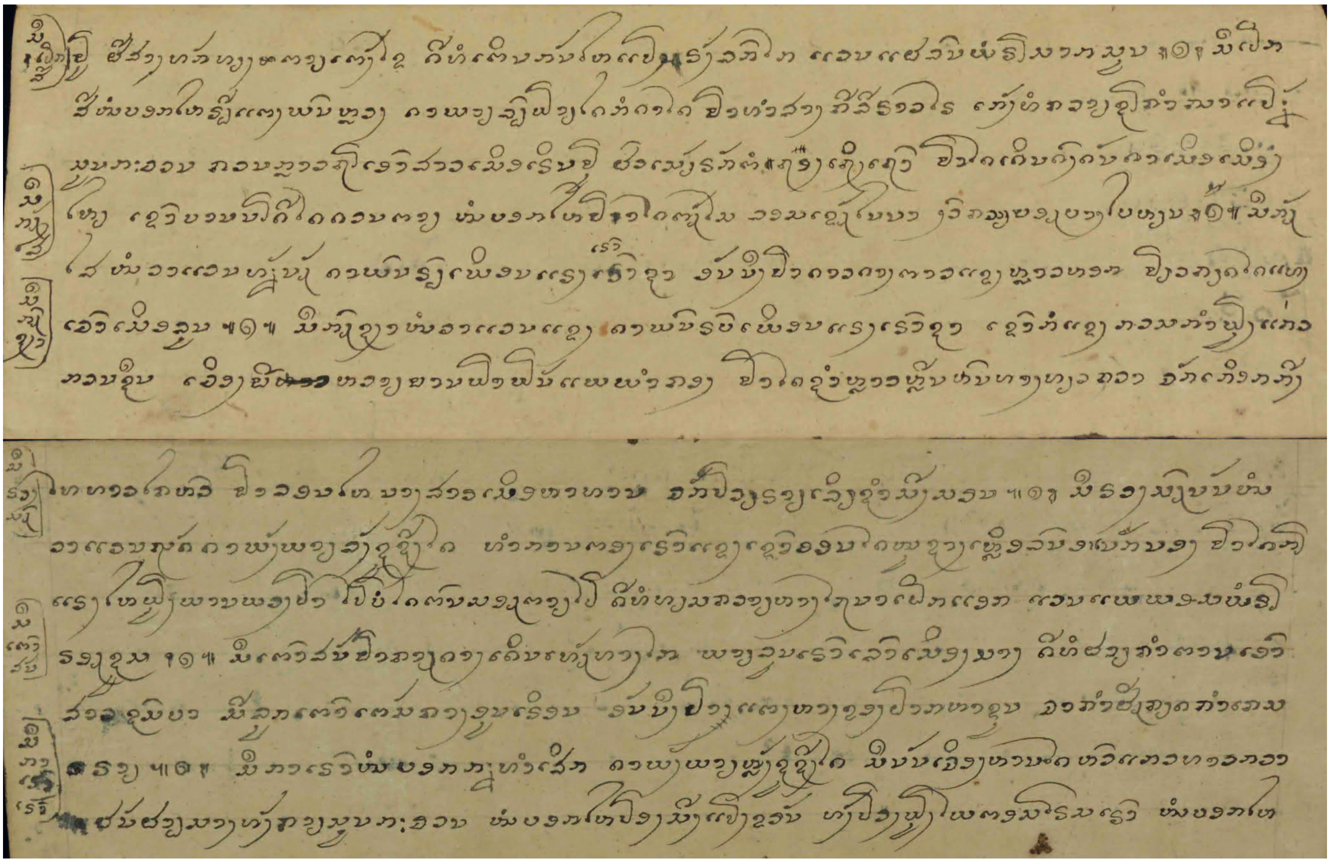


Fig. 12: BAD-13-2-042, fol. 27rv: Text on the calculation of auspicious and inauspicious days, written in CS 1270 (1908 CE).

have taken a long time to finish them. Having successfully accomplished such a task must have made the copyist proud of his work since he actually made a note of the challenge he had overcome.

Astrology

The majority of paper manuscripts found in Sathu Nyai Khamchan's abode deal with astrological topics (*holasat* ໂຫລາສາດ) and are made of mulberry or *khòi* paper. Furthermore, some of the palm-leaf manuscripts found at the abbot's home – especially the short ones – deal with the same subject.[25] It is unexpected that manuscripts dealing with this matter were kept in the eminent abbot's abode, because monks are thought to follow precepts and study Buddhist texts. All the paper manuscripts were kept together in the same cabinets along with the palm-leaf manuscripts. This fact demonstrates that Sathu Nyai Khamchan took care of all the manuscripts he kept in his abode. It is very likely he used some of them regularly and read the rest of them through once in a while, although we have no firm evidence for this.

One of the above-mentioned manuscripts – BAD-13-2-042 entitled *Nangsü ha mü hai mü di*, meaning a manuscript containing texts for calculating auspicious and inauspicious days – deals with the first thunder of the year, a natural phenomenon allegedly affecting people's lives, especially their efforts at cultivation. Part of this text reads as follows:

> [...] ຮ້ອງກ້ຳາບົວລະພາ ເທວະດາໄຂປະຕູເຫຼັກ ຈັກແພ້ຄົນທັງຫຼາຍ ຫົວປີຝົນບໍ່ຫຼາຍ ຫຼ້າປີຝົນຈິ່ງມີຫຼາຍ ເຂົ້າດີທຸກແຫ່ງແລ ຮ້ອງກ້ຳາອາຄະເນ ເທວະດາໄຂປະຕູລົມ ຝົນບໍ່ຫຼາຍ ລົມແຮງນັກ ຄົນທັງຫຼາຍຈັກເປັນທຸກນັກ ເມືອງຈັກເປັນເສິກ ທໍ່ວ່າເຂົ້າຍັງດີແລ ຮ້ອງກ້ຳາທັກຂິນ ເທວະດາໄຂປະຕູໄຟ ປີນັ້ນຈັກແລ້ງນັກ ຄົນຈັກຕາຍຢາກເຂົ້າມາກນັກແລ ບໍ່ດີແລ [...]

> […] [If it begins to] thunder in the east, God [will] open a steel door. [This] will affect everyone seriously. Not much rain [will fall] at the beginning of the year, but much more rain [will fall] at the end of the year. [People in all] locations [will have a] fruitful harvest of rice. [If it begins to] thunder in the south-east, the God [will] open

[25] For more details, see manuscripts BAD-13-1-0057, BAD-13-1-0082, BAD-13-1-0330; BAD-13-2-003, BAD-13-2-007, BAD-13-2-042, BAD-13-2-043, BAD 13-2-054, BAD-13-2-059.

> a wind door. Not much rain [will fall], but an extremely strong wind [will blow]. Everyone will suffer [from such a phenomenon], [and] warfare will break out in the *müang* (country). However, [people will still get a] bountiful harvest of rice. [If it begins to] thunder in the south, the deity [will] open a fire door. There will be a severe drought that year. A number of people will be famine-stricken and die. It will be a terrible year. […]

Another interesting point is the changing ownership of this manuscript. A colophon on fol. 1v reads: '[This] manuscript on the calculation of auspicious [and] inauspicious days belongs to Hua Chao Phumma from Vat Saen. This manuscript was written in [CS 1270 [1908 CE]'. This might indicate that the owner had written the manuscript himself, and he should therefore be recognised as one of the local scholars. It was not given to Sathu Nyai according to the custom of 'making manuscripts' to foster charity, i.e. of donating one's manuscript as the property of a monastery, but for some other reasons; otherwise, there would have been a colophon stating so. Two possible reasons why this manuscript came into Sathu Nyai Khamchan's personal possession should be mentioned. One possibility is that the former owner knew the contents of this manuscript very well, maybe even remembering them by heart, and then gave it away. Another possibility is that after the former owner's death, his relatives might not have known how to use the manuscript and therefore gave it to others or handed it directly to Sathu Nyai Khamchan.

Magic

The Lao word *khatha* (ຄາຖາ), meaning 'magic' or 'magic formula', refers to two categories of supernatural powers: *khatha man* (ຄາຖາມານ), which is believed to cause harm and destruction to all beings (similar to black magic), and *khatha pha* (ຄາຖາພະ), which is believed to protect beings and things from various kinds of danger. The first category is forbidden for Buddhist monks, but the second one is said to be appropriate for monks to practise. Thus, it comes as no surprise that a number of mulberry and *khòi* paper manuscripts dealing with magical matters were found in Sathu Nyai Khamchan's abode. Some of them contain a number of sacred words from Buddhist teachings. Those Pali words were combined with Lao words and used as a magic formula. Lao words are not felt to be sacred. Therefore, not only do Pali words serve to make up for certain deficiencies in the Lao language, but they are also used for writing ritual texts.

In manuscript BAD-13-2-007, the *Triple Gems* (Buddha, Dhamma and Sangha) were interspersed with specific Lao words for the composition of *khatha*. Part of this *khatha* goes as follows:

> [...] ພຸດທັງອັດ ທຳມັງອັດ ສັງຄັງອັດ [...] ພຸດທັງຕຸດ ທຳມັງຕຸດ ສັງຄັງຕຸດ [...] ພຸດທັງ ສະລະນັງອັດ ທຳມັງ ສະລະນັງອັດ ສັງຄັງ ສະລະນັງອັດ [...]

> […] [I pray that the] Buddha [will help me to] close [my mind to the unmeritorious], [I pray that the] Dhamma [will help me to] close [my mind to the unmeritorious], [I pray that the] Sangha [will help me to] close [my mind to the unmeritorious], […] [I pray that the] Buddha [will help me to] keep [my mind from the unmeritorious] [I pray that the] Dhamma [will help me to] keep [my mind from the unmeritorious] [I pray that the] Sangha [will help me to] keep [my mind from the unmeritorious] […] [I hold the] Buddha as my refuge [to help me to] close [my mind to the unmeritorious] [I hold the] Dhamma as my refuge [to help me to] close [my mind to the unmeritorious] [I hold the] Sangha as my refuge [to help me to] close [my mind to the unmeritorious] […]

The words and expressions used in this *khatha* reflect the writer's or the compiler's high competence in the use of language, especially with regard to words derived from Pali and Sanskrit. In this *khatha*, he has combined Pali words with Lao words. He may certainly be considered an expert in composing *khatha*. There is no indication what effect this *khatha* has and how it can be used, however. The substance of the *khatha* hints at the possibility that it is used to protect human beings from various dangers. Monks, novices, nuns and possibly laypeople who practise meditation may use it as a prayer to protect themselves from any kind of danger and to keep their mind focused.

Pharmacopeia

Lao Buddhist monks and novices have long been recognised not only as propagators of Buddhism, but also as experts in healing and medical treatment (*tamla ya* ຕຳລາຢາ). They know how to use various plants to obtain medicinal substances. Furthermore, some of them have recorded the knowledge of traditional therapy in manuscripts. A number

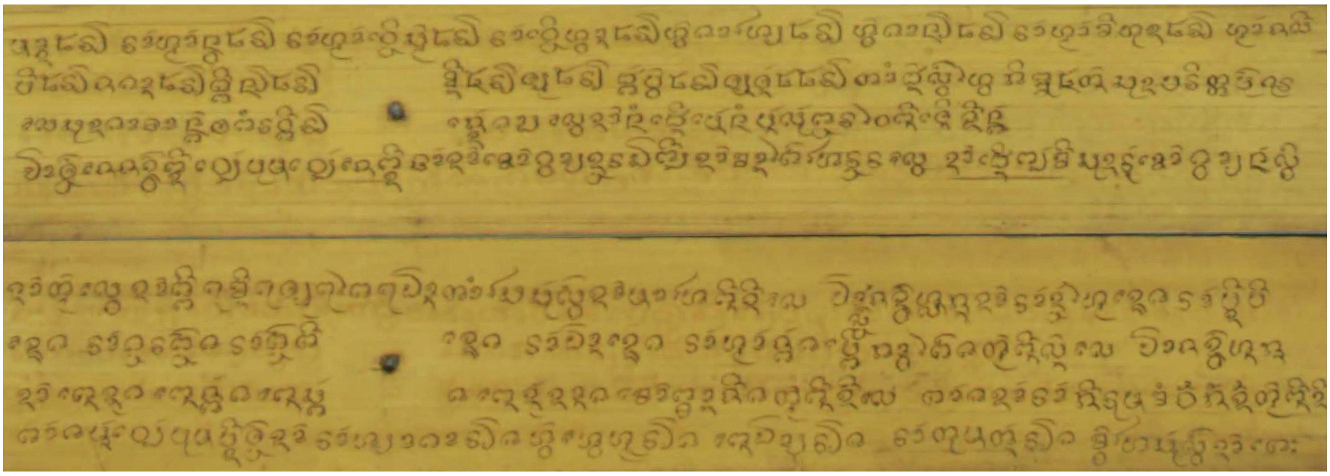


Fig. 13: Palm-leaf manuscript BAD-13-1-0056, fols. 19r/ 19v: Recipe for curing stomach ache.

of these manuscripts were found in Sathu Nyai Khamchan's abode after his death.

Palm-leaf manuscript BAD-13-1-0056, one of the manuscripts mentioned above, is a good example (fig. 13). This manuscript comprises twenty-four folios of 29 cm in length and 5 cm in width. It contains texts that deal with various kinds of illness and traditional medicine, as shown in the following excerpt:

> [...] ຢາທ້ອງແສສະດວງກໍດີ ເຈັບປູມເຈັບແສກໍດີ ຖາກເອົາເຂົາຄວາຍດ່ອນສາມກີບ ເອົາຂາງໄຟໃຫ້ຮ້ອນ ເອົາເຜີ້ງກັບຂີ້ສູດຮູກເຂົາຄວາຍນັ້ນ ແລ້ວເອົາຕົ້ມ ແລ້ວເອົາພິກເຈັດ ຂີງເຈັດຫງມເຈັດ ໄພເຈັດ ຕໍາໃສ່ ສຸກແລ້ວເອົາມາໃຫ້ກິນ ດີແລ [...]

> […] medicine for stomach problems: [take] three chips of a horn from a white water buffalo; heat them up by roasting [them], rub beeswax and stingless beeswax on them and boil them [in a pot]. Seven pieces of chilli, ginger, galangal, garlic and *phai*[26] need to be mixed by pounding them together and then put in the pot. After this has been cooked well, give it to [the sick person] […].

Most ingredients used for this medicinal substance were taken from plants and can also be eaten as food. These plants are popular and easy to obtain, whereas the horn of a water buffalo is somewhat more difficult to get hold of, particularly one from a white buffalo. This animal may have been thought to have some special power that the black one did not have. This assumption is further supported by the fact that, according to local beliefs,[27] a sick person should abstain from eating meat from a white buffalo.

Manuscripts for private study

In general, senior monks keep a number of manuscripts in their rooms for their private use, which cover both religious and non-religious subjects. As mentioned above numerous manuscripts with religious texts found in Sathu Nyai Khamchan's abode indicate that they were used by him. The following manuscripts are two of them.

A manuscript of Yattikammavācā

Apart from the manuscripts thought to be written and/or corrected by Sathu Nyai Khamcham as mentioned above, a *Yattikammavācā* manuscript (BAD-13-2-018) – i.e. a series of questions and answers used in higher ordination ceremonies (monks' ordination) – should be mentioned as a good example of his privately used manuscripts (fig. 14). Its main characteristics are as follows:

- darkened paper, golden ink
- size and shape: 52.0 x 10.2 x 1.0 cm, similar to the shape of *khòi* manuscripts (see table 2)
- cover: hard cover stating the date, names of the donor and restorer
- language: Pali
- script: Lan Na script (Tua Müang)

[26] *Zingiberaceae purureum Rosc.*, occasionally used as a cure for fainting and indigestion; see Tomecko 2009, 112–113.

[27] This belief might be connected to the belief in the sacredness of white elephants, which is common in South-East Asia. For more details, see Vincent, 1998, 65–73, and Pridi, 1990, 49–56.

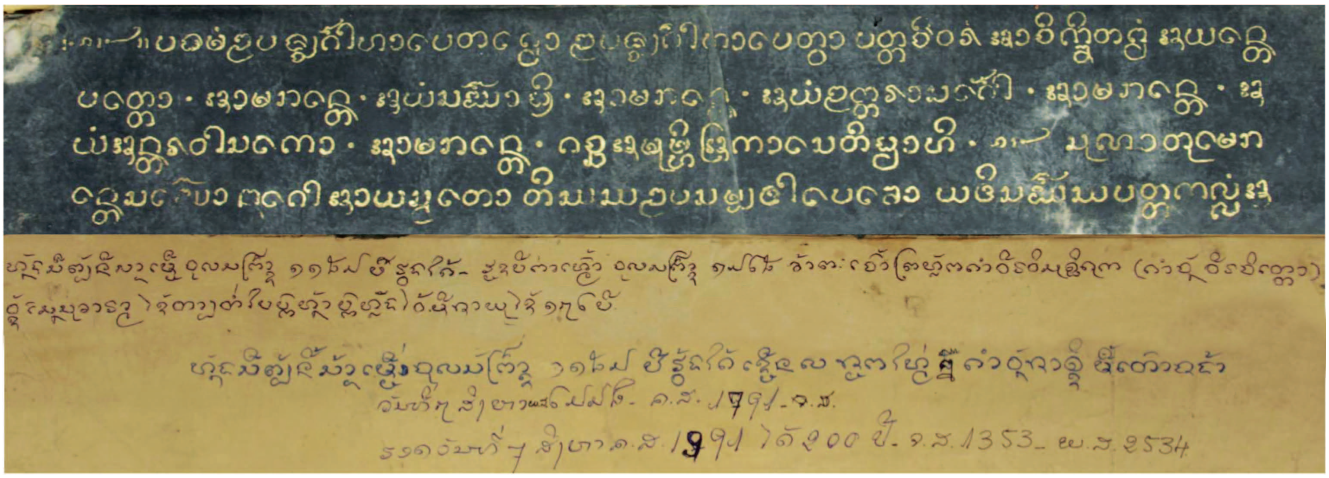


Fig. 14: Paper manuscript BAD-13-2-018, fols. 1v/12r: First folio of text and back cover with restoration note.

- date: CS 1153 (1791 CE)
- scribe: Luang Siang La (Maha Kesòn)
- restoration:
  - person: Sathu Nyai Khamchan
  - date: CS 1325 (1963 CE)
  - part: both front and back covers.

This manuscript records an important Buddhist text, the *Yattikammavācā*, the text used in the ordination ceremony. The use of Lan Na script indicates that the scribe might have tried to purify the texts, originally written in Pali, which came from Chiang Mai, at that time the capital of Lan Na kingdom, and were taken to Lan Xang. We can draw this conclusion because this manuscript was written about two and a half centuries after the Lao Buddhists from the Lan Xang kingdom received a number of Buddhist texts from Chiang Mai in 1523 CE.[28] From this year onwards, there were a number of Buddhist scholars who had knowledge of Pali texts and were proficient in Lan Na script. The manuscripts of *Yattikammavācā* might have been written in this context.

In 1963 CE, 172 years after the manuscript was written, Sathu Nyai Khamchan repaired its cover and left a note. Even though we do not know his intentions for doing so, the note provides us with very important information on the connection between him and this fascicle of *Yattikammavācā*.

ໜັງສືພັບນີ້ສ້າງເມື່ອຈຸນລະສັງກາດ ໑໑໕໓ ປີຮວງໃຄ້ ຮອດປີກາເໝົ້າ ຈຸນລະສັງກາດ ໑໓໒໕ ຂ້າພະເຈົ້າ ພະຫຼັກຄຳວິລະວິສຸດທິຄຸນ (ຄຳຈັນ ວິລະຈິດໂຕ) ວັດແສນສຸຂາລາມ ໄດ້ຕາບຕໍ່ໃບປົກໜ້າປົກຫຼັງໄວ້ ມີອາຍຸໄດ້ ໑໗໒ ປີ.

This manuscript was written in CS 1153, a *huang khai* year. [Later,] in a *ka mao* year, CS 1325 [1791], I, Phra Lakkham Viravisutthikhun [Sathu Nyai Khamchan] of Vat Saen Sukharam repaired [its] front and back covers. [This manuscript] has an age of 172 years.

Later on, in 1991 CE, twenty-eight years after he repaired it, he also noted and confirmed that this manuscript was written in 1791 CE and had lasted 200 years – from the year of its writing resp. copying until 1991 CE.

ໜັງສືພັບນີ້ສ້າງເມື່ອຈຸນລະສັງກາດ ໑໑໕໓ ປີຮວງໃຄ້ ເດືອນ ໙ ອອກໃໝ່ ໘ ຄ່ຳ ວັນອາທິດ ມື້ເຕົ່າສະງ້າ ວັນທີ ໗ ສິງຫາ ພ.ສ. ໒໓໓໔ ຄ.ສ. 1791 ຮອດວັນທີ 7 ສິງຫາ ຄ.ສ. 1991 ໄດ້ 200 ປີ ຈ.ສ. 1353 ພ.ສ. 2534.

This manuscript was written in CS 1153, a *huang khai* year, the ninth lunar month, the eighth day of the waxing moon, Sunday, a *tao sanga* day, 7 August, be 2334, 1791 CE. On 7 August 1991 CE, CS 1353, be 2534, [this manuscript] has lasted for 200 years.

The information mentioned above indicates that Sathu Nyai Khamchan intended to keep this manuscript in good condition to help it survive long periods of usage. In other words, the manuscript can undoubtedly be regarded as a manuscript he kept and used to follow his private intellectual and religious interests. It was in his hands for almost half a century, from the time he restored it to the time of his death

[28] Sila, 2001, 63.

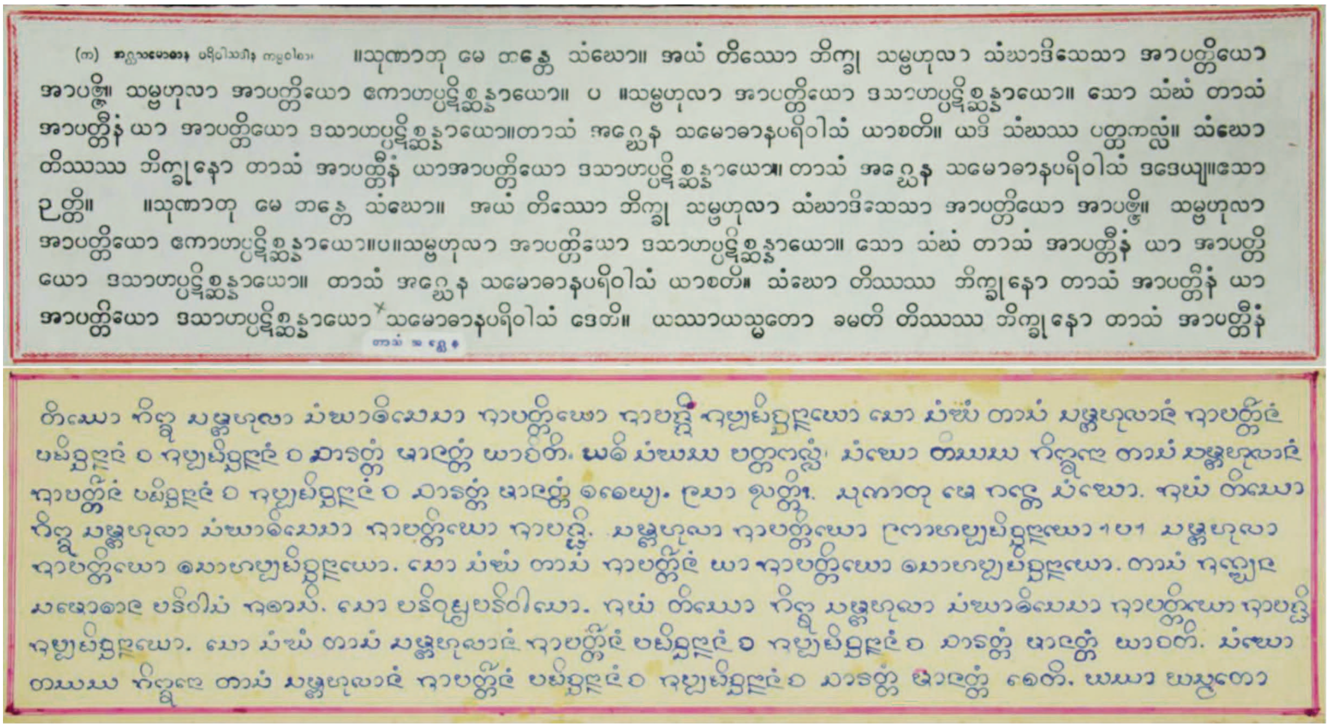


Fig. 15: Paper manuscript BAD-13-2-020, fols. 12v/13r: Showing the text *Sipkao Khan Kammavācā*.

(1963–2007). In fact, this manuscript might have become his property even earlier than that. At first, it may have still been in good condition, but its cover became torn in the course of time. Knowing that this manuscript was of considerable importance to Buddhism, he repaired both the front and the back cover of this favourite manuscript of his, leaving interesting notes inside its cover.

A manuscript entitled Sipkao Khan Kammavācā

A *Sipkao Khan Kammavācā* (fig. 15) – a nineteen-section series of questions and answers used in higher ordination ceremonies – is another example of the abbot's privately used manuscripts (BAD-13-2-020).[29] The main characteristics of this manuscript are the following:

- modern paper, black ink
- size and shape: 48.7 x 12.5 x 1.5 cm, similar to the shape of *khòi* manuscripts (see table 2)
- cover: hard cover with the date and scribe's name
- language: Pali
- script: Burmese script
- date: CS (?) 1295 (1933 CE)
- scribe: *aggamahāpaṇḍita* […] (only honorific title 'Foremost Great and Wise One' is legible)
- editing:
  - person: Sathu Nyai Khamchan
  - date: undated
  - part: missing part was re-written.

The Buddhist Sangha uses the same text for this ceremony in every Theravada country in South and South-East Asia.[30] Any senior monk who presides over such a ceremony, as Sathu Nyai Khamchan did, would be able to recite the text easily. If it was ever incomplete, Sathu Nyai Khamchan would have been able to identify the missing parts clearly and supplement them. The newly written text uses Tham Lao (Dhamma) script, not Burmese script like the original. This might indicate that Sathu Nyai Khamchan tried to substantiate the notion that Theravada Buddhist countries share the same ritual text in Pali. Furthermore, we can conclude from this

[29] Traditionally, Burmese people considered that the making of a book of *Kammavācā* was a way of earning merit, and this performance was popular during their sons' ordaining ceremonies. Agrawal 1982, 19, states: 'The *kammavācā* is a collection of extracts from the Pāli *Vinaya*, the monastic code of disciplines, outlining rituals and observances of Buddhist order, principally concerned with ordination and bestowals of robes. It was customary for a Burmese family to commission a copy of the *kammavācā* on the occasion of their son entering the monkhood.'

[30] Theravada is the name of a Buddhist tradition that uses the teachings of Buddha known by the term *Tipiṭaka*, or Pali Canon. This tradition is followed by Buddhists in numerous countries in South and South-East Asia such as Cambodia, Laos, Myanmar (Burma), Sri Lanka and Thailand.

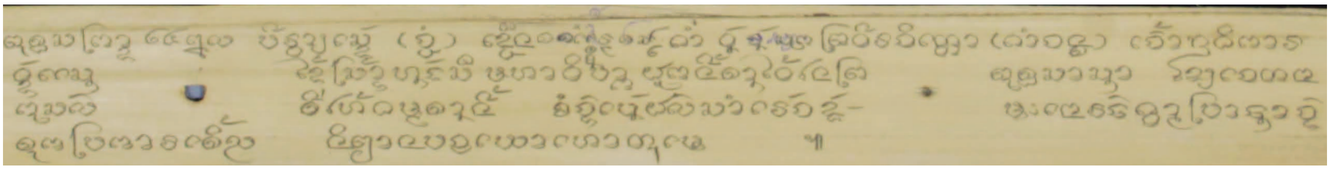


Fig. 16: Palm-leaf manuscript BAD-13-1-0300, fol. 24r: Colophon with donation (*sang*) note.

that both Myanmar and Lao Tham scripts were considered appropriate scripts for writing Pali texts thought to be the word of Lord Buddha. Moreover, a monk who can recite Pali texts is highly honoured; McDaniel has stated that the mere knowledge of Pali terms and ability to memorise, translate and explain Pali words is a mark of great prestige in Laos and northern Thailand.[31]

Manuscript making

Donors

In the Lao language, the meaning of 'making manuscripts' (*kan sang nangsü*) is somewhat multifarious. *Sang* (ສ້າງ) used in this context covers at least three meanings. It often refers to the act of *making,* of writing (*litchana/khian*) or of copying (*kai/khat*) manuscripts. In other cases, it is applied in the sense of 'to donate' (*bòlichak*). Finally, the word *sang* can mean that a monk gives a manuscript which he previously used privately to the whole Sangha. It is reported that Sathu Nyai Khamchan was one of the senior monks of Luang Prabang who loved 'to *sang*' manuscripts. Even though he also wrote a number of manuscripts himself, the word *sang* used in the colophons usually means that he gave the manuscript to the Sangha – in order to follow the traditional ideal of 'manuscript-making', an act of both 'making and giving to Buddhism' (*sang vai nai phuttha sasana*). The following example is taken from manuscript BAD-13-1-0300 (fig. 16).[32]

> ພຸດທະສັງກາດ ໒໔໘໙ ປີຮວາຍເສັດ (ຈໍ) ເດືອນ ໑໑ ຂຶ້ນ ໘ ຄ່ຳ ວັນສຸກ ພະວິລະຈິດໂຕ (ຄຳຈັນ) ເຈົ້າອະທິການວັດແສນ ໄດ້ສ້າງໜັງສືມະຫາວິບາກຜູກນີ້ ທານໄວ້ໃນພະພຸດທະສາສະໜາ ໂດຍເຈຕະນາ [...]

> In be 2489 (1946 CE), the *huai set* [year], the eleventh lunar month, the second day of the waxing moon, Friday, Sathu Nyai Khamchan, the abbot of Vat Saen, made this bundle of *Mahavibak* ('Result of Accumulated Merits and Sins') [in order] to give [it] to Buddhism. With this determination […]

In this case, however, *sang* means that Sathu Nyai Khamchan wrote this manuscript himself. In other words, the donor (*sattha/chaosattha*) and the scribe (*phu litchana*) of the above-mentioned manuscript are one and the same person. As Koret has put it: 'The monks at the temples are not expected to write literature but they are expected to copy it. Classes are taught in religious script that is used to record the stories'.[33]

In other cases, some manuscripts have numerous donors who are related by marriage or kinship. They can be grouped as follows: 1) the main donor and his or her spouse; 2) the main donor, his or her spouse and their children; 3) the main donor, his or her spouse, their children and their parents; and 4) the main donor, his or her spouse, their children, their parents and other relatives.

The religious practices which surround the formal sponsoring of the making of a manuscript (*vithikan sang nangsü*) in Luang Prabang are remarkable. Once a manuscript has been made and donated to the Sangha, other people can get the chance to 're-donate' the same manuscript again. After a manuscript is donated, it is considered part of the property of the Sangha. However, a layperson may ask to be allowed to donate the same manuscript again. It is then given to that person after he or she has made a small donation, usually less than the manuscript's value. The manuscript is now formally the property of the layperson. If it is damaged, the layperson repairs it – usually, it is cleaned and enclosed in a new protective cloth (*pha khamphi*). Finally, the layperson donates the manuscript back to the Sangha in a special ceremony, after which it is then the property of the Sangha again (fig. 17; BAD-13-1-0300):

[31] McDaniel 2008, 117.

[32] For more details, see the colophons of manuscripts BAD-13-1-0004, BAD-13-1-0005, BAD-13-1-0006, BAD-13-1-0007, BAD-13-1-0008, BAD-13-1-0009, BAD-13-1-0010, BAD-13-1-0011, BAD-13-1-0012, BAD-13-1-0013, BAD-13-1-0128, BAD-13-1-0156, BAD-13-1-0157, BAD-13-1-0160, BAD-13-1-0163, BAD-13-1-0164, BAD-13-1-0193, BAD-13-1-0195, BAD-13-1-0208, BAD-13-1-2030, BAD-13-1-0280 and BAD-13-1-0300.

[33] Koret 1999, 229.

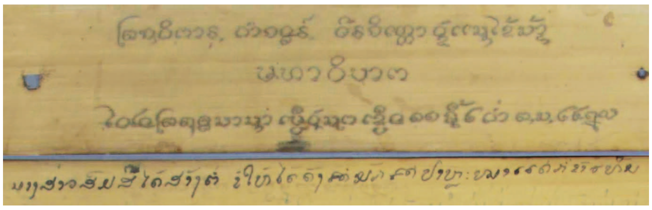


Fig. 17: Palm-leaf manuscript BAD-13-1-0300, fols. 1r/1v: Colophon with note of 're-donation' by layperson.

> ພະອະທິການ ຄໍາຈັນ ວິລະຈິດໂຕ ວັດແສນ ໄດ້ສ້າງມະຫາວິບາກ ໄວ້ໃນພະພຸດທະສາສະໜາ ເມື່ອວັນສຸກ ເດືອນ ໑໑ ຂຶ້ນ ໘ ຄໍ່າ ພ.ສ. ໘໔໙໙.
>
> ນາງສາວ ສົມສີ ໄດ້ສ້າງຕໍ່ ຂໍໃຫ້ໄດ້ດັ່ງຄໍາມັກຄໍາປາຖະໜາ ແດ່ກໍຂ້າເທີ້ນ.
>
> Sathu Nyai Khamchan, the abbot of Vat Saen, on Friday, the second day of the waxing moon, eleventh lunar month, 2489 be (17.9.1946 CE), made/donated (*sang*) a bundle of *Mahavibak* ('Result of Accumulated Merits and Sins') to support Buddhism.
> [I,] Miss Somsi sponsored the making [of this bundle], following [a preceding donor. I asked for] all my desires to be fulfilled.

This passage indicates that Miss Somsi's need to achieve merit might have been so urgent that producing a new bundle would have required too much time. Miss Somsi might, for example, have encountered misfortune and believed that one of the best ways to overcome her bad luck would be to donate a manuscript.[34] Since she had to do so in a hurry, one possibility was to re-donate a finished bundle of manuscripts that had already been donated by another person. This common practice is also conducted with other religious objects like Buddha images or a monk's robes.

Purposes of manuscript production

Traditionally, there are two main purposes for making manuscripts:

- to support Buddhism (*kham su sasana*)
- and to achieve merit (*sang punnya palami*).

It is generally believed that one way to support Buddhism is to contribute to the promotion of it by writing or copying Buddhist texts in order to help Buddhism flourish until the end of five thousand years, as predicted by Buddha (*phuttha thamnai*). Achieving merit is understood as the continuous development of goodness or perfection (*palami*) until it is sufficient to gain enlightenment and reach nirvana (*banlu òlahan lae thoeng pha nipphan*). However, these are not the only purposes for making manuscripts; the following also exist:

- to achieve happiness (including good health and personal fame and gain),
- to transfer the donor's acquired merits to a deceased person,
- to remove evil and diseases from the donor's body.

Commemoration of birthdays

Interestingly, a number of manuscripts found in Sathu Nyai Khamchan's abode have passages in them indicating that he made them to commemorate his own birthday. On one's birthday anniversary, one can follow a common practice of merit-making to commemorate it by asking a monk for permission to organise a ritual ceremony. Popular ways of achieving merit are by receiving particular precepts, listening to a specific sermon, and offering alms.

Sathu Nyai Khamchan, in contrast, performed an act of merit-making to commemorate a specific event in his life: the anniversary of his birthday by making numerous manuscripts. Some of the colophons contain passages stating that he made manuscripts for this purpose at least three times, namely at the ages of 24, 36 and 56.[35] Moreover, his birthday ceremony was sometimes organised for him by other senior monks and laypeople who were his close disciples (fig. 18):[36]

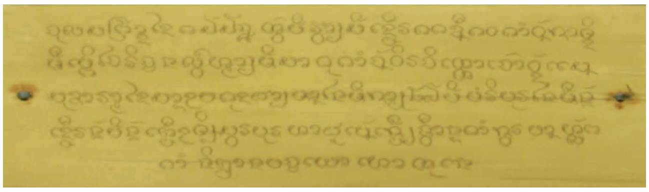


Fig. 18: Palm-leaf manuscript BAD-1-13-0222, fol. 25r: Colophon with donation note.

> ຈຸນລະສັງກາດໄດ້ ໑໔໔໙ ຕົວ ປີຮວາຍສີ ເດືອນ ໑໑ ຂຶ້ນ ໑໐ ຄໍ່າ ວັນອາທິດ ມື້ເປີກໄຈ້ ລິດຈະນາແລ້ວ ໝາຍມີ ສາທຸ ຄໍາຈັນ ວິລະຈິດໂຕ ເຈົ້າວັດແສນສຸຂາລາມ ໄດ້ສ້າງອຸບປະຄຸດຜາບມານ

[34] Cf. manuscripts BAD-13-1-0087, BAD-13-1-0155, BAD-13-1-0219.

[35] For more details see: BAD-1-13-0120, BAD-1-13-0128, BAD-1-13-0139, BAD-1-13-0157, BAD-1-13-0163, BAD-1-13-0208, BAD-1-13-0230, BAD-1-13-0280; BAD-1-13-0222.

[36] B2435/Box B23, BAD-12-2-1987.010.

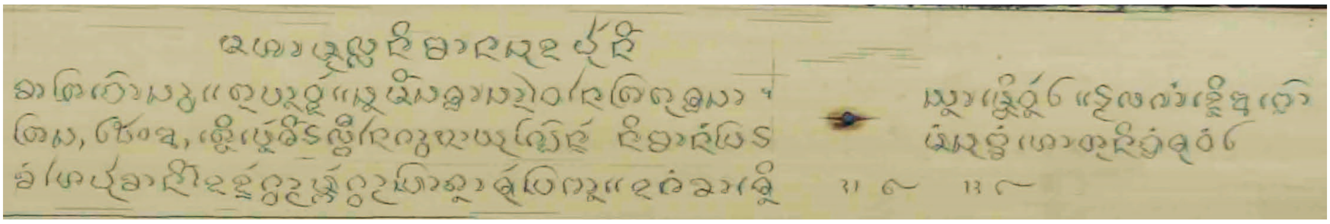


Fig. 19: Palm-leaf manuscript BAD-13-1-0139, fol. 31r: Colophon with birthday commemoration.

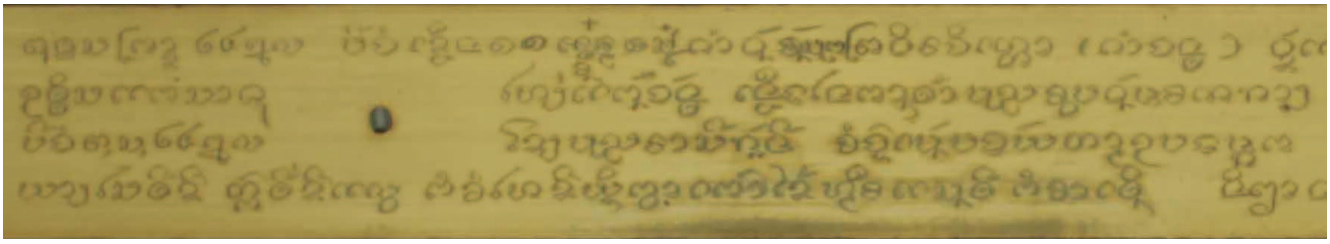


Fig. 20: Palm-leaf manuscript BAD-13-1-0027, fol. 18r: Colophon with dedication.

> ໃນມື້ອາຍຸ ໕໖ ປີບໍລິບູນ ໃນມື້ນັ້ນ ເດືອນນັ້ນ ປີນັ້ນ ເພື່ອອຸທິດ ສ່ວນບຸນຫາຜູ້ເປັນເອື້ອຍຊື່ວ່າ ນາງ ຄໍາອວນ ບ້ານຫຼັກຄໍາ ນິບພານະ ປັດຈະໂຍ ໂຫຕຸ ໂນ.
>
> In CS 1338, the *huai si* year, the eleventh lunar month, the tenth day of the waxing moon, Sunday, the *poek chai* day (20.09.1976 CE), the writing of [this fascicle of manuscripts was] finished. Sathu Nyai Khamchan, abbot of Vat Saen Sukharam, made [this fascicle of] *Upakhut Phap Man* ('Upakhut defeated *Māra*') on the day [I] was fifty-six years old in order to dedicate merit to [my] elder sister, Mrs Kham Uan of Ban Lak Kham. [May this merit be] a condition for the attainment of nirvana for us (*Nibbāna paccayo hotu no*).'

When laypeople saw that the respected senior monk made manuscripts to commemorate his birthday, they may have considered this a good way to achieve merit and followed his example. For instance, the colophons of manuscript nos. BAD-13-1-0027 and BAD-13-1-0139 demonstrate that a layperson, namely Miss Phaeng from the village of Vat Saen, also 'made' these fascicles to commemorate her birthday anniversary in be 2508 (1965 CE) (fig. 19):

> ມະຫາມູລະນິບພານະສູດຜູກນີ້ ຂ້າພະເຈົ້າ ສາວແພງ ບ້ານວັດແສນ ມີສັດທາສ້າງໄວ້ໃນພະພຸດທະສາສະໜາ ເມື່ອວັນ ໒ ແຮມ ໙ ຄ່ຳ ເດືອນ ໘ ເກົ່າ ພ.ສ. ໒໕໐໘ ເພື່ອເປັນທີ່ລະລຶກໃນຄາວອາຍຸຄົບນັ້ນ ນິບພານັງ ປະລະມັງ ສຸຂັງ ໂຫຕຸ ນິດຈັງ ທຸວັງ ໒ ຂໍໃຫ້ຜູ້ຂ້ານີ້ໄດ້ດັ່ງ ຄວາມມັກຄວາມປາຖະໜາທຸກປະການ ແດ່ກໍຂ້າເທີ້ນ.
>
> This fascicle of *Mahāmullanibbānasuta* was made by [myself, namely] Miss Phaeng of Ban Vat Saen in order to support Buddhism, on Monday, the ninth day of the waning moon, the eighth lunar month, be 2508 to mark the time of [my] birthday celebration. Nirvana that is the ultimate happiness is [my] perpetual and constant [desire]. (*Nibbānaṃ paramaṃ sukhaṃ hotu niccaṃ duvaṃ duvaṃ*.) I ask for all my desires to be fulfilled.

Commemoration of obits

Traditionally, Lao Buddhists believe that organising a ceremony of merit-making in the name of a deceased person is a way of showing gratitude to their benefactors.[37] Even many years after the deceased have passed away, their children, relatives and other grateful people still express their appreciation with an annual act of merit. Sometimes, followers of a monk obtain merit by commemorating the anniversary of his death. By doing so, they acknowledge their superiors, and, in turn, their superiors' goodness and worthiness will live on in their hearts, so they believe. Colophons of some of the manuscripts found in Sathu Nyai

---

37 Not only do Lao Buddhists believe that they can gain merit by their own ways of merit-making, but they have confidence that merit can be transferred to the deceased as well. This probably reflects the rite of passage presented in Khamphun's work (2011, 11, 228), which comprises four important ceremonies to be performed in a person's lifetime: birth, ordination, marriage and death. Traditionally, when a person dies, his or her relatives must 'make merit' in the name of the deceased person. For more details about death rites in Theravada Buddhist countries in South-east Asia, see Tambiah 1970, 191–194, Swearer 1981, 28–32, Berger 2000, and Terwiel 2012, 247–260.

Khamchan's abode strongly suggest that this was the main reason for making them (BAD-13-1-0007, BAD-13-1-0164) (fig. 20):

> [...] ອຸທິດແກ່ສາທຸໃຫຍ່ແກ່ນຈັນເນື່ອງໃນການທຳບຸນ
> ຂວບວັນມໍລະນະພາບ [...]

> [...] dedicated to Sathu Nyai Kaenchan on the occasion of the anniversary of his death [...]

Sathu Nyai Kaenchan was a former abbot of Vat Saen Sukharam, and Sathu Nyai Khamchan took over his position once he had passed away. The above-mentioned colophon contains a message indicating that Sathu Nyai Khamchan 'made' manuscripts in order to dedicate merit to Sathu Nyai Kaenchan after becoming his successor. According to the colophon of this fascicle, this event took place in be 2489 (1946 CE). Sathu Nyai Khamchan and the Buddhists of Luang Prabang as a whole may have followed the traditional way of making merit by writing or sponsoring manuscripts. This assumption is based on a large number of manuscripts found in his abode with colophons referring to the practice. For instance, Thit Suk made a palm-leaf fascicle (BAD-13-1-0090) to dedicate merit to his wife who had already died; Phia Sai-uppakan and his spouse made a fascicle (BAD-13-1-0106) to dedicate merit to their deceased son; and Miss Sim and Mòn Thòngdi made a fascicle (BAD-13-1-0281) to dedicate merit to their relatives who had passed away. In practice, numerous manuscripts were made in the name of deceased teachers and their beloved.[38]

Achieving health and good luck

Although the manuscript-making ritual was frequently dedicated to transfer merit to deceased persons, it is believed that the living who made the manuscript in their name also received merit from this act.

Sathu Nyai Khamchan probably read manuscripts containing texts dealing with the maintaining of fortune and knew that Lao Buddhism allows for organising a ceremony of merit-making to prolong the lives of people (*het bun süp sata/tò anyu*). Usually, there is no specific point in the life of a layperson when it is advisable to conduct this ceremony; it is performed when it seems convenient or when the layperson faces misfortune and quickly needs to get rid of bad luck. Besides the part of manuscript-making, this ceremony consists of three additional parts: receiving the five precepts, listening to a specific sermon, and offering alms.

Conclusion

A large number of educated Buddhists – i.e. practising monks and novices – have produced various types of manuscripts from ancient times to the present day. Some of them were made a long time ago, but have been preserved, copied and passed on from one generation to the next.

Sathu Nyai Khamchan should be regarded as one of the senior monks of Luang Prabang who devoted himself to many activities related to the monastic order and the Buddhist community, including the writing, collecting and preserving of manuscripts. His regular efforts to achieve merit by making manuscripts in commemoration of his birthday was welcomed and adopted by the people of Luang Prabang.

Concerning the production of manuscripts, Sathu Nyai Khamchan patiently tried to find ways to improve his own writing skills. He might have understood that various traditional techniques and ways of making manuscripts needed to be revived. On the other hand, he did not disapprove of modern techniques. The traditional stylus and palm leaves – once the main tool and material required for this kind of work – could be replaced. Therefore, a number of books found in his abode reflect the use of various modern tools like ballpoint pen and typewriter. They were made from both palm leaves and paper.

To complete the picture of Sathu Nyai Khamchan, it should also be considered that he showed a keen interest in the orthographic system of the Dhamma script. In former times, a number of words – especially the ligatures (*kham nyò*) – could be written in different ways. During his life they were seldom used, but frequently replaced with full words. Moreover, various features of 'modern' writing and printing such as the use of correcting and formatting of columns, paragraphs, and punctuation marks can be seen in a large number of manuscripts written during the abbot's lifetime.

[38] For more details, see the colophons of manuscripts BAD-13-1-0024, BAD-13-1-0090, BAD-13-1-0095, BAD-13-1-0096, BAD-13-1-0102, BAD-13-1-0106, BAD-13-1-0193, BAD-13-1-0195, BAD-13-1-0217, BAD-13-1-0263, BAD-13-1-0281, BAD-13-1-0297, BAD-13-1-0299, BAD-13-1-0310, BAD-13-1-0318, BAD-13-1-0319 and BAD-13-1-0322.

LIST OF MANUSCRIPTS

BAD-13-1-0002,	BAD-13-1-0004,	BAD-13-1-0005,	BAD-13-1-0006,	BAD-13-1-0007,
BAD-13-1-0008,	BAD-13-1-0009,	BAD-13-1-0010,	BAD-13-1-0011,	BAD-13-1-0012,
BAD-13-1-0013,	BAD-13-1-0014,	BAD-13-1-0017,	BAD-13-1-0019,	BAD-13-1-0023,
BAD-13-1-0024,	BAD-13-1-0027,	BAD-13-1-0028,	BAD-13-1-0029,	BAD-13-1-0056,
BAD-13-1-0057,	BAD-13-1-0058,	BAD-13-1-0059,	BAD-13-1-0061,	BAD-13-1-0065,
BAD-13-1-0067,	BAD-13-1-0070,	BAD-13-1-0073,	BAD-13-1-0075,	BAD-13-1-0082,
BAD-13-1-0087,	BAD-13-1-0088,	BAD-13-1-0090,	BAD-13-1-0095,	BAD-13-1-0096,
BAD-13-1-0102,	BAD-13-1-0104,	BAD-13-1-0105,	BAD-13-1-0106,	BAD-13-1-0113,
BAD-13-1-0114,	BAD-13-1-0120,	BAD-13-1-0128,	BAD-13-1-0139,	BAD-13-1-0148,
BAD-13-1-0149,	BAD-13-1-0150,	BAD-13-1-0151,	BAD-13-1-0153,	BAD-13-1-0154,
BAD-13-1-0155,	BAD-13-1-0156,	BAD-13-1-0157,	BAD-13-1-0160,	BAD-13-1-0162,
BAD-13-1-0163,	BAD-13-1-0164,	BAD-13-1-0169,	BAD-13-1-0175,	BAD-13-1-0176,
BAD-13-1-0177,	BAD-13-1-0178,	BAD-13-1-0183,	BAD-13-1-0186,	BAD-13-1-0188,
BAD-13-1-0191,	BAD-13-1-0193,	BAD-13-1-0195,	BAD-13-1-0196,	BAD-13-1-0200,
BAD-13-1-0208,	BAD-13-1-0217,	BAD-13-1-0218,	BAD-13-1-0219,	BAD-13-1-0222,
BAD-13-1-0223,	BAD-13-1-0224,	BAD-13-1-0225,	BAD-13-1-0230,	BAD-13-1-0238,
BAD-13-1-0246,	BAD-13-1-0247,	BAD-13-1-0248,	BAD-13-1-0280,	BAD-13-1-0281,
BAD-13-1-0287,	BAD-13-1-0292,	BAD-13-1-0296,	BAD-13-1-0297,	BAD-13-1-0300,
BAD-13-1-0302,	BAD-13-1-0306,	BAD-13-1-0307,	BAD-13-1-0310,	BAD-13-1-0318,
BAD-13-1-0319,	BAD-13-1-0321,	BAD-13-1-0322,	BAD-13-1-0329.	

BAD-13-2-001	BAD-13-2-002,	BAD-13-2-003,	BAD-13-2-004,	BAD-13-2-005,
BAD-13-2-006,	BAD-13-2-007,	BAD-13-2-018,	BAD-13-2-020,	BAD-13-2-042,
BAD-13-2-043,	BAD-13-2-054,	BAD-13-2-059,	BAD-13-2-066,	BAD-13-2-086.

B2435/Box B23;	BAD-12-2-1987.010.

REFERENCES

Agrawal, Om Prakesh (1982), *Palm-leaf and Paper: Illustrated Manuscripts of India and Southeast Asia* (Melbourne: National Gallery of Victoria).

—— (1984), *Conservation of Manuscripts and Paintings of Southeast Asia* (London: Butterworth).

Berger, Hans Georg (2000), *Het bun dai bun: Laos – Laos Sacred Rituals of Luang Prabang* (London: Westzone).

Chao Phetsarat Rattanavongsa ເຈົ້າເພັດຊະລາດ ຣັດຕະນະວົງສາ (2001), ໂຫລາສາດລາວ ພາກປະຕິທິນ (Lao Astrology: Lunar Calendar), Translated from the Thai Version by the Central Committee for Education of the Lao Buddhist Fellowship Organization (Vientiane: Education Printing).

Gorkum, Nina Van (1975), *Abhidhamma in Daily Life* (Bangkok: Dhamma Study Group).

Grabowsky, Volker (2011), 'The Dhamma Script Cultural Domain as a Contested Space in the Tai-Lao World', *The Journal of the Royal Institute of Thailand*, 3: 98–112.

Huang, Jo-Fan (2006), 'A Technical Examination of 7 Thai Manuscripts in the 18th, 19th, and 20th Centuries', *ANAGPIC Student Papers*, Association of North American Graduate Programs in the Conservation of Cultural Property (https://www.ischool.utexas.edu/~anagpic/2006pdf/2006ANAGPIC_Huang.pdf).

Hunter, Dard (1978), *Papermaking. The History and Technique of an Ancient Craft* (New York: Dover, reprint of ed.1947).

Igunma, Jana (2013), 'The History of the Book in Southeast Asia (2): The Mainland', in M. F. Suarez, H. R. Woudhuysen (eds.), *The Book. A Global History* (Oxford: Oxford University Press), 629-634.

Khamphun Philavong, Maha ມະຫາ ຄຳຜຸນ ພິລາວົງ (2011), ວັດທະນະທຳ ແລະປະເພນີບູຮານລາວ. [The Culture and Tradition of Lao], second edition (Vientiane: Duangma Printing).

Koret, Peter (1999), 'Book of Search: The Invention of Traditional Lao Literature as a Subject of Study', in Evans, Grant (ed.) *Laos Culture and Society* (Chiang Mai: Silkworm Books), 226–257.

Lao Buddhist Fellowship Organization (2007–2008), ອົງການພຸດທະສາສະໜາສຳພັນລາວ, ບົດລາຍງານສະພາບການເຄື່ອນໄຫວວຽກງານຂອງອົງການພຸດທະສາສະໜາສຳພັນລາວ ສົກປີ [The Report of The Lao Buddhist Fellowship Organization 2007–2008 (R-LBFO07-08)] (Vientiane).

McDaniel, Justin Thomas (2008), ‘Manuscripts and Education in Northern Thailand and Laos’, *The Journal of the International Association of Buddhist Universities,* 1: 109–119.

McDaniel, Justin (2009), ‘Two Buddhist librarians: the proximate mechanisms of Northern Thai Buddhist history’, in Berkwitz et al. (eds.), *Buddhist Manuscript Cultures: Knowledge, Ritual, and Art* (London: Routledge).

Phanya Luang Maha Sena ພະຍາຫຼວງມະຫາເສນາ (undated), ແບບຮຽນໄວ ເຫຼັ້ມ ໒ [Method of the reading practice of Tham Lao script], vol. 2 (Vientiane).

Pridi Banomyong (1990), *The King of the White Elephant* (California: The Thammasat Association).

Sengsoulin, Bounleuth (2014), *Manuscripts Found in the Abode of the Venerable Abbot Phra Khamchan Virachitto, Vat Saensukharam, Luang Prabang, Laos,* DORISEA Working Paper Series No. 14 (Göttingen).

Sila Vilaṿong, Maha ມະຫາ ສິລາ ວິລະວົງ (2001), ປະຫວັດສາດລາວແຕ່ບູຮານເຖິງ *1946.* [The Lao History from the Past to 1946], third edition (Vientiane: Dokket).

Swearer, Donald K. (1995), *The Buddhist World of Southeast Asia* (Albany: SUNY Press).

Tambiah, Stanley J. (1970), *Buddhism and the Spirit Cults in Northeast Thailand* (Cambridge University Press).

Techasiriwan, Apiradee (in print), 'Locating Tai Lü and Tai Khün Manuscripts in Space and Time through Colophons', in Giovanni Ciotti and Hang Lin (eds.), *Tracing Manuscripts in Time and Space through Paratexts* (Studies in Manuscript Cultures, 7; Berlin: De Gruyter), 35–59.

Terwiel, Barend Jan (2012), *Monks and Magic: Revisiting a Classic Study of Religious Ceremonies in Thailand* (Copenhagen: NIAS Press).

Tomecko, Denise (2009), *Buddhist Healing in Laos: Plants of the Fragrant Forest* (Bangkok: Orchid Press).

Veidlinger, Daniel M. (2006), *Spreading the Dhamma. Writing, Orality, and Textual Transmission in Buddhist Northern Thailand* (Honolulu: University of Hawai’i Press).

Vincent, Frank (1988), *The Land of White Elephant: Sights and Scenes in South-East Asia 1817–1872* (Singapore: Oxford University Press).

Article

Audience Certificates in Arabic Manuscripts – the Genre and a Case Study*

Tilman Seidensticker | Jena

The audience certificates (Arabic *samāʿ*, plural *samāʿāt*, also translated as 'audition certificates') in Arabic manuscripts are attested to in single instances from the tenth century CE, they especially flourished from the twelfth to the fifteenth centuries, and there are even certificates from the twentieth century. These paratexts are protocols of sessions during which shorter texts or parts of longer books were recited. By giving not only the dates of these sessions but also the attendants' names and sometimes their familiar or professional background, they provide ample information on the reception and transmission of knowledge. There seems to be no counterpart to them in other manuscript cultures, and therefore and due to the insights they provide, they deserve to be introduced to a general public interested in manuscripts.

As a starting point, I shall take my own first acquaintance with audience certificates, namely those which are contained in the manuscript Ms. orient. A 627 kept at the Forschungsbibliothek Gotha, Germany. When I had to describe fols. 13b/14a with five audience certificates for an exhibition catalogue,[1] I used the given dates for a *terminus ante quem* for A 627, as Wilhelm Pertsch did back in 1878.[2] For my short article in the catalogue, I identified one of the attendants in Arabic historiographical works and concluded that the manuscript must once have been in Baghdad. Then I more or less forgot about this particular manuscript until I started doing some systematic work on the certificates in October 2012. Meanwhile, I think Pertsch and I should have been more cautious.

Before turning to the manuscript itself, I will first summarise what is known about the certificates of audience by going through the publications that have appeared on the subject over the last 60 years. The existence of the *samāʿ* notes had not gone unnoticed by Arab and Western scholars, of course, but it was not until 1955 that they were actually made the subject of an entire article, namely in the first volume of the newly founded *Revue de l'Institut des manuscrits arabes* in Cairo. The well-known Syrian scholar Salahaddin al-Munaggid (Ṣalāḥaldīn al-Munajjid), who also became director of the Arab League's Institute of Arabic Manuscripts in 1955, published a programmatic article in Arabic entitled 'The Audience Certificates in the Old Manuscripts'.[3] Before presenting 16 examples from libraries in Europe and the Arab world, he listed all the elements to be encountered in Arabic *samāʿ* notes, be they obligatory or optional:

1. Name of the *musmiʿ* [also *muqriʾ*], 'attending authority' (either the author or another person provided with a credible chain of transmission going back to the author)
2. Names of the *sāmiʿūn/mustamiʿūn*, 'listeners', sometimes even specifying the age of children
3. Title of the book/part (stated in three of the certificates in the Gotha Manuscript orient. A 627)
4. Name of the *qāriʾ*, 'reader' (who is always mentioned as a distinct person in the Gotha example, but is identical to the *musmiʿ* elsewhere)
5. The copy of the work that was read aloud during the session (this never occurred in the Gotha example)
6. Name of the *kātib/muthbit*, 'person who puts down the attendants' names in writing, clerk' (mentioned in all but five cases in the Gotha example)

* This article is based on a lecture held on 30 January 2013 at SFB 950 'Manuskriptkulturen in Asien, Afrika und Europa' within the scope of the Centre for the Study of Manuscript Cultures (CSMC) during my time as a Petra Kappert Fellow (from October 2012 to March 2013).

1 *Orientalische Buchkunst* 1997, 95.

2 Pertsch 1878, 484. Pertsch's description contains a number of inaccuracies. The oldest date of the sessions is not 487, but 486 Hijra; *juzʾ* is not 'book' (Ger. 'Werk'), but rather 'part', and the notes are records of twelve sessions, not statements made by twelve different scholars.

3 Al-Munajjid 1955.

7. Some words testifying to the correctness of the given names (nowhere in the Gotha example)
8. Venue of the session (three times in the Gotha example, but quite vague)
9. Date of the session (obligatory)
10. Note by the *musmiʿ* testifying to the correctness of the preceding information in his own handwriting (not provided in the Gotha example).

One year after al-Munaggid's article appeared, Georges Vajda's 80-page monograph was published on the audience certificates in the Arabic manuscripts of the Bibliothèque nationale in Paris.[4] Vajda lists 72 Arabic manuscripts containing *samāʿ* notes and mentions the most important individuals in the categories of attending authority, reader and listener. As Witkam has noted, 'Of the 72 mss. listed by Vajda, 59 have a "traditional Islamic" content, that is, disciplines that are part of the *madrasa* curriculum, whereas 13 do not have a directly religious content but deal with such topics as medicine, literature and the sciences'.[5] In 1969, a lecture by Gerard Lecomte was published that he had given on the 27th 'Deutscher Orientalistentag' [German Orientalists' Congress] in Würzburg the year before.[6] Lecomte combined some general exhortations to Arabists to devote more attention to the certificates with examples from three manuscripts containing works by the ninth-century author Ibn Qutayba.

The next publication – a monograph by Pierre A. MacKay which spans 80 pages again – appeared in 1971 and was devoted to the certificates in just a single manuscript from the Egyptian National Library.[7] Witkam summarised MacKay's achievements as follows:

> One of the most outstanding sets of *ijāzāt* is found not in an Islamic scholarly text, but in what is probably the most prestigious text of Arabic imaginative literature, the *Maqāmāt* of al-Ḥarīrī. This becomes clear from the *ijāzāt* found on the authoritative manuscript of the text, copied from al-Ḥarīrī's own copy. In the principal and contemporaneous *ijāza* on this manuscript the names of some 38 scholars, a number of whom are identified as distinguished notables of Baghdad, are mentioned as having been present at the reading of the entire work, which took more than a month of intermittent sessions to complete. MacKay's meticulous analysis of the numerous notes in this manuscripts has, in fact, reconstructed a period of almost two centuries of cultural life in Baghdad, Aleppo and Damascus. It all started in Baghdad in the year 504/1111, when the first reading of a copy of the author's autograph took place. That reading was followed by a number of subsequent readings, all in Baghdad. In the 60 or so years since the first reading, the manuscript had become quite heavy with *samāʿ* notes. After a period of 40 years, which remains unaccounted for, it came into the possession of the Aleppan historian Kamāl al-Dīn Ibn al-ʿAdīm (d. 660/1262). The manuscript then remained for more than 30 years in Aleppo, and bears numerous names of members of the best Aleppan families as auditors at sessions at which the manuscript was read. Finally, the manuscript bears certificates of reading sessions held in Damascus in the course of the year 683/1284. The manuscript then fades from view until, almost exactly six centuries later, it was acquired in 1875 by Dār al-Kutub al-Miṣriyya, where it still is.[8]

Witkam himself, a former curator of the Oriental collections kept at the library of Leiden University and emeritus Professor of Codicology and Palaeography of the Islamic world at the same university, was the next one to publish on the subject in 1995.[9] His article 'The Human Element between Text and Reader: The *Ijāza* in Arabic manuscripts' was programmatic again, culminating in an appeal to Arabists not only to analyse the data contained in such certificates, as Vajda and MacKay had done, but also to include as complete a transcription as possible of the Arabic notes themselves.[10] He adds: 'This is not an easy task to perform, since the scholarly certificates are often written in the least legible of scripts'.[11] His appeal came at a moment when Stefan Leder and two colleagues from Syria had already begun to compile an opus magnum: the *Muʿǧam al-samāʿāt al-dimašqiyya*, also known by the

[4] Vajda 1956. Vajda published a short paper on the topic two years earlier as well (Vajda 1954).

[5] Witkam 1995, 131.

[6] Lecomte 1969.

[7] MacKay 1971.

[8] Witkam 1995, 131f.

[9] Witkam 1995.

[10] Such a transcription of certificates together with a Dutch translation and five indexes is given in Witkam 2003.

[11] Witkam 1995, 135.

French title *Les certificats d'audition à Damas 1155 – 1349*.[12] He, Yāsīn al-Sawwās and Maʾmūn al-Ṣāgharjī had identified around 1,350 audience certificates from works kept at the Dār al-Kutub al-Ẓāhiriyya in Damascus, now known as Al-Assad National Library. They deciphered the notes and published the data in the form of indexes in 1996, first and foremost a 500-page index of individual people. Almost 8,000 persons are listed here, and their function in social life – if known – is mentioned as well as their role in the sessions. I quote from the explanations about the index's value from Leder's introduction:

> A characteristic of Damascene Audience Certificates in this period is the abundant number of the listeners, who often visited the lectures not alone but in company of their friends, or their attendants, or members of their families. The documents pay special attention to the affiliation of people. This orientation is visible in personal names that include the lineage and thus the membership in families and family organizations. […] In accordance with this is the exact description of the family ties of all those present, with reference to their attendants, and in the case of slaves and freedmen, their exact status. The women, who also visited the lectures, normally not alone but accompanied by their brothers, sisters, children, or other relatives, rarely in company of their men or female neighbours, receive the same treatment. Thus the Certificates present in general, and in the case of persons who are named several times in particular, a dense network of data about the direct genealogy and relations by marriage. Of unique value are, hence, the indications on family trees on the mother side, generally ignored in the contemporary biographical sources but abundant in these documents.[13]

The second index, that of place names, is similarly useful for the historical topography of Damascus. 'The use of the Umayyad Mosque constitutes a case of its own. Numerous hints to locations in the Certificates show that the Mosque's premises were used in unimagined profusion for sundry purposes, and above all for the use of people attached to differing groups. It was subdivided into very distinct but not isolated areas.'[14]

In the year 2000, the register volume was followed by a second volume containing facsimiles of all the analysed certificates.[15] Besides this big work, Leder also published a number of articles between 1994 and 2002.[16] Before I move on, I wish to quote a remark that Leder made in the introduction of the first volume:

> Wherever the readability of a manuscript is hampered by faintness of the writing or other impairments, this is even more acute in its Certificates, for these are written in a hasty manner and in narrow margins. In some cases, however, it seems that the real rash and 'personal' writing is not due to circumstances; rather it is chosen consciously in order to give the copy an unmistakable character, a kind of signature for its authenticity.[17]

The second-last contribution of importance to the audience certificates is the proceedings of a workshop entitled *Notes on Manuscripts in Islamic Studies: State of the Art and Future Research Perspectives*, which was held at the University of Kiel, Germany in April 2008.[18] Four papers are of particular importance regarding the topic of *samāʿ* notes, two of which I shall mention here.[19] Rosemarie Quiring-Zoche's contribution treats 'The Yemenite diplomat Qāsim Abū Ṭālib al-ʿIzzī (d. 1960) as mirrored by his manuscript notes'.[20] She analyses a multiple-text manuscript from the Berlin State Library which contains nine treatises on Prophetic tradition and jurisprudence. They were copied towards the end of the nineteenth century, and the owner, Qāsim Abū Ṭālib, wrote down how often he read the treatises. What is particularly striking here is the high frequency: treatise no. 4, for example, was read by him or in his presence in 1888, 1895, 1896, 1897 (twice), 1898, 1899 and a final time in 1907. We also learn

---

12 Leder et al. 1996.

13 Leder et al. 1996, 33.

14 Leder et al. 1996, 34.

15 Leder et al. 2000.

16 Three of them are enumerated in Görke and Hirschler 2011, 15, footnote 26; the fourth one is Leder 2002.

17 Leder et al. 1996, 33.

18 Görke and Hirschler 2011.

19 The other two are Stefan Leder, 'Understanding a Text Through its Transmission: Documented *samāʿ*, copies, reception' (pp. 59–72); Konrad Hirschler, 'Reading Certificates (*samāʿāt*) as a Prosographical Source: Cultural and social practices of an elite family in Zangid and Ayyubid Damascus' (pp. 73–92).

20 Quiring-Zoche 2011.

that these lectures took anything from 3 to 9 weeks. Around the year 1910, the manuscript changed hands. The last reading attested to in a note dates from the year 1952, which means that the thousand-year-old habit of leaving reading notes continued until quite recently in Yemen and probably in other parts of the Islamic world as well.

The second article of considerable importance for my topic was Andreas Görke's contribution[21] to the *Proceedings* mentioned above because the manuscript he analysed also stems from Baghdad and was read there at almost the same time as the Gotha manuscript; even two of the readers mentioned in the latter appear in the Damascus manuscript on taxes studied by Görke,[22] namely the reciters Abū Yāsir Muḥammad Ibn ʿUbaydallāh Ibn Kādish al-ʿUkbarī (d. 496/1103) and Abū ʿAbdallāh al-Ḥusayn Ibn Muḥammad Ibn Khusraw al-Balkhī (d. 526/1132). Görke's observations on details and peculiarities in the certificates that he studied enable us to glean a better understanding of the *samāʿāt* in the Gotha manuscript.[23]

In 2012, Konrad Hirschler's book *The Written Word in Medieval Arabic Lands* was published. While Leder and his co-authors covered an immense number of Damascene certificates with the aim of providing basic prosopographical data, Hirschler, in his chapter 'A City is Reading', concentrates on a close cultural-historical analysis of a few of these certificates, taking those from a manuscript of Ibn ʿAsākir's *History of Damascus* (*Tārīkh madīnat Dimashq*) into particular consideration.[24] This enabled him to a) distinguish between two main kinds of reading sessions, viz. learned and popular ones, b) discover what social and cultural differences existed between various groups, and c) uncover the various motives for specific groups' involvement in learning processes. Hirschler's chapter shows the wealth of information which can be drawn from these paratexts on numerous aspects of social and cultural history in an exemplary way.

Ms. orient. A 627 from the Forschungsbibliothek Gotha is a fragment of a copy of al-Kharāʾiṭī's *Iʿtilāl al-qulūb*. Abū Bakr Muḥammad Ibn Jaʿfar al-Kharāʾiṭī died in 327/938 in Ashkelon or Jaffa. His work *Iʿtilāl al-qulūb*, 'The Sickness of Hearts', contains love stories, love poetry and Prophetic traditions as well as sayings of pious early Muslims, grouped in more than 50 unnumbered chapters; the author tries to give guidance to Muslims on how to cope with the temptations of passionate love. There are just three manuscripts extant now besides the Gotha codex. Two of them (at the Dār al-Kutub in Cairo and Ulu Cami in Bursa) are fragmentary or abridged versions;[25] only the Rabat manuscript (The National Library of the Kingdom of Morocco, al-Khizāna al-ʿāmma) seems to be complete.[26] Such a small number of surviving manuscripts implies that the work, once important, fell into oblivion at some point. But as a source of major thematic inspiration, it became of primary importance for Ibn al-Jawzī's famous work 'The Censure of Passion' (*Dhamm al-hawā*). Ibn al-Jawzī (d. 1201) has the same chapter headings as al-Kharāʾiṭī in 15 cases, but does not mention him as his model, and he quotes much of the latter's material as well.[27]

So far, al-Kharāʾiṭī's book has been edited twice; the second impression of the first edition appeared in the year 2000 in Saudi Arabia[28] and the second edition in 2001 in Beirut.[29] Both editions are based on the Rabat manuscript, but the editor of the second one also took the Cairo manuscript into account and mentions the Gotha fragment without using it, however. A first comparison has shown that the text of the Gotha manuscript contains parts (*juzʾ*) 6 and 8 (i.e. chapters 47–49, 54–57 as in the editions) as well as three additional chapters. The value of the text as given by Ms. orient. A 627 will not be discussed here in detail; rather, I will try to shed some light on the questions raised by and the information

[21] Görke 2011.

[22] The *Kitāb al-Amwāl* by Abū ʿUbayd al-Qāsim Ibn Sallām (d. 224/838).

[23] Further publications on the audience certificates that I have not mentioned can be found in Görke and Hirschler 2011, introduction, 13f., footnotes 19–24.

[24] Ibn ʿAsākir died in 571/1176.

[25] On the Cairo manuscript in the Dār al-Kutub al-Miṣriyya (445 *adab*, 6542 *adab* and 962 *adab Taymūr* – why three shelf marks?), cf. al-Shaykh 2001, 25 (starts from chap. 21). On the Bursa manuscript (Ulu Cami 1535), cf. Leder 1984, 59, who gives further hints on the abbreviated or incomplete character of the manuscript, a fact which was already assumed by Jean-Claude Vadet.

[26] On this manuscript, al-Khizāna al-ʿāmma bi-l-Ribāṭ, Awqāf 269 q, cf. al-Shaykh 2001, 23 (he states shelf mark no. 869 instead of 269 q); al-Murābiṭī 2001-2. A PDF version of a film of this manuscript made for the Institute of Arabic Manuscripts of the Arab League can be found on the internet. (The library stamps contained there can yield some valuable evidence about the manuscript's history.)

[27] Cf. Leder 1984, 57–61, 112–118.

[28] Al-Dimirdāsh 2000.

[29] Al-Shaykh 2001.

which can be drawn from the certificates.[30] Twelve of them are contained on fols. 13b to 15b and one on fol. 37b, which is the last folio of this manuscript.

The best way of doing this is to present some examples in a simplified form, representing (usually long) Arabic names by capital letters in most cases. This is certificate no. 3 (fol. 14a, lines 16–21):

> The whole part (*juzʾ*)[31] was heard,
> - with the Most Honourable Chamberlain Abū al-Ḥasan ʿAlī Ibn Muḥammad Ibn ʿAlī Ibn al-ʿAllāf (may God be pleased with him) as the **attending authority**,
> - and Shaykh Abū Yāsir Muḥammad Ibn ʿUbaydallāh Ibn Kādish al-ʿUkbarī as the **reciter**,
> - by the Shaykhs A and B and C,
> - with D as the **clerk** of the *samāʿ*,
> - while E heard just the first 15 leaves,
> - and this was on Wednesday 6 Ramaḍān 487 [= 19 September 1094].

The name of the attending authority (*musmiʿ*, *muqriʾ*) responsible for the correctness of the transmitted text has been stated in full length because he has the same function in all 13 certificates in the Gotha fragment and thus plays a prominent role in the manuscript. Ibn al-ʿAllāf lived in Baghdad from 406 to 505 Hijra (1015 to 1111 CE) and was a distinguished person, being a chamberlain (*ḥājib*, probably at the Caliph's court) and transmitter of pious knowledge. The name of the reciter (*qāriʾ*) is given *in extenso* here as well, because al-ʿUkbarī is well known as a reciter from the certificates in the manuscript studied by Görke; his name is mentioned in certificates of lecture series held in Baghdad in the years 472, 477–8, 478, 478–9, 479, 480, 480 and 481 Hijra.[32] The clerk is called *kātib al-samāʿ* in no. 3, i.e. 'writer of the certificate', while in others he is called *muthbit al-samāʿ*, the 'person who records the certificate'. Besides these three people with an 'official' function, only four other listeners were present at the session (A, B, C and E); with such a small audience, certificate no. 3 refers to the least attended of all 13 sessions. On top of this, listener E left earlier. Such cases of temporary attendance are mentioned in five other certificates among the 13, and Görke states that remarks like these are quite frequent in the certificates he analysed.[33]

A second example, certificate no. 9 (fol. 15a, lines 10–18), shows some continuities as well as changes. People already known from the first example are represented by the letters used for them there and are highlighted in bold face, while any additions are written in italics:

> The whole *sixth* part of the work *Iʿtilāl al-qulūb* was heard,
> - with the Most Honourable Chamberlain *Sir* Abū al-Ḥasan ʿAlī Ibn Muḥammad Ibn ʿAlī Ibn al-ʿAllāf (may God be pleased with him) as the **attending authority**,
> - and Shaykh Abū Yāsir Muḥammad ibn ʿUbaydallāh ibn Kādish al-ʿUkbarī as the **reciter**,
> - by the Shaykhs **D**, his brother F, **C**, his son **E**, G and **B**,
> - with **A** as the **clerk** of the *samāʿ*,
> - and this was in the month of Rajab 487 [= July/August 1094].

In the second example, all those who are named in certificate no. 3 are present as well, and they are enforced by two more attendants (F and G). The clerk has changed, which is in accord with Görke's statement that the role of the *kātib/muthbit al-samāʿ* was not formalised even in lecture series with a common core of listeners.[34] A similar overlap of attendees can be found in other pairs, namely 1 and 13, 2 and 8, 4 and 10, 6 and 11 and 7 and 12. Such a seemingly systematic doubling of the presence of part of the audience at recitation of one and the same part of the book[35] has to be accounted for. Görke found such cases in his Baghdad manuscript and offered a plausible explanation:

> The fact that it was not uncommon that participants missed parts of a lecture resulted in another phenomenon documented throughout the certificates. If they later intended to be able to transmit the whole work, participants who missed a lecture needed to catch up with the material. Therefore follow-up sessions were held for participants who missed some sessions or parts thereof. We find certificates which record readings of the same part of the book with the same *qāriʾ* taking place

[30] I intend to publish the complete text of the *samāʿāt* in a separate article together with an analysis of the persons mentioned in the certificates.

[31] In this case, *juzʾ* is not identical to those *ajzāʾ* which divide the text in the editions; there, *juzʾ* 8 ends later in the text (see below).

[32] Görke 2011, 116f.; cf. 109.

[33] Görke 2011, 107f.

[34] Görke 2011, 107.

[35] Nos. 1 and 13 do not seem to refer to recitations of the same text, of course, because no. 13 is separated from the other twelve by two dozen folios.

> only a month or two apart. In the latter of these lectures, people take part who usually attend the previous series of lectures, but missed the respective parts.[36]

This explanation does not hold for our pairs, however. The later session of pair 3 and 9 was no. 3, and only people are mentioned there *who had already attended the earlier one*. The dates are a clue that can help us solve the riddle, however: the second ones within all these pairs with a common stock of attendants (i.e. 13, 8, 10, 11 and 12) were either held in the same month as the first ones *or they were held earlier*. Table 1 shows the dates in a simplified notation where Muslim months are indicated by Roman numerals. (In three cases, the exact dates and weekdays are given in the certificates' text,[37] but as they have no relevance for clarifying the chronological questions, they have been omitted here.) Certificates 1 to 12 are written on each of fols. 13b to 15b, and only no. 1 is written on two pages (on two folios, in fact). No. 13 is written on fol. 37a. Nos. 1 and 13 are written immediately after the preceding text units of al-Kharāʾiṭī's work respectively. In the table, a bold line is inserted when the chronological sequence of the dates is interrupted.

Table 1: Simplified dates and folios of the 13 certificates (a common stock of attendants can be found in nos. 1 & 13, 2 & 8, 3 & 9, 4 & 10, 7 & 12).

#1	III 486	(13b/14a)
#2	III 487	(14a)
#3	IX 487	(14a)
#4	X 490	(14a)
#5	XII 488	(14b)
#6	II 501	(14b)
#7	VII 499	(15a)
#8	III 487	(15a)
#9	VII 487	(15a)
#10	X 490	(15a)
#11	I 501	(15b)
#12	XII 488	(15b)
#13	III 486	(37b)

Such chronological disorder is quite surprising; the outward impression conveyed by folios 13b to 15b is that the twelve certificates are written one after the other from top to bottom on each page (which is the usual way in Arabic manuscripts). When one tries to find a reason for the disorder, a comparison of the text with the editions yields an initial insight. The text preceding certificate no. 1 on fol. 13b is from chapter 55, 'On the Hopes of Lovers' (*Dhikr amānī ahl al-hawā*); this chapter is the second of four chapters contained in part 8.[38] This makes the initial statements of the three certificates (nos. 8, 9 and 12), which are the only ones containing any explicit mention of the part of the book recited in the session, difficult to understand. The beginning of nos. 8 and 9 is: 'The whole *sixth part* of the work *Iʿtilāl al-qulūb* was heard by …'; no. 12 begins: 'This whole part, which is the *sixth one* of the *Iʿtilāl al-qulūb*, was heard by …'. A look at the text between certificate no. 12 (15b) and no. 13 (37b) shows that the text of chapters 47 to 49, which belong to part 6, is reproduced here (in addition to three other chapters that are not contained in the editions).

The reason for the duplicated pairs of certificates, whose chronology is inverted sometimes, and the fact that text belonging to part 8 precedes text from part 6 are obviously due to a bookbinder transposing certain folios, probably when the manuscript was rebound in Gotha, but possibly also prior to its acquisition by Ulrich Jasper Seetzen in Cairo in 1808 (cf. fol. 1a). The original order of the certificates must have been this one:

13, 8–12 (fol. 37b, fols. 15a–b: referring to readings of what is called 'part 6' in nos. 8, 9 and 12 and what is actually included in 'part 6' in both editions)

1–7 (fols. 13b–14b: referring to readings of text which is included in 'part 8' in the editions).

The jumping back of years between 7 and 8 can be explained this way, but similar irregularities are found before nos. 5, 7 and 12 as well. To explain these, we must try to find out what these three certificates all have in common. A first shared feature is that they are all the last certificate on the respective pages. A second feature is their similar handwriting. For a better understanding of certificates 5, 7 and 12 as well

[36] Görke 2011, 107.

[37] In certificates no. 3, 4 and 10.

[38] The last words preceding no. 1 are: *ḥaddaṯanā ʿAbdallāh Ibn Burayda ʿan ʿUmar Ibn al-Khaṭṭāb raḍiya Allāh ʿanhu*. In the editions, this sentence is missing in al-Shaykh 2001, 339, but the preceding sentence can be found there; it is found in line 11 in al-Dimirdāsh 2000, 395.

as the remaining ones, an attempt to find out by how many people they were actually written by seems helpful. Using the information provided in the certificates is a first step. As we have seen in nos. 3 and 9, they sometimes contain a mention of the clerk who was chosen to record names and dates. These are the following in Ms. orient. A 627:

(1 and 13: no clerk mentioned)

2 and 8: Aḥmad Ibn Muḥammad Ibn al-Ḥasan Ibn Muḥammad al-Wāsiṭī, known as Ibn al-ʿUkbarī

3 and 9: Saʿdallāh Ibn ʿAlī Ibn al-Ḥusayn Ibn Ayyūb al-Bazzāz/Abū al-Qāsim ʿUbaydallāh Ibn ʿAlī al-Makhramī (as seen above, roles changed; the clerk of one session was an ordinary attendant in the other)

4 and 10: al-Ḥusayn Ibn Naṣr Ibn Muḥammad Ibn Khamīs al-Mawṣilī

(5: no clerk mentioned)

6 and 11: ʿUmar Ibn Ẓufar Ibn Aḥmad

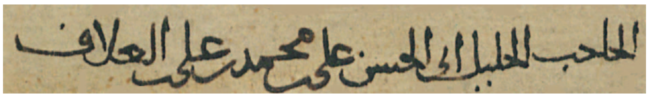
(7 and 12: no clerk, but a copyist mentioned.)

Instead of a clerk, the name of a copyist (*nāqil*) has been included in pair 7 and 12. The habit of transferring audience certificates from other manuscripts is frequently mentioned in the publications referred to above. When the copyist did not mention himself and the act of transferring, using such a transferred certificate to determine a *terminus ante quem* for the manuscript in which it is contained yields false datings, of course. In every certificate which has been transferred from another manuscript, the handwriting normally is not that of the clerk of the original certificate, although it cannot be excluded that a clerk sometimes transferred records made by himself. In nos. 7 and 12, the name of the copyist is stated in various lengths: he gives his name as ʿAbdalkhāliq Ibn Aḥmad Ibn ʿAbdalqādir Ibn Muḥammad Ibn Yūsuf initially, while he just calls himself Ibn Yūsuf the second time. A comparison of the handwriting in both certificates (see below) shows that they were written by the same person.

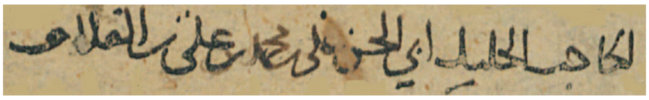
The common element of the attending authority Ibn al-ʿAllāf is very useful for identifying different hands discernible in the certificates. In what follows, I have compared his name for each of the pairs of certificates that have a common stock of listeners. To facilitate comparison, letters from neighbouring lines and stains have been covered digitally; the reader who wishes to see the original script is referred to the facsimiles contained in the appendix.

Pair no. 1 and 13
At first glance, the ways of writing are not identical; in the first example, some words are connected (e.g. ʿAlī Ibn) that are separated in the second one.

No. 1, line 1:

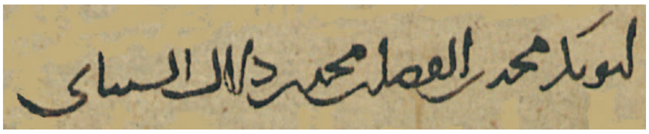


No. 13, line 1:

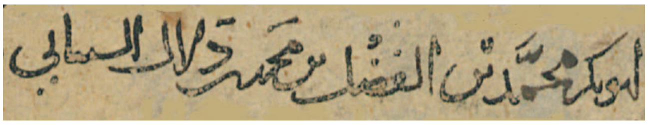


But the components of another name (Abū Bakr Muḥammad Ibn al-Faḍl Ibn Muḥammad Ibn Dallāl al-Shaybānī), in particular the last two elements, could show that both versions were probably written by the same person:

No. 1, line 3:



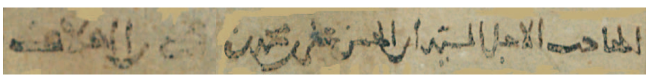
No. 13, line 2:



Pair no. 2 and 8
Although no. 8 is much more worn and smeared than its counterpart, the similarity is still quite obvious:

No. 2, line 1:

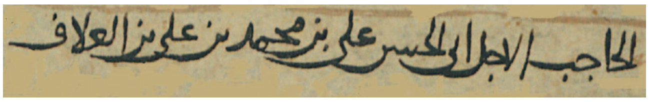
No. 8, lines 1–2:



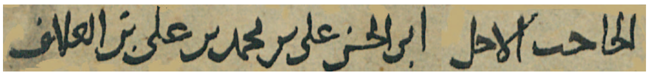
Pair no. 3 and 9

In this case, identical hands cannot be expected because the clerks are not identical. First the title and name of Ibn al-ʿAllāf:

No. 3, line 1:

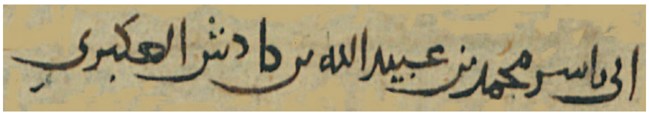


No. 9, lines 1–2:

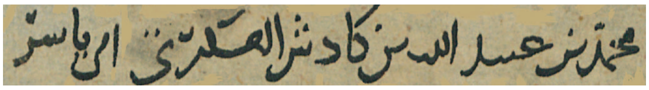


Another name (Abū Yāsir Muḥammad Ibn ʿUbaydallāh Ibn Kādish al-ʿUkbarī) shows dissimilarity as well, especially in the second *mīm* of Muḥammad, the *hāʾ* of Allāh and the *kāf* and *shīn* of Kādish:

No. 3, line 2:

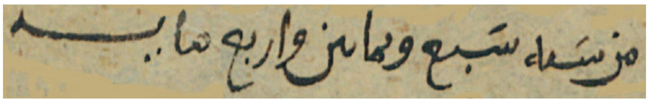


No. 9, line 3:

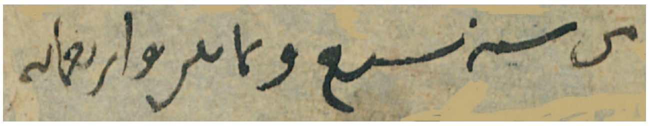


The ways in which the year 487 is written may suffice as final evidence of different hands:

No. 3, line 6:



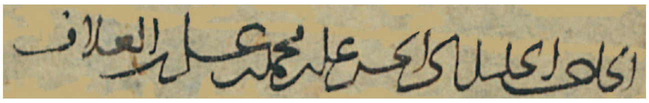
No. 9, line 9:



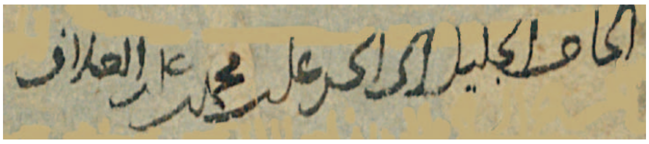
Pair no. 4 and 10

This pair shows agreement again in Ibn al-ʿAllāf's title and name, especially in the writing of the *jīm* in al-Ḥājib and the *lām-alif* in al-ʿAllāf:

No. 4, line 1:



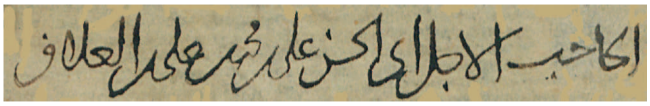
No. 10, line 1:



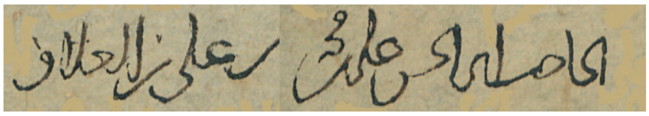
Pair no. 6 and 11

The impression of far-reaching agreement is especially conveyed by the second half of Ibn al-ʿAllāf's mentioning:

No. 6, line 5:



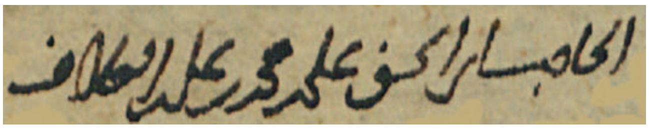
No. 11, lines 5-6:



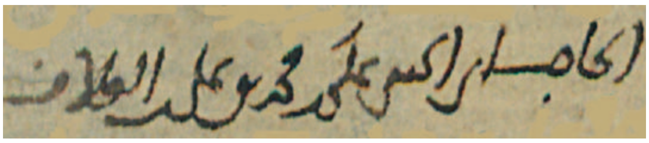
Pair no. 7 and 12 (plus 5)

This pair shows a comparable degree of agreement in a hand noticeably inclined to the right:

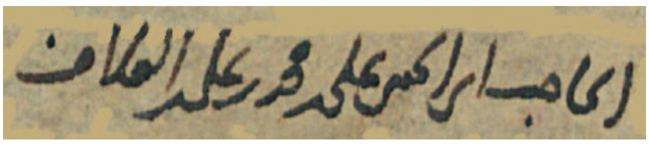
No. 7, line 1:



No. 12, line 2:



No. 5, line 1. No. 5 seems to be written by the same hand, too:



As a result, we can state with a high degree of probability that 1) the handwriting is identical whenever the clerk or copyist has the same name in the text; 2) the handwriting is different whenever different clerks are mentioned; 3) although neither the clerk nor the copyist is mentioned in three cases (nos. 1, 5 and 13), the identity of hands 1 and 13 and of hands 5, 7 and 12 is highly plausible. This latter observation makes it almost certain that no. 5 is a transferred *samāʿ*, too.

Nevertheless, we still need to ask ourselves whether other certificates than nos. 5, 7 and 12 have been transferred from other manuscripts containing the same text; this is of relevance to the question of determining a *terminus ante quem* for Ms. orient. A 627 and in understanding which sequence the paratexts are in. One clue can be found in the eulogies attached to the name of the attending master (*muqriʾ*), Ibn al-ʿAllāf, who died in 505 Hijra, whereas our certificates refer to sessions held in the years from 486 and 501. The eulogy *raḥimahu llāh*, 'May God have mercy upon him', is used in pair 7 and 12; this phrase is reserved for the deceased. This matches perfectly with the expressly transferred nature of both certificates, so we can conclude that they must have been copied after 505 Hijra (along with no. 5). The eulogy mentioned in nos. 4 and 10 is similarly clear: *ayyadahu llāh*, 'May God support him', refers in all probability to his mundane well-being. Among the remaining texts, nos. 6 and 11 do not attach a eulogy to Ibn al-ʿAllāf's name. The phrase used in nos. 1, 2, 3, 8, 9 and 13, *raḍiya llāhu ʿanhu*, 'May God be pleased with him', is difficult to interpret: it is well known with reference to pious deceased Muslims, but to the best of my knowledge, the question of whether it can be used for revered individuals who are still alive has not been dealt with yet in scholarly literature. Based on my own general experience and on assessments of several colleagues well acquainted with these phrases and *samāʿ* notes, I propose the working hypothesis that *raḍiya llāhu ʿanhu* might well have been used for contemporaries. Accordingly, we may assume that the use of this eulogy is not a compelling reason for regarding the certificates containing it as transferred ones.

Table 2

Referring to part 6		Referring to part 8	
#13	III 486	#1	III 486
#8	III 487	#2	III 487
#9	VII 487	#3	IX 487
#10	X 490	#4	X 490
#11	I 501	#6	II 501
#12	XII 488 (transferred after 505)	#5	XII 488 (transferred after 505)
		#7	VII 499 (transferred after 505)

Based on all these observations and reasoning, the apparent chronological disorder in certificates which appear to have been written one after the other (with the exception of no. 13) can be explained in the following way:[39]

Leaving aside no. 7 for now, table 2 indicates that there were six different circles. Either part 8 was recited in the same month as part 6 (13 & 1, 8 & 2, 10 & 4), or one month later (11 & 6, 12 & 5) or two months later (12 & 5). The disorder in the manuscript can be explained by two different factors: 1) two separate cases of misbinding and 2) later transferring of certificates. As for the first factor, the text of part 6 including the first audience certificate referring to it (no. 13) was wrongly bound after the text of part 8 on an unknown date, and the folio bearing the text of the certificates which originally followed (fol. 15, nos. 8 to 12) was wrongly inserted after the folio which carried the certificates referring to part 8 (fol. 13b to 14b, nos. 1 to 7). The second reason for the chronological disorder is that certificates 5, 7 and 12 were added later; having established this from textual and palaeographical evidence, a fresh look at the visual evidence supports this hypothesis as they are squeezed under the preceding notes.

There is some more information that can be drawn from Ms. orient. A 627; a future publication will have to deal with the role of women and children in the lectures, the social background of the listeners, the possible difference between two terms for the clerk (*kātib* vis-à-vis *muthbit*), the place where readings of 'The Sickness of Hearts' took place, and what was really to be achieved by being present at the lessons. For the purposes of this article, suffice it to say that *samāʿ* notes can only be used for dating manuscripts

[39] If not stated otherwise, the certificates seem to have been written down immediately after the sessions. No. 11 is an exception: it is stated here in line 11 that the text was written down 'on another date' (*bi-ghayr hādhā al-tārīkh*); on the other hand, in no. 10, line 11, it is expressly stated that the certificate was written down on exactly the same day as the session (*bi-tārīkh al-samāʿ*).

with great care. If further evidence can be found for the assumption that the eulogy *raḍiya llāhu ʿanhu* was used with reference to living people, however, we could conclude that Ms. orient. A 627 was written before Rabīʿ I 486 (April 1093 CE).[40] This is what the most ancient date looks like in the Gothanus:

Fol. 37b ult. It should be read as *Rabīʿ al-awwal sanat sittīn wa-tham[ā]nīna wa-arbaʿimiʾatin.* The line is as mutilated by cutting and worn in the original manuscript as it looks here.

[40] Boris Liebrenz/Leipzig, in an email dated 26 May 2015, draws my attention to an obvious instance for *raḍiya llāhu ʿan* with respect to living persons in the manuscript Ms. 199 (fol. 5b) from the Daiber Collection I (cf. Hans Daiber [1988], *Catalogue of the Arabic Manuscripts in the Daiber Collection, Institute of Oriental Culture, University of Tokyo* [Tokyo], p. 88). The sentence reads: *suʾāl bi-mā qawlukum raḍiya llāhu ʿankum wa-nafaʿa bi-ʿulūmikum al-muslimīn fī al-dunyā wa-l-ākhira fī-mā dhakara al-Jalāl al-Suyūṭī fī fatāwīhi …* ‘a question about your opinion – may God be pleased with you and may he cause benefit from your knowledge for the Muslims in this world and the hereafter – concerning what Jalāl al-Dīn al-Suyūṭī mentions in his legal rulings …’. Eight lines later, the answer is given. The page can be found on the Internet (http://ricasdb.ioc.u-tokyo.ac.jp/daiber/db_ShowImg_I.php?ms=199&txtno=&size=m&page=10).

Fig. 1: fol. 13b.

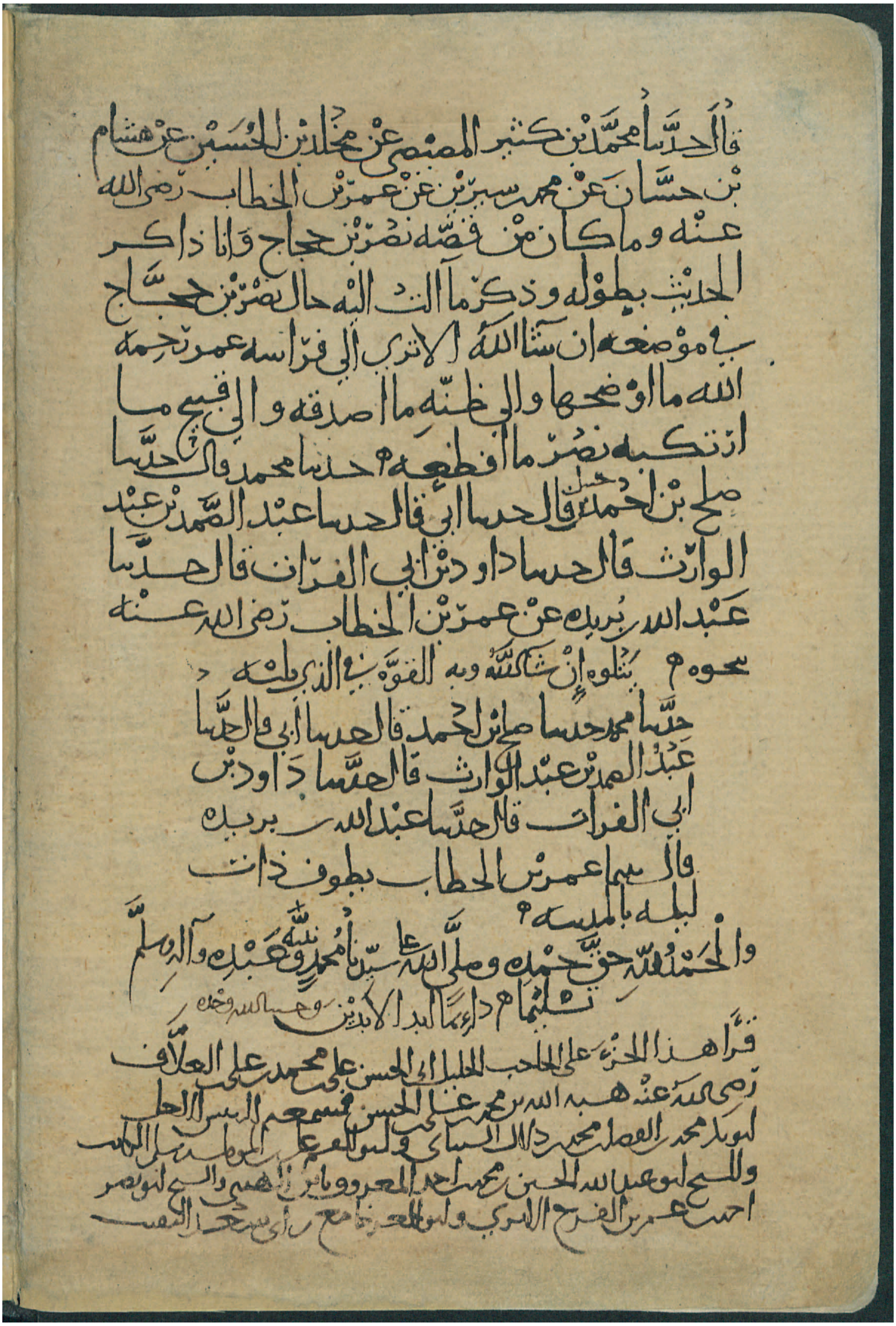


Fig. 2: fol. 14a.

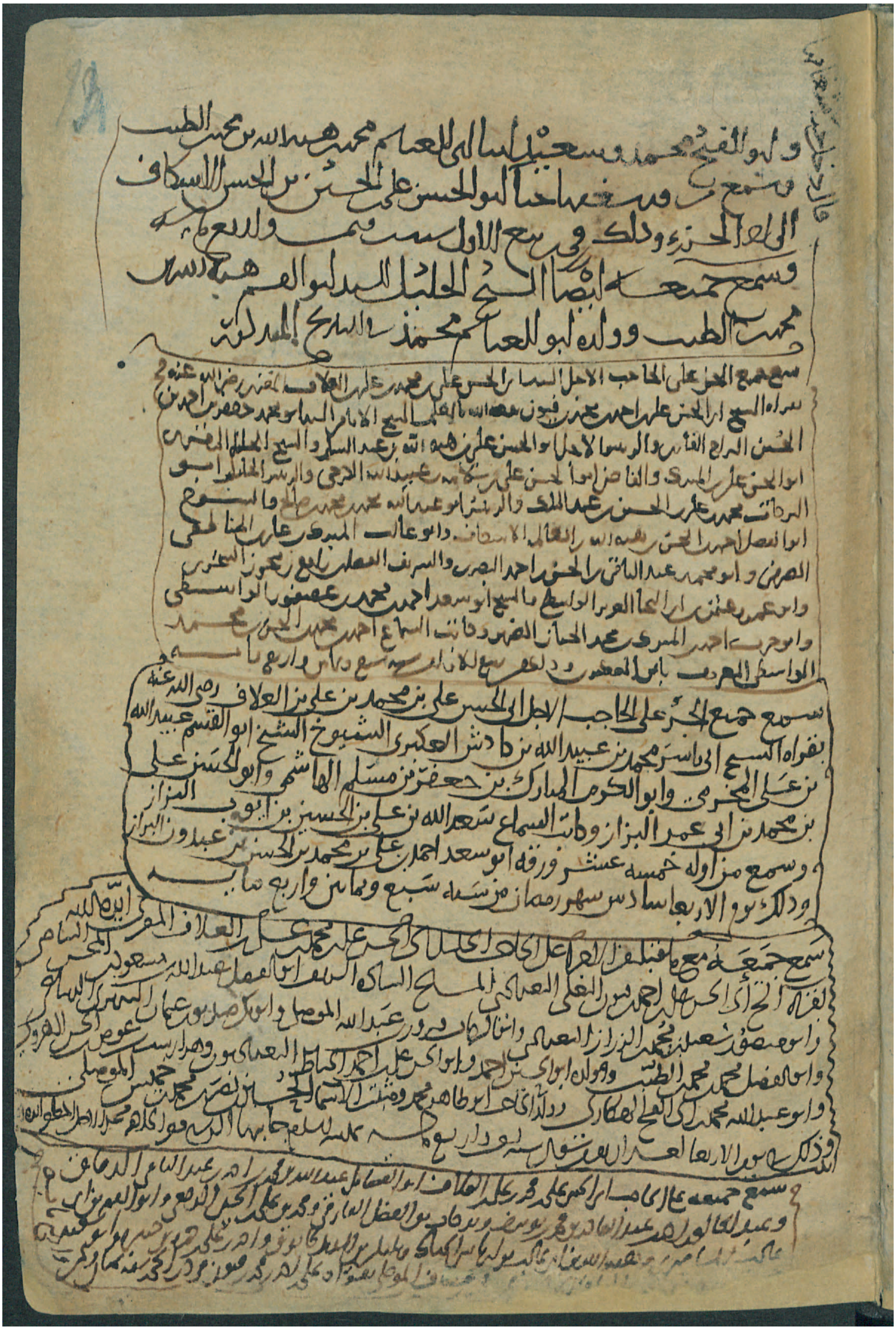


Fig. 3: fol. 14b.

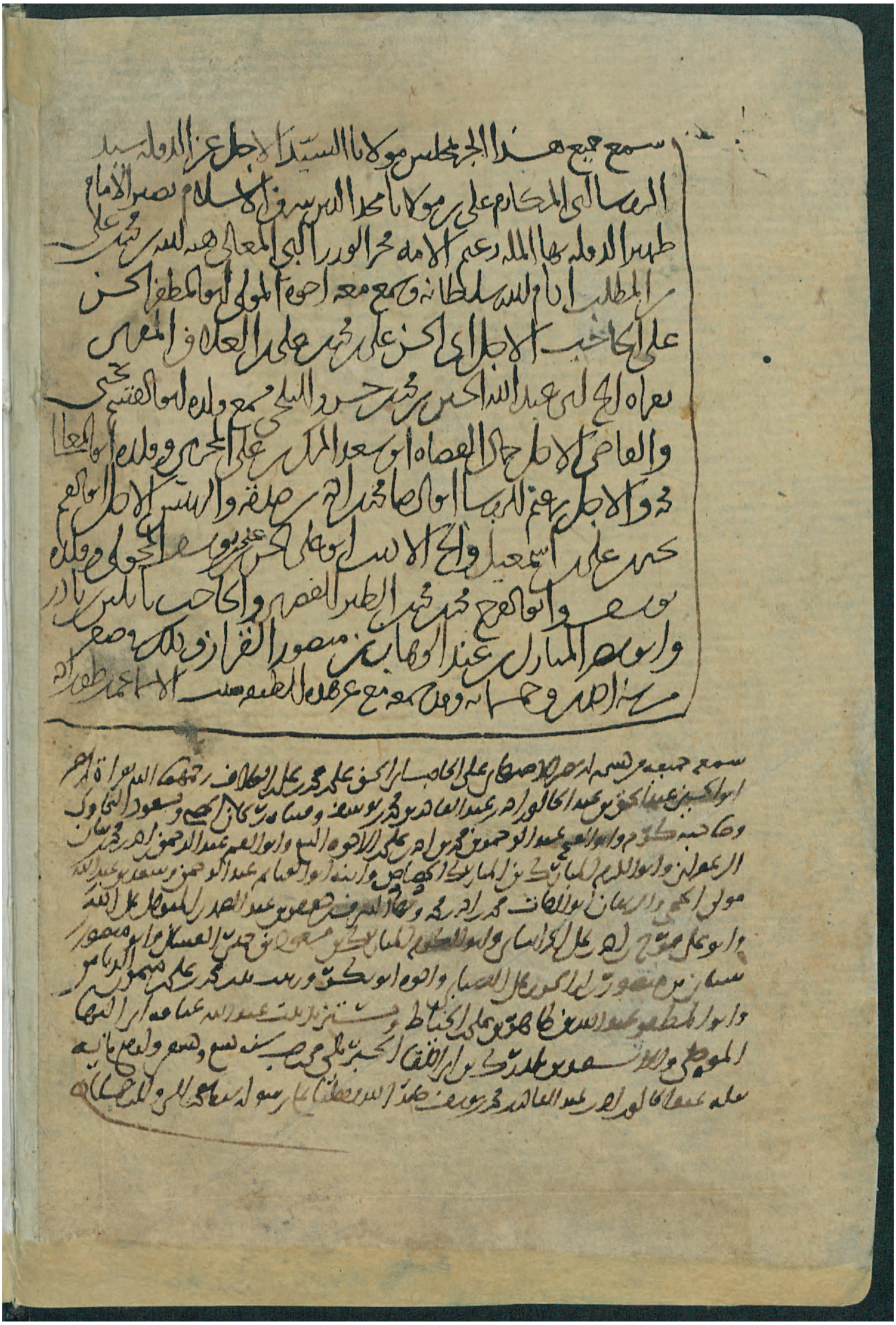
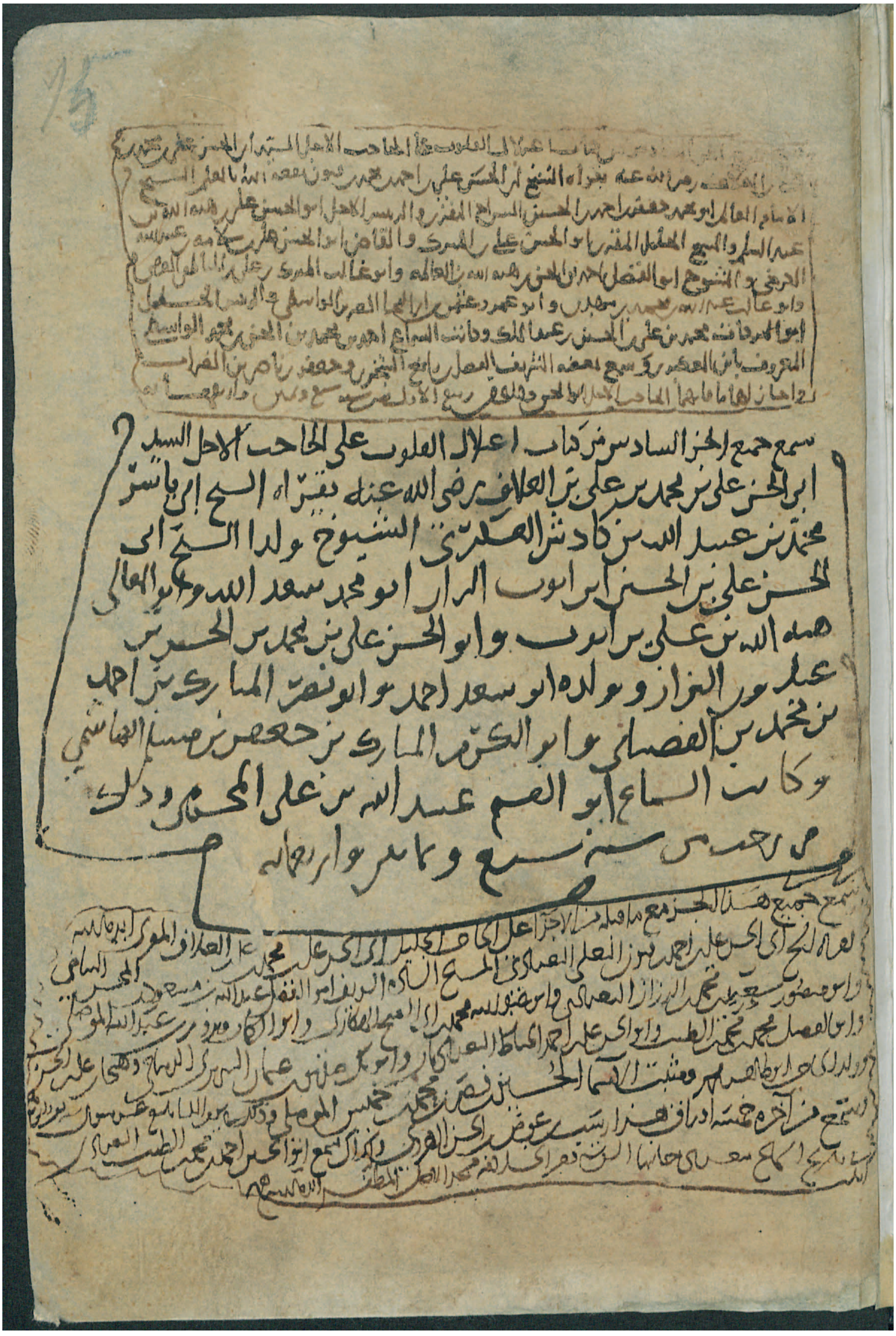


Fig. 4: fol. 15a.



سمع جميع الجزء السادس من كتاب اعلال القلوب على الحاجب الاجل السيد
ابي الحسن علي بن محمد بن علي بن العلاف رضي الله عنه بقراءة الشيخ ابي ياسر
محمد بن عبد الله بن كادش العكبري الشيوخ ولدا الشيخ ابي
الحسن علي بن الحسن بن ايوب البزاز ابو محمد سعد الله وابو المعالي
هبة الله ابنا علي بن ايوب وابو الحسن علي بن محمد بن الحسن بن
عبدون البزاز وولده ابو سعد احمد وابو نصر المبارك بن احمد
بن محمد بن الفضل وابو الكرم المبارك بن جعفر بن مسلم الهاشمي
وكاتب السماع ابو القسم عبد الله بن علي المحمّي وذلك
في محرم من سنة تسع وثمانين واربعمائة

Fig. 5: fol. 15b.

Fig. 6: fol. 37b.

أنبأنا محمد قال أنشدني محمد بن علي الواثقي لعبيد الله بن عبد الله بن طاهر
دمعة قد جرت وأخرى على الخد وأخرى من الجفون تجول
فترى الدمع قد تحيّر في الخد فيها كأنه ما يزول
أنبأنا محمد قال أنشدني أبو صخر الأموي لديك الجن
ندبر عيني بعدك الكوكب ولوعة إنسانها تلهب
ودمعة في الخد مشفوعة كأنها من حمرة تحلب
ما أمنع الدمع وإرساله علي لما امتنع المطلب
إن تكن الأيام قد أذنبت فيك فإن الدمع لا يذنب
أنبأنا محمد قال أنشدني عزيز الأعرابي
ومما شجاني أنها يوم أعرضت تولت وماء العين في الجفن حائر
فلما أعادت من بعيد بنظرة إلي التفاتًا أسلمته المحاجر
أنشدنا محمد قال أنشدني أبو جعفر العبدي لذي الرمة
ولما تلاقينا جرت من عيوننا دموع كففنا ماءها بالأصابع
ونلنا سقاطًا من حديث كأنه جنا النحل ممزوجًا بماء الوقائع
يتلوه إن شاء الله وبه القوة باب فضيلة حفظ السر وذم إذاعته
والحمد لله حق حمده

REFERENCES

Al-Dimirdāsh, Ḥamdī (ed.) (2000), *Iʿtilāl al-qulūb taʾlīf Muḥammad b. Jaʿfar b. Muḥammad b. Sahl b. Shākir al-Sāmirī al-Kharāʾiṭī* (240:327) (2nd ed. Mecca).

Görke, Andreas (2011), 'Teaching in 5th/11th century Baghdad: Observations on the lectures of Abū l-Fawāris Ṭirād b. Muḥammad al-Zaynabī and their audience', in Görke and Hirschler (eds.), 92–118.

Görke, Andreas, and Hirschler, Konrad (eds.) (2011), *Manuscript Notes as Documentary Sources* (Beirut/Würzburg; Beiruter Texte und Studien, 129).

Hirschler, Konrad (2012), *The Written Word in Medieval Arabic Lands. A Social and Cultural History of Reading Practices* (Edinburgh).

Lecomte, Gérard (1969), 'Bedeutung der "Randzeugnisse" (samāʿāt) in den alten arabischen Handschriften', in *Supplement I* der *Zeitschrift der Deutschen Morgenländischen Gesellschaft* (27. Deutscher Orientalistentag Würzburg 1968), vol. 2, (Wiesbaden), 562–566.

Leder, Stefan (1984), *Ibn al-Ǧauzī und seine Kompilation wider die Leidenschaft. Der Traditionalist in gelehrter Überlieferung und originärer Lehre* (Beirut).

—— (2002), *Spoken Word and Written Text: Meaning and Social Significance of the Institution of Riwāya* (Tokio; Islamic Area Studies. Working Paper Series No. 31).

Leder, Stefan, al-Sawwās, Yāsīn, and al-Ṣāgharjī, Maʾmūn (1996), *Muʿǧam al-samāʿāt al-dimašqiyya. Les certificats d'audition à Damas 550 – 750 h./1155 – 1349* (Damascus).

——, ——, —— (2000), *Recueil de Documents fac similés des certificats d'audition à Damas 550 – 750 h./1155 – 1349. Muʿǧam al-samāʿāt al-dimašqiyya* (Damascus).

MacKay, Pierre A. (1971), *Certificates of transmission on a manuscript of the* Maqāmāt *of Ḥarīrī (Ms. Cairo, Adab 105)* (Philadelphia; Transactions of the American Philosophical Society. New Series 61/4).

Al-Munajjid, Ṣalāḥaldīn (1955), 'Ijāzāt al-samāʿ fī al-maḫṭūṭāt al-qadīma', in *Majallat maʿhad al-makhṭūṭāt al-ʿarabiyya/Revue de l'Institut des manuscrits arabes*, vol. 1, 232–251.

Al-Murābiṭī, Saʿīd (2001-2), *Fihris al-makhṭūṭāt al-ʿarabiyya al-maḥfūẓa fī al-Khizāna al-ʿāmma bi-l-Ribāṭ. al-Mujallad al-sābiʿ. Khizānat al-awqāf (ḥarf al-qāf) - 1* (Rabat).

Orientalische Buchkunst in Gotha. Ausstellung zum 350jährigen Jubiläum der Forschungs- und Landesbibliothek Gotha (Gotha 1997).

Pertsch, Wilhelm (1878), *Die orientalischen Handschriften der Herzoglichen Bibliothek zu Gotha*. Dritter Theil: *Die arabischen Handschriften*, vol. 1 (Gotha).

Quiring-Zoche, Rosemarie (2011), 'Der jemenitische Diplomat Qāsim Abū Ṭālib al-ʿIzzī (gest. 1380/1960) im Spiegel seiner Handschriften-Vermerke', in: Görke und Hirschler (eds.), 45–58.

Al-Shaykh, Gharīd (ed.) (2001), *Iʿtilāl al-qulūb fī akhbār al-ʿushshāq wa-l-muḥibbīn, taʾlīf Abī Bakr Muḥammad b. Jaʿfar b. Muḥammad b. Sahl al-Kharāʾiṭī* (Beirut).

Vajda, Georges (1954), 'Les certificats de transmission dans les manusc rits arabes de la Bibliothèque Nationale de Paris', *Bulletin d'information de l'Institut de recherche et d'histoire des Textes*, 2: 107–110.

—— (1956), *Les certificats de lecture et de transmission dans les manuscripts arabes de la Bibliothèque Nationale de Paris* (Paris; CNRS. Publications de l'Institut de Recherche et d'histoire des Textes, 6).

Witkam, Jan Just (1995), 'The human element between text and reader. The *ijāza* in Arabic manuscripts', in Yasin Dutton (ed.), *The Codicology of Islamic Manuscripts. Proceedings of the second conference of al-Furqan Islamic Heritage Foundation, 4–5 December 1993* (London).

—— (2003), 'Sporen van lees- e leercultuur in een twalfde-eeuws handschrift uit Damascus', in id., *Van Leiden naar Damascus, en weer terug. Over vormen van islamitische lees- en leercultur* (Leiden), 33–142.

Article

On the Threshold between Legend and History: the Afterlife of a Mackenzie Manuscript

Eva Wilden | Hamburg

In nineteenth-century South India, one of the motivating factors for travelling in search of manuscripts and for making manuscripts travel into newly arising collections and libraries was not so much the interest in indigenous texts as the hunt for information that would allow local history to be reconstructed more precisely. This period saw the first attempts at Indian historiography in Western languages, such as Wilson's 'Historical Sketch of the Kingdom of Pandya' from 1836. Some of the main sources that were used for such an undertaking were manuscripts from the extensive collections kept by Colin Mackenzie (1754–1821), the core stock of today's Government Oriental Manuscript Library (GOML) in Madras.[1] These manuscripts testify to the progressive amalgamation of indigenous, traditional and Western modes of presentation and narration.

The present article proposes to deal with one instance of that type, namely the story of Tiruvaḷḷuvar – author of the *Tirukkuṟaḷ*, the text that is to this day regarded as the crown jewel of Tamil literary production – and how he vanquished the members of the older literary establishment called 'the Academy' (*Caṅkam*). It can be regarded as complementary to a study of the transmission history of the Tamil classical corpus of the *Caṅkam*,[2] a study written at a time when I had not yet managed to locate and photograph a particular manuscript, the source that allows us to reconstitute the progression from a medieval Puranic legend to an established 'fact' of Tamil literary history.

The historical background can be outlined in a few words. The oldest surviving texts of Tamil classical literature, the so-called *Caṅkam* ('Academy') corpus, which may date back to the beginning of the first millennium, had a changeable fate. After the first waves of anthologisation probably between the late fifth and the early seventh centuries, the extensive poetological commentaries of the eleventh to fifteenth centuries assembled them into the two hyper-anthologies known today as *Eṭṭutokai* ('the Eight Anthologies') and *Pattuppāṭṭu* ('the Ten Songs') and made them the reference texts for what was thought to be outstanding Tamil poetry. By the end of that period, interest in it began to flag, but then it flickered up again in the seventeenth century with a couple of integrative grammatical works that resumed the earlier tradition. Afterwards the texts slowly faded from public consciousness again, while nevertheless the topos of the literary academy at the court of the Pāṇṭiya dynasty in Maturai remained alive and thriving in the form of narrative material used in a variety of literary productions beginning with the Maturai chronicles of the *Tiruviḷaiyāṭaṟpurāṇam*.

A second classical corpus followed in the wake of the *Caṅkam* and was modelled on it, partly adopting its literary conventions and, even more poignantly, making up the number eighteen: the Eighteen Minor Classics (*Patiṉeṇ Kīḻkkaṇakku*) correspond to the eight plus ten works of the major classics (*Patiṉeṇ Mēṟkaṇakku*). Their two most important innovations are a new metre (*Veṇpā*) and the extension of genres from the heroic and erotic to the didactic. Judging by the amount of attention they have received in the theoretical literature, their popularity never matched that of the *Caṅkam* corpus, with two notable exceptions: the *Tirukkuṟaḷ* and, to a lesser degree, the *Nālaṭiyār*, both of which are didactic anthologies. By the seventeenth century, the *Kuṟaḷ* had become the most frequently quoted Tamil text of all with the greatest number of commentaries, and by the nineteenth century it was deemed to be the oldest and most venerable, while the better part of the two classical corpora lay forgotten.

This state of affairs is mirrored in three clusters of legends told about those works and the institution that produced them in various traditional sources. The first one is a legend of origin for the *Caṅkam* corpus, attested for the first time in the

[1] For a short survey of the collection's history, see Dirks 2009, 29–47.

[2] Cf. Wilden 2014.

eleventh-century (?) preamble to a poetological commentary, Nakkīraṉ on the *Iṟaiyaṉār Akapporuḷ*, the first exclusive treatise on love poetics.[3] This legend tells of how three successive literary academies were founded in the Pāṇṭiya capitals, under the aegis of the Pāṇṭiya kings, and how the seats of the first and second ones, Southern Maturai and Kapāṭapuram, were lost in flooding caused by heavy rainfall. The works of the *Caṅkam* we possess today would have been the fruit of the labours of the third academy in upper – that is, modern – Maturai. This flood legend has apparently lain dormant for centuries, except for a few allusions in the commentary literature and a few stray verses, but it first re-emerges in an anonymous verse account of unclear origin and date (found and quoted by U. V. Cāminātaiyar in the introduction to his edition of the *Cilappaṭikāram*) and then in the introduction to the *Tamiḻ Nāvalar Caritai*, a work that brings together quotations from fifty earlier poets of all periods up to the seventeenth century. However, the flood legend plays a centre-stage role in the nineteenth-century revival process and touches the root of modern Tamil self-understanding.

In short, the second cluster of legends can be called the *Tiruviḷaiyāṭal* materials. Alluded to for the first time in the canonical poetic corpus of the Tamil Śaivas, the *Tēvāram*, and taken up briefly by several later works from the same corpus and by the *Kallāṭam*, a poetic work possibly from the twelfth century, the first fully fledged narrative is Nampi's *Tiruviḷaiyāṭaṟpurāṇam*, possibly from the thirteenth century (?), which was translated into Sanskrit in the fifteenth-century *Hālāsya Māhātmyam* and then immortalised in Parañcōti's immensely popular retelling of the *Tiruviḷaiyāṭaṟpuraṇam* in the seventeenth century. From there, partial retellings and elaborations of particular events found their way into virtually every genre of Tamil literature.[4] To be sure, their purpose was not primarily to relate stories connected with the academy in Maturai, but to recount the 'sixty-four sports', or mythic deeds, of Lord Śiva, who in the form of Cuntarar is closely linked to Maturai and the fate of the Pāṇṭiya dynasty (and since the genealogy of Pāṇṭiya kings is part of the narrative frame of the *Purāṇam*, it has been read as a kind of chronicle interspersed with myths). Among those sixty-four deeds, there are no less than five events which take place in the academy itself.

In brief, the story relates how Śiva gave the poets – who could not agree among themselves about the quality of their poetry – the famous bench of judgement (*caṅkap palakai*), a plank which extends itself to allow all true poets to sit upon it. It continues with an account of how Śiva gave a poem to the poor and uneducated but devout priest Tarumi in order to make him win a poetic contest set up by the Pāṇṭiya king, the resulting dispute between Śiva and the academy poet Nakkīraṉ about the quality of that poem, the subsequent punishment of Nakkīraṉ, and his being forgiven and finally taught proper Tamil grammar at the hands of the mythical grammarian Akkatiyaṉ. The last academy-related event is the improper treatment suffered by an outsider – a poet by the name of Iṭaikkāṭaṉ – at the hands of an unjust Pāṇṭiya king, and Śiva's intervention to set matters straight.

With this the stage is set for the third cluster of legends, which concerns the bench of judgement, the poetic contest and jealousy among the poets. The third one tells of how Tiruvaḷḷuvar, the author of the *Tirukkuṟaḷ*, challenged the academy, how he was allowed to put the manuscript of his work on the bench and how it was approved. At that point, the numerous versions vary considerably: some of them say he took his place among the academy members, while others devise various punishments for the arrogant older academicians, even including the dissolution of the academy itself. What is peculiar about the whole set is that it is never mixed up with any of the other versions mentioned so far. Nothing in the Maturai materials gives any hint on either Tiruvaḷḷuvar or the *Kuṟaḷ*. Except for a few cryptic verses,[5] what is available is a whole series of nineteenth-century retellings in English, written both by Indian and by European authors. These versions have already been brought together and discussed in Blackburn 2000 (and focus more on the figure of Tiruvaḷḷuvar than on his relation to the academy). Blackburn points out that they seem to be based

[3] For a translation and discussion of the legend, see Aravamuthan 1930 and Zvelebil 1973a; for a discussion of the dating problems, see Wilden 2009.

[4] For a first survey of related materials, see Aravamuthan 1931–32; for a content synopsis of the three major versions, see Dessigane, Pattabiramin and Filliozat 1960.

[5] The most famous of them is found in the *Tiruvaḷḷuvamālai*, a little text transmitted in the wake of the *Kuṟaḷ* itself that is supposed to contain the praise poems written by the academy poets in honour of Tiruvaḷḷuvar after they had been forced to recognise his superiority. The first verse is generally read as an allusion to that event: *tiru taku teyvam tiruvaḷḷuvarōṭ' / uru taku nal palakai okka – irukka / uruttiracaṉmar eṉa uraittu vāṉil / orukkavō eṉrat' ōr col*, 'Pronouncing: / "Together with holy divine Tiruvaḷḷuvar, / on the beautiful good bench let equally sit / Uruttiracaṉmar", from heaven / a voice spoke: "let them be united".' The simplest interpretation of this is that a voice from heaven (i.e. Śiva's voice) prompted a decision to accept Tiruvaḷḷuvar along with the famous 'arbitrator' Uruttiracaṉmar alias god Murukaṉ onto the bench of judgement and hence into the academy.

on oral accounts, at least one of which was preserved in the Mackenzie collection. He did not, however, find the Tamil source that brings the separate strands together.[6]

It comes as no surprise that more than one of the sources can still be traced back to that enormous collection, even if some of the actual manuscripts cannot be found there anymore. Wilson's Descriptive Catalogue from 1828 refers to a manuscript containing a chronicle of the Pāṇṭiya kings that appears to have many similarities to the *Tiruviḷaiyāṭaṟpurāṇam*, only that here Tiruvaḷḷuvar is introduced right into the assembly. Surprisingly, the poet is not depicted as a human being in this case, but as an impersonation by Lord Śiva:

> The last five chapters are devoted to marvellous anecdotes of the College of *Madura* founded by *Vamsa Sekhara*, for the cultivation of Tamul: the first professors of which forty-eight in number, it is said, were incarnations of the forty-eight letters of the Sanskrit alphabet and *Sundareśvara* himself was the 49th. The latter presented the College with a diamond bench or desk, which would give place to no heterodox or inferior productions. The professors becoming arrogant, Siva appeared as *Terupurántaka Kavivíswer*, or according to some accounts, as *Teruvaluvar*, the celebrated moral poet, and produced a work which being laid on the desk with the Books of the forty-eight professors thrust every one of them off, and occupied the whole in solitary dignity. The chief teachers of the *Madura* College were *Narakíra*, *Bána*, and *Kapila*, to whose joint labours this work is ascribed.
>
> (Wilson 1828, 197)

A couple of further versions of Tiruvaḷḷuvar's performance, with partly oral sources, are mentioned in Taylor's *Oriental Historical Manuscripts* of 1835, namely an account brought home by one of Mackenzie's trusted Indian collaborators, Cavelly Venkata Ramaswami, which stipulates that the bench vanished, a second one attributed to 'Madras', according to which the bench elongated to accommodate Tiruvaḷḷuvar along with the earlier poets, and finally one labelled 'traditional' where the bench dissolves into water. These clearly legendary accounts with their beautiful variability re-appear condensed into 'historical fact' only one year later in the first historiography of the Pāṇṭiya kingdom, written and published by Wilson:

> The reign of Vamsa Sek'hara was also distinguished by an event which led to important consequences to the literature of the Peninsula, and which is one reason for placing his reign in the earlier ages of Christianity. This was the foundation of a College at Madura, for the cultivation, it would appear, of profane literature and the Tamil language. …
>
> (Wilson 1836, 212)

> The professors of the Madura College were at first forty-eight in number, called the *sangattár*, or assembly. **The chief of these were Narakíra, Bána, and Kapila, of whom no works remain.** These received instruction in the *Sútras*, or rules, of the Dravira language, it is said, from the god Siva himself, who appeared amongst them as the forty-ninth professor, and enabled them to expound and propagate the primitive institutes of the language, which are invariably attributed in the Dekhin to the Muni Agastya…
>
> (Wilson 1836, 213)

> The abolition of the *sangattár* is narrated in the usual marvellous manner. A candidate for the honour of a seat on the bench of professors, appeared in the person of Tiruvaluvar, a Pariah priest from Mailapur, and the author of an ethical poem. The learned professors were highly indignant at his presumption, but, as he was patronised by the rájá, they were compelled to give his book at least the trial. For this purpose it was to find a place upon the marvellous bench, which the professors took care to occupy fully. To their astonishment, however, the bench extended itself to receive the work, and the book itself commencing to expand, spread out so as to thrust all other occupants from the bench. The rájá and the people of Madura witnessed the scene, and enjoyed the humiliation of the sages; and the professors were so sensible of their disgrace, that, unable to survive it, they issued forth, and all drowned themselves in a neighbouring pool. In consequence the establishment was abandoned.
>
> (Wilson 1836, 217)

[6] The earliest English reference, already brought forth by Blackburn (ibid.), is probably Kindersley 1794, 53, with a note on Tiruvaḷḷuvar: 'The author of this work [the Kuṟaḷ] was a priest of the lowest order of the Hindoos (the pariar), and this cast have a tradition that the writer having ventured to appear with his moral performance (though at a very respectable distance) before the sacred bench of Bramins at Madura, it happened, while they were perusing it with admiration, that the bench on which they sat miraculously extended itself so as to admit another member, which the Bramins, interpreting as divine indication of the priest's competency to fill the vacant seat, liberally overlooked his exceptionable cast, and placed him on it. The Bramins, however, deny this story.'

Table 1: Time frame for the materials pertaining to the legend

Century	Grammatical tradition	Śaiva tradition	*Kuṟaḷ* tradition
21st	BGOMLRC *Maturai caṅkappalakai carittiram*		
20th	GOML R.997		
19th	Taylor's *Oriental Manuscripts* – Wilson's *Historical Sketch of the Pāṇṭiyas* GOML D.458 *Caṅkattār Carittiram*		
18th	[*Tamiḻnāvalar Caritai*]		
17th		Parañcōti's *Tiruviḷaiyāṭaṟpurāṇam*	
16th			
15th		*Hālāsya Māhātmyam*	
13th		Nampi's *Tiruviḷaiyāṭaṟpurāṇam*	
12th		Śaiva canon, eleventh *Tirumuṟai*	*Tiruvaḷḷuvamālai*
11th	Nakkīraṉ's flood legend		

Here, it seems easy to separate the strands. All the information contained in the first paragraph can be abstracted from the academy stories of the *Tiruviḷaiyāṭaṟpurāṇam*, known in colonial circles at the very least from the extensive English summary given in Taylor 1835, based on Parañcōti. It is fairly obvious that more was not known, firstly because the names of the three chief poets (Nakkīraṉ, Paraṇar and Kapilar) are misspelled in a way that is not explained by the spelling conventions of the period,[7] and secondly because their works are believed to be lost: the actual *Caṅkam* poetry was no longer available. Remarkable is also the absence of any reference to the sequence of three academies, based on the flood legend, which is told in detail, as already mentioned, in the *Tamiḻ Nāvalar Caritai*, and which is alluded to at least in passing by almost any other account of Tamil literary history of the period, such as Casie Chitty's Tamil Plutarch of 1859, to name just one.

Luckily, Wilson names his source for the second paragraph in a footnote, namely a manuscript entitled '*Madura Sangattár*'. Contents and timing now make it highly likely that this is a manuscript which passed from the Mackenzie collection to the GOML and was entered and catalogued under the shelf mark D.458 *Caṅkattār Carittiram*, 'the Life Story of the Academy Poets'.[8] The original palm-leaf manuscript appears to be lost now, or at least it has been entered in the list of missing manuscripts. What remains, however, is a paper copy entered as R.977, in a typical pre-lined industrial-paper exercise book such as were used for copying in many South-Indian libraries from the second half of the nineteenth century onwards. By a stroke of luck the little text had recently been published, in the Bulletin of the Government Oriental Manuscript Library and Research Centre in 2009, under the title '*Maturai caṅkappalakai carittiram*', which is why I was allowed to digitise the manuscript. This brings

[7] They had to be read from palm leaf (the *Tiruviḷaiyāṭaṟpurāṇam* manuscripts) where, in the case of Nakkīrar, often written Naṟkīrar, the *puḷḷi* on the *ṟ* was not marked, thus allowing for a decipherment of Narakira (with deletion of the honorific *r* at the end). In the case of Paraṇar, the palm leaf does not distinguish the grapheme for long *ā* and for intervocalic *r*, hence the decipherment of 'Bana'.

[8] Shelf marks beginning with a capital D are generally used for the palm leaves that form the oldest part of the new collection, described in the early volumes of the Raṅgācāryā, Kuppuswami Sastri and Subramanya Sastri catalogue; this one is found in vol. 2 from 1916. Many of those manuscripts were subsequently copied on paper and shelf-marked with a capital R in order to preserve their content. Some texts accordingly exist today both on palm leaf and on paper, while the palm leaves of others have not survived the course of time.

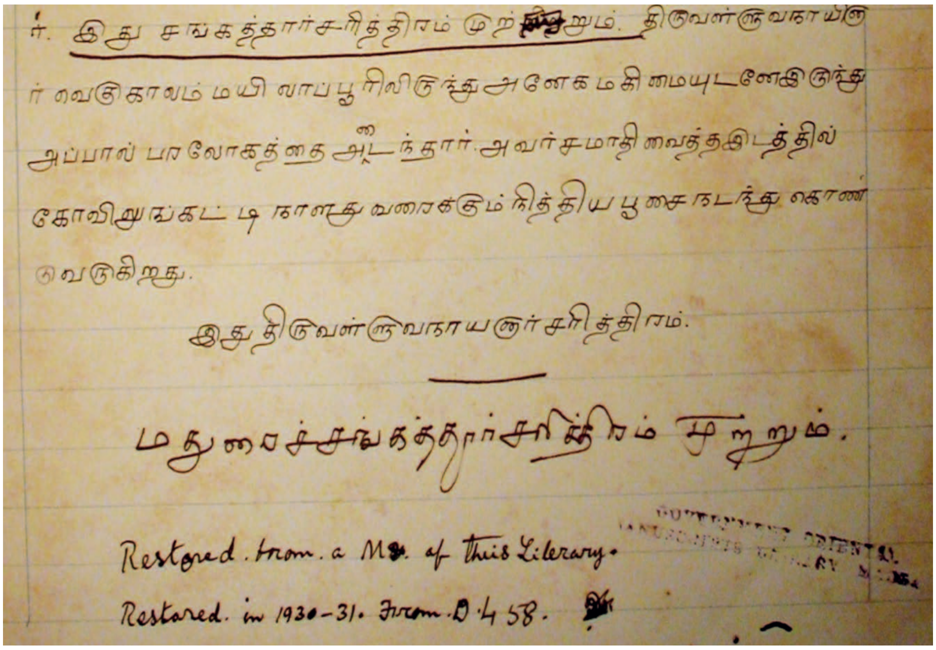

ர். இது சங்கத்தார்சரித்திரம் முற்றும். திருவள்ளுவநாயினா
ர் வெகுகாலம் மயிலாப்பூரிலிருந்து அனேகமகிமையுடனேஇருந்து
அப்பால் பரலோகத்தை அடைந்தார். அவர்சமாதி வைத்தஇடத்தில்
கோவிலுங்கட்டி நாளது வரைக்கும் நித்தியபூசை நடந்துகொண
டுவருகிறது.
இது திருவள்ளுவநாயனார்சரித்திரம்.
மதுரைச்சங்கத்தார்சரித்திரம் முற்றும்.
Restored from a Ms. of this Library.
Restored in 1930–31. From D.458.

Figure 1: The colophon of R.997.

us back to the origin of the first conflation of sources, because GOML D.458 = R.997 gives a digest of the *Caṅkam* legends from the *Tiruviḷaiyāṭal* tradition entangled with the life story of Tiruvaḷḷuvar.

The time frame for the development outlined so far can be summarised in table 1.

How old might the original manuscript have been? Early nineteenth century if it was made for the Mackenzie collection or possibly older if it was a palm leaf that happened to be of interest to the collectors. It is not clear whether the original simply disintegrated while or after being copied on paper, the alarming condition of the palm leaf being the usual reason for 'emergency copying' undertaken at the GOML. The editor of 2009 claims to have used the original D.458, but since there is a pencil note on the flyleaf of the paper copy, stating that the text has been published by the GOML Bulletin, that seems doubtful. Also the date of the paper copy itself is not clear. There is a Tamil writer's colophon with an addition in English from the library that states the manuscript was 'Restored from a Ms. of this Library. Restored in 1930–31. From D.458'. However, there is another date given both on the fly- and the title leaves, 9.5.88 (presumably 1888), and the manuscript is written in three hands. One possible explanation is that the paper copy was made in 1888, got damaged and had to be partially restored from the palm leaf in 1930.

The scribal colophon (fig. 1) gives brief information about the content of the text:

itu caṅkattār carittiram muṟṟum. tiruvaḷḷuvanāyiṉār vekukālam mayilāppūriliruntu aṉēkamakimaiyuṭaṉē iruntu appāl paralōkattai aṭaintār. avar camāti vaitta iṭattil kōviluṅ kaṭṭi nāḷatu varaikkum nittiyapūcai naṭantukoṇṭu varukiṟatu.
itu tiruvaḷḷuvanāyaṉār carittiram.
maturaiccaṅkattār carittiram muṟṟum.

Here ends the life story of the Academy scholars. At another time, Lord Tiruvaḷḷuvar, being from Māyilapūr and with unequalled greatness, joined the other world there. In the place where he concentrated, a temple has also been built and a permanent service is held there.
This is the life story of Lord Tiruvaḷḷuvar.
Here ends the life story of the Maturai Academy scholars.

There still seems to be an awareness of the fact that two stories have been joined here, namely the story of the Maturai Academy scholars and the life story of Tiruvaḷḷuvar (who was involved in bringing it to an end). A reference to Tiruvaḷḷuvar's birth place has been added, namely Māyilapūr, Madras, and a temple in the same place, possibly the origin of the manuscript, but that is not stated clearly. This is not the place to translate the full text, but to summarise briefly, the manuscript starts with the *Tiruviḷaiyāṭal* stories, beginning with the creation of the academy and the gift of the *Caṅkappalakai*, the bench, giving, however another rationale for that step, namely the arrogance of forty-nine heavenly poets assembled around Śiva, who are sent to Earth to be taught a lesson in humility. This is followed by the poem that Tarumi (or 'Tarmi' here) presented to the academy, the dispute between Śiva and Nakkīraṉ, and the latter's punishment, but skipping the episode about Śiva interceding on behalf of the poet Iṭaikkāṭaṉ. It continues by recounting the birth of Tiruvaḷḷuvar, culminating in his challenge of the academy, which results in the bench's accommodating the *Kuṟaḷ*, but throwing the established scholars into the academy pond as a punishment for their arrogance, which had already manifested itself in their treatment of ‘Tarmi’.

As a concluding remark, a few words should be said about the copying procedure followed by this paper manuscript, which deserves to be termed out of the ordinary. The language of the text is a fair mixture of spoken and formal Tamil, with many Sanskrit loanwords, often written with Grantha letters (used in South India to write Sanskrit up until the twentieth century) in addition to the Tamil alphabet. The copyist, presumably when disagreeing with the palm leaf, put the original reading into square brackets and added his own suggestion in round brackets. A great number of his corrections are normalisations of spoken Tamil forms. This procedure is in marked contrast to that of the 2009 edition, with re-tamilisation of Grantha letters and normalisation of the syntax. The first few sentences of the manuscript read as follows, with Grantha letters put in bold:

> *ātiyil caṅkattār nāṟpattoṉpatu pērum kailācattil cuvāmiyiṭattil tamiḻcā**s**tiraṅkaḷ cakalamum vācittu,* [*yi*](*i*)*ṉimēl taṅkaḷukkuc camāṉa*[*mo*]~~*m*~~(*r*) *āṉavar oruvarum illai eṉṟu mikunta* [*keṟu*] (*keru*)*vattuṭaṉē oruvaraiyum ilaṭciyampaṇṇāmal irukkiṟatu. cuvāmikkut terintu ‘*[*yi*](*i*)*varkaḷaik karuvapaṅkam paṇṇa vē*[*ṇ*](*ṇṭ*)*um’ eṉṟu tiruvu*[*ḻ*](*ḷ*)*attilē niṉaintu, ‘*[*ṉ*] (*n*)*īṅkaḷ pūlōkattil maṉu**ṣ**yarām piṟantu akattiyariṭattil tamiḻilakkaṇa~~mu~~m mutalākiya cā**s**tiraṅkaḷellām vācittu maturaiyil vaṅku*[**ṣ**](*c*)*a cēkarapāṇṭiyaṉiṭattil vittuvāṉkaḷāy iruṅkaḷ. antat talam tuvātacāntamākac* [*cē*](*ceytē*) *namakku mukkiyamāṉa talamākac* [*cē*](*ceytē*) *atil nām aṟup*(*p. 1*) *pattu nāṉku tiruviḷaiyāṭal*(*kaḷ*) *ceykiṟataṉālē atil* (*tami*) *ḻkku atikāri*[*y*](*k*)*aḷāka* [*yi*](*i*)*ruṅkaḷ. antak kōyilil* [*coṟṉṉa*] (*cuvarṇa*) *pu**ṣ**ka*[*ṟ*](*r*)*aṇi eṉṟu orumakāpuṇṇiya tī*(*r*)*ttam iruk*(*kiṟ*)*atu. atil **s**nāṉam paṇṇiṉāl cakala pāpaṅkaḷum vimōcaṉamāy anta mīṉāṭci cuntarecuvararai orumaṇṭalam taricaṉam paṇṇiṉāl nammuṭaiya* [*kayi*](*kai*)*lāca patavi kiṭaikkum. antac* [*coṟ*](*cuvar*)*ṇa pu**ṣ**ka*(*ra*)*ṇiyil orupalakai mēlē eḻumpi mitakkum. antap palakaik*[*ki*](*ku*) *nāmatē*[*ṉ*](*y*)*am ‘caṅkappalakai’ eṉṟu collappaṭum.*

> In the beginning, there were forty-nine people learning all Tamil *śāstras* with the Lord on [Mount] Kailās, priding themselves that from now on nobody would be equal to them [and] without paying respect to anybody. [That] becoming known to the Lord, he thought in his sacred mind ‘it is necessary to defeat their arrogance’ – let you be born on Earth as humans, learn all *śāstras*, beginning with the Tamil grammatical works from Akkatiyar, and stay as scholars with the Pāṇṭiya [king] Vaṅkuṣacēkaraṉ. Because, making that place into the twelfth, making it the place that is the foremost to us, we perform sixty-four sacred sports there, let you be Tamil experts there. In that temple there is a bathing *ghat* of great merit with the name ‘golden lotus pond’. If one bathes there, all evil deeds are dissolved, [and] if one obtains sight of Mīṉāṭci [and] Cuntarecuvarar, it joins the rank of our Kailās. In that golden lotus-tank a plank rises [and] floats. That plank is called by the name of ‘academy plank’.

The main corrections to be seen here concern morphology: correcting spoken *vēṇum* into formal *vēṇṭum*, replacing *–kki* as a dative suffix by *–kku* and *–yaḷ* as a plural suffix by *–kaḷ*. Others simplify *sandhi* by replacing a gliding consonant for a word-initial vowel. Phonemic normalisation is also found, such as *ḷ* for *ḻ*, not to forget simple corrections of mistakes. Sad as it is that the original palm leaf appears to have been lost, the paper copy in our hands is the manuscript of a philologist who tried to preserve his source text as closely as possible while at the same time trying to make it more readable.

REFERENCES

Aravamuthan, T. G. (1930), 'The Oldest Account of the Tamil Academies', *Journal of Oriental Research,* 4: 183–201, 289–317.

Taylor, W. (1931–32), 'The Maturai Chronicles and the Tamil Academies', *Journal of Oriental Research,* 5: 108–124, 196–214; 6: 89–105, 275–294, 322–340.

Blackburn, S. (2000), 'Corruption and Redemption: "The Legend of Vaḷḷuvar and Tamil Literary History"', *Modern Asian Studies,* 34: 2, 449–482.

Casie Chitty, S. (1859), *The Tamil Plutarch. A Summary Account of the Lives of the Poets and Poetesses of Southern India and Ceylon* (1st ed. Colombo; rep. of 2nd revised ed., New Delhi: Asian Educational Services, 1982).

Dessigane, R., Pattabiramin, P. Z., Filliozat, J. (1960), *La légende des jeux de Çiva à Madurai d'après les textes et les peintures*, Fascicule 1: *texte* (Pondichéry; Publications de l'Institut Français d'indologie, 19).

Dirks, N.B. (2009), 'Colin Mackenzie: "Autobiography of an Archive"', in Trautmann, Th. R. (ed.) (2009), *The Madras School of Orientalism: Producing Knowledge in Colonial South India* (New Delhi: Oxford University Press), 29-47.

Hālāsyamahātmya, in Grantha script, title page missing (École Française d'Extrême Orient Paris 34928).

Iṟaiyaṉār Akapporuḷ and *Nakkīraṉ's urai*, ed. Kaḻakam (Tirunelvēli 1953, repr. 1964).

Kallāṭam, ed. Po.Vē. Cōmacuntaraṉ (Kaḻakam 1975, repr. of 1963).

Kindersley, N. A. (1794), *Specimens of Hindoo Literature* (London: W. Bulmer; photomechanical rep. Gale Eighteenth-Century Collections Online).

Maturai caṅkappalakai carittiram, ed. by Ca. Tiyākarācaṉ, *Bulletin of the Government Oriental Manuscript Library and Research Centre* 36 (2009), 1–22.

Raṅgācāryā, M., Kuppuswami Sastri, S., Subramanya Sastri, P.S. (1912–1939), *A Descriptive Catalogue of the Tamil Manuscripts in the Government Oriental Manuscript Library, Madras*, vols. I–V (D. 1-2173) (Madras: Government Oriental Manuscript Library).

Tamiḻ Nāvalar Caritai, ed. A. Turaicāmip Piḷḷai (Tirunelveli 1949).

Taylor, W. (1835), *Oriental Historical Manuscripts in the Tamil Language*, vols. I–II (Madras: [no publisher]).

—— (1837), 'Observations on Professor Wilson's *Historical Sketch of the Kingdom of Pandya*, in the Sixth Number of the Journal of the Royal Asiatic Society', *Madras Journal of Literature and Science*, 6: 142–157.

Taylor, W. (1862), *A Catalogue Raisonné of Oriental Manuscripts in the Government Library*, vol. III (Madras: United Scottish Press).

Tēvāram. Hymnes Śivaïtes du pays tamoul. Edition, introduction, glossaire, T. V. Gopal Iyer and F. Gros, vols. I–III (Pondichéry: IFP 1984, 1985, 1991).

Tirukkuṟaḷ mūlamum Parimēlaḻakar uraiyum, ed. Vaṭivēlu Ceṭṭiyār, vols. I–III (Maturaip Palkalaikkaḻakam [1904], 1972–1976 [with *Tiruvaḷḷuvar Mālai*]).

Tiruvaḷḷuvar Mālai and *Tirukuṟaḷ*, ed. Caravaṇapperumāḷaiyar Tēcikar (Madras 1899).

Tiruviḷaiyāṭaṟpurāṇam. Cellinakarp Perumpaṟṟippuliyūr Nampi iyaṟṟiyatu, ed. U. Vē. Cāminātaiyār (Kabeer Printing Works, Madras [1906, 1927], 1972).

Tiruviḷaiyāṭaṟpurāṇam, cuttacaivarākiya parañcōtimāmuṉivar moḻipeyarttaruḷiya, ed. Nā. Katiraivēṟpiḷḷai (Ceṉṉai, Vittiyāratnākara Accukkūṭam, 1928).

Wilden, E. (2009), 'Canonisation of Classical Tamil Texts in the Mirror of the Poetological Commentaries', in ead. (ed.), *Between Preservation and Recreation: Tamil Traditions of Commentary*, *Proceedings of a Workshop in Honour of T. V. Gopal Iyer* (Pondichéry: Institut Français de Pondichéry – École Française d'Extrême Orient; Collection Indologie, 109), 145–165.

—— (2014), *Manuscript, Print and Memory: Relics of the Caṅkam in Tamilnadu* (Berlin: de Gruyter; Studies in Manuscript Cultures, 3).

Wilson, H. H. (1828), *The Mackenzie Collection. A Descriptive Catalogue of the Oriental Manuscripts*, vol. I (Calcutta: Asiatic Press).

—— (1836), 'Historical Sketch of the Kingdom of Pandya', *Journal of the Royal Asiatic Society,* 3: 199–242.

Zvelebil, K. (1973), 'The Earliest Account of the Tamil Academies', *Indo-Iranian Journal,* 2: 109–135.

Article

The Secondary Life of Old Georgian Manuscripts*

Jost Gippert | Frankfurt am Main

Abstract

This article deals with two aspects of the secondary 'life' of Old Georgian manuscripts, namely a) their 'wandering' between the (autochthonous and allochthonous) centres of manuscript production and storage, and b) their reutilisation for personal blessings, rogations and prayers, and also for less 'immanent' purposes such as prescriptions, contracts and writing exercises added by later readers, users or owners. The various types of reuse are exemplified with reference to codices from Georgia and elsewhere.

1. Introduction

Amongst the manuscript traditions of the Christian Near East, that of the Georgians is one of the richest, extending from about the fifth to the nineteenth century CE and comprising approximately 75,000 surviving leaves. The role played by the production of manuscripts in the spiritual and intellectual life of the Georgian people can easily be inferred from the various forms of secondary use to which many of the codices were subjected. This is true for a large number of them that can be shown to have been the object of relocation, being moved from the place where they were originally conceived to one or several other places where they were worked upon, sometimes long before they were stored in modern depositories such as the Korneli Kekelidze National Centre of Manuscripts in Tbilisi. Another type of secondary use can be seen in the various functions to which many codices were subjected, aside from being merely read and copied. On the following pages, these two main types of secondary use will be illustrated by a series of examples, which should by no means be regarded as exhaustive.

2. Georgian manuscripts in motion

In comparison with the small region south of the Caucasus main ridge that is inhabited by speakers of the Georgian language today, Georgian manuscripts originated in a much broader area in the Christian East from the early beginnings of Georgian literacy on. By the end of the first millennium of the Christian era, Georgian monks had long been established in Jerusalem and on Mt Sinai, and with the foundation of the Georgian monasteries on Mt Athos and in the Rhodopes, further centres of erudition evolved in what may be termed the Georgian diaspora of the Middle Ages. However, none of the 'allochthonous' centres remained isolated. Instead, we can be sure there were close ties not only between neighbouring centres, but also across longer distances (cf. map on next page, which details the most important centres of Georgian manuscript production and the most obvious ties between them).[1] This is clearly demonstrated by both explicit and implicit evidence to be found in 'wandering' manuscripts, that is, colophons and marginal notes[2] on the one hand and textual and layout features on the other.

2.1

A famous example of a manuscript taken from one centre to another is the *Sinai mravaltavi*,[3] a homiliary codex from the second half of the ninth century, which is preserved in St Catherine's Monastery. Having become disintegrated over the course of time, the separate parts

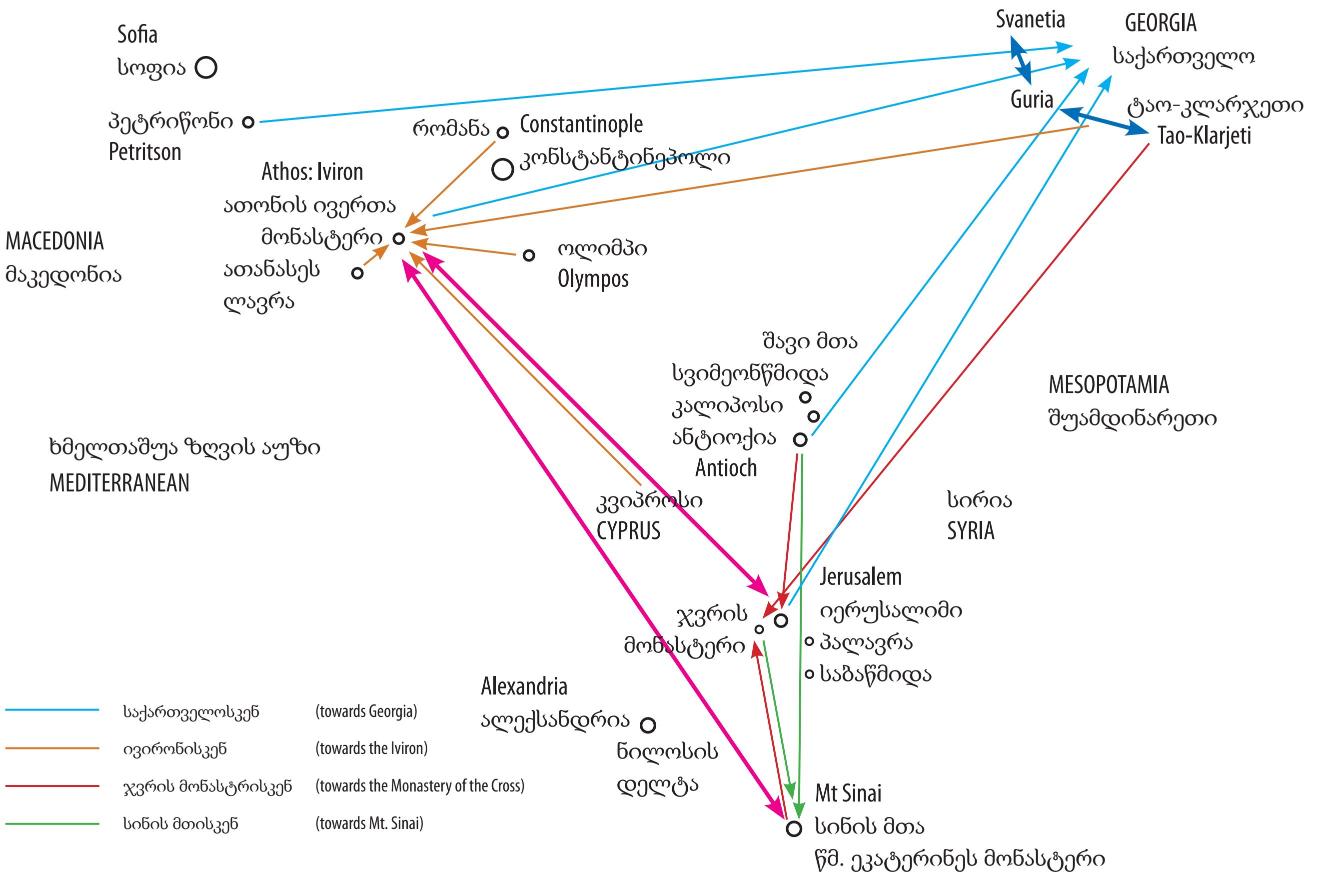
---

* This article is based on my lectures given at the workshops *Manuscripts in Motion* and *The Second(ary) Life of Manuscripts* held at the Sonderforschungsbereich 950 'Manuscript Cultures in Asia, Africa and Europe', University of Hamburg, financed by the German Research Foundation, and within the scope of the Centre for the Study of Manuscript Cultures (CSMC), on 17 November 2012 and 11 July 2013.

[1] This figure is an extended version of the map published in Karanadze et al. 2010, 6. Aside from the English place names, additional information shown includes the ties linking Mt Athos to Jerusalem and Mt Sinai, and the links between Tao-Klarjeti, Guria and Svanetia, all dealt with below.

[2] In contrast to other (secondary) notes (usually) applied to the margins, I treat scribes', owners', donors', binders' and restorers' notes that refer (explicitly or implicitly) to the manuscript itself or the text(s) contained within it as colophons.

[3] See Gippert (forthcoming) with reference to the term *mravaltavi*, lit. 'multi-headed'.



Map: Centres of Old Georgian manuscript production and their ties.

of the *mravaltavi* are catalogued under four signatures today (Sin. georg. 32, 57, 33, and N 89). The codex is peculiar not only because it is the oldest dated Georgian manuscript we know of to date, but also because it contains two verbose colophons written by its scribe, a certain Amona, son of Vaxṭang Moʒarġuli. According to the first of these colophons (written in the same majuscule hand as the main text), the codex was produced in the Great Laura of St Sabbas near Jerusalem on behalf of Maḳari Leteteli, son of Giorgi Grʒeli and maternal cousin of the scribe, under patriarch Theodosius (862–878) ‘in the year 6468 after Creation and in the chronicon 84’, which suggests the period from September 863 to August 864 CE as the date of its execution.[4] The second colophon, which is written in minuscule, but is undoubtedly by the same scribe, informs us that the codex was ‘devoted’ to Mt Sinai, ‘the most holy of all, for the remembrance and benefit of ourselves and our souls’, i.e. the donor (together with a ‘brother in spirit’ of his, P̣imen Ḳaxa) and the scribe. The transfer of the codex to St Catherine’s Monastery, then, must have occurred before the year 982. This is clear from another colophon added ‘in the year 6585 ... after Creation and in the chronicon 201’, i.e. between September 980 and August 981 CE, by the most prominent Georgian conventual of St Catherine’s, Iovane Zosime, who undertook the third (!) binding of the codex on site. For convenience’s sake, the relevant passages of the three colophons are provided in table 1 together with an English translation (cf. also figs. 1 and 2).[5]

[4] See Gippert (forthcoming) on the Old Georgian system of reckoning time.

[5] In the transcripts, abbreviations and punctuation marks are employed according to modern usage. Capital letters are used to represent enlarged initials within both majuscule and minuscule contexts. See Gippert (forthcoming) for information on the lines added below the end of the first colophon, which read: ‘*l(o)cv(a) q̇(a)vt : amona mčxreḳlisatws c(o)dvilisa p(ria)d c̣(mida)no*’ [‘Pray for Amona the scribe, the very sinful one, Saints!’] and the dating following them in the form of an extra line (‘*za̅ c̣eli S̅Ē*’, i.e. ‘upper (?) year 208). I assume that the rogation was written by Amona himself with the dating being added later (in 987–8 CE; by Iovane Zosime?). — Unless otherwise indicated, the photographs reproduced in this article were all taken by the author.

Table 1: Donor's, scribe's and binder's colophons of the *Sinai mravaltavi*.

First colophon, majuscules, initial part, fol. 273va–b

Çqalobita mamisayta da ʒisayta da sulisa çmidisayta ...	By the charity of the Father and the Son and the Holy Spirit ...
Da madlita çmidisa adgomisa saplavisa uplisa čuenisa iesu krisṭēsisayta	and the mercy of the Holy Resurrection from the grave of Our Lord Jesus Christ
da meoxebita q̇ovelta çinaçarmeṭq̇uelta, mocikulta, maxarebelta ...	and with the support of all prophets, apostles, evangelists ...
Me, ***maḳari leteteli, ʒē giorgi grʒelisay, codvili priad, ġirs mq̇o ġmertman šesakmed çmidisa amis çignisa mravaltavisa***	I, **Maḳari Leteteli, son of Giorgi Grʒeli, a very sinful (man), was considered worthy by God to create this holy *mravaltavi* book**
tana-šeçevnita ʒmisa čuenisa sulierad p̣imen ḳaxisayta	with the help of my brother in spirit, P̣imen Ḳaxa,
da ***qelt-çerita dedis ʒmisçulisa čemisa amona vaxtang moʒarġulisa ʒisayta***	and **by the handwriting of my mother's brother's son, Amona, the son of Vaxtang Moʒarġuli,**
saqsenebelad sulta čuentatws da sulta mšobelta čuentatws da q̇ovelta gardacvalebulta twsta čuentatws...	as a memento of our souls and the souls of our parents and of (the souls of) all our deceased...

First colophon, majuscules, final part, fol. 274ra

Daiçera ese çigni ierusalems, lavrasa didsa çmidisa da neṭarisa mamisa čuenisa sabayssa *dġeta ġmrtis moq̇uarisa tevdosi p̣aṭreakisata da saba-çmidas p̣aṭiosnisa da sanaṭrelisa solomon mamasaxlisisata.*	**This book was written in Jerusalem, in the big Laura of our Holy and Blessed Father Sabbas,** in the days of the God-loving patriarch, Theodosius, and the venerable and blissful abbot of St Sabbas' (Laura), Solomon.
Da daiçera çmiday ese *çigni dasabamitgan çelta: XWYĒ*	And this holy book was written in the year 6468 after Creation.
Kroniḳoni iqo: P̣D:	The chronicon was 84.

Second colophon, minuscules, initial part, fol. 274rb

Da ***me, glaxaḳman maḳari, ševçire çmiday ese mravaltavi çmidat-çmidasa mtasa sinas*** *saqsenebelad da sargebelad tavta čuenta da sulta čuentatws.*	And **I, poor Maḳari, have devoted this holy *mravaltavi* to Mt Sinai,** the most holy of all, for the remembrance and benefit of ourselves and our souls.
da amas šina ars šemḳobay çeliçdisa dġesasçaulta q̇oveltay, tkumuli çmidata moʒġuartay.	And in it is the adornment of all feast days of the year (as) preached by the holy leaders.
Moec, upalo, p̣ovnad çq̇alobay šeni ...	Grant, Lord, to find your compassion ...

Third colophon, minuscules, initial part, fol. 274v

Ḳ(wrieelei)S(o)N saxelita ġmrtisayta	*Kyrie eleison*! In the name of God!
Šeimosa mesamed çmiday ese çigni mravaltavi ṭq̇avita zroxisayta ***sina-çmidas***	This holy *mravaltavi* book was bound for the third time in cowskin **on Holy (Mt) Sinai**
qelita iovane priad codvilisa zosimesita dġeta oden boroṭad moxucebulobisa čemisata,	by the hand of Iovane Zosime, a very sinful (man),[6] in the days of my being badly aged,
Brʒanebita da priad mosçraped moġuaçebita mikael da mikael p̣aṭiosanta mġdeltayta,	by order and under very zealous instigation of Michael and Michael, the venerable priests,
Dasabamitganta çelta kartulad: XP̣P̣Esa da kroniḳonsa: SAsa ...	in the year 6585 after Creation, Georgian style, and in the chronicon 201 ...

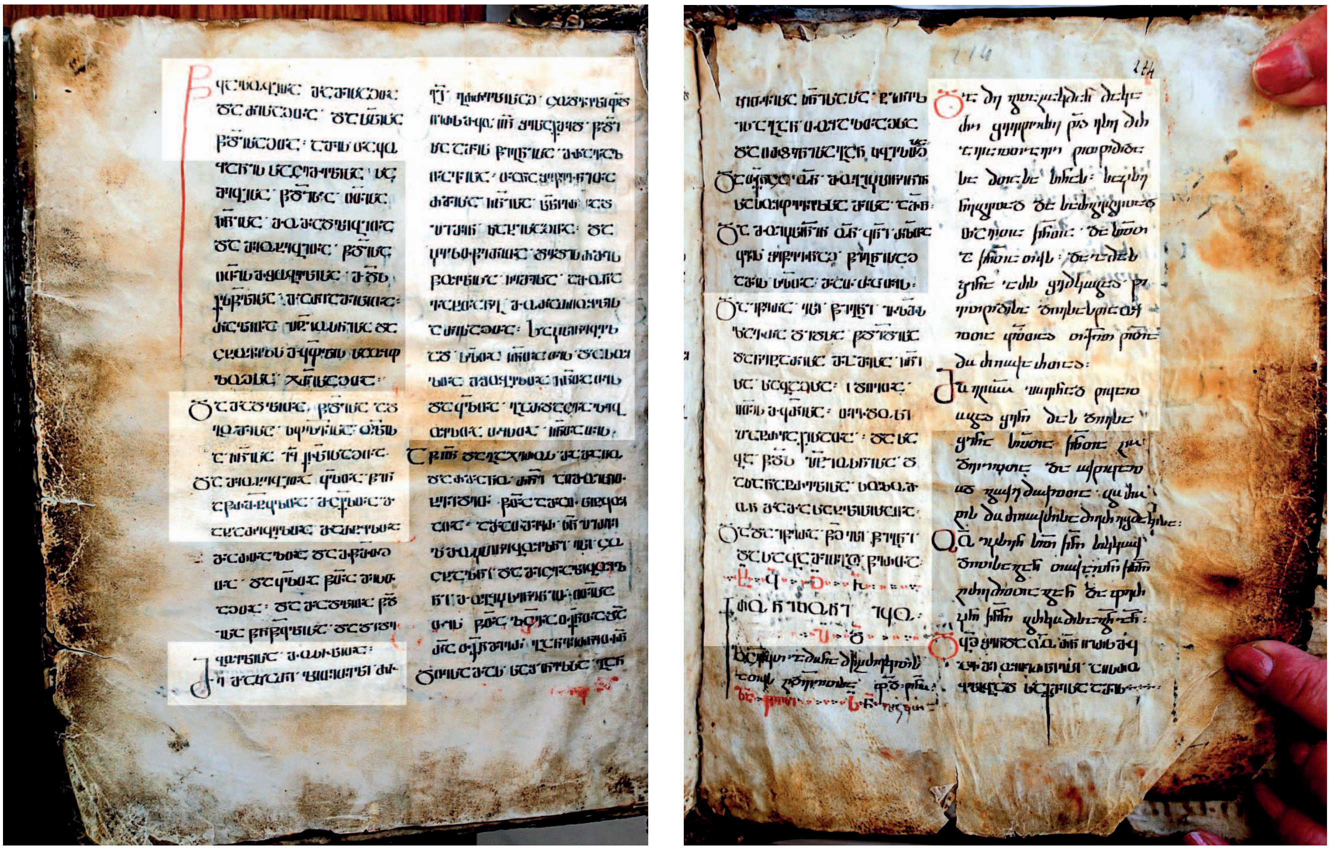


Fig. 1: Cod. Sin. georg. 32-57-33, fol. 273v and 274r (quoted parts of colophons 1 and 2 highlighted).

2.2

Whilst the transfer of the *mravaltavi* from Jerusalem to Mt Sinai was intentional and planned from the start,[7] many other manuscripts of the same age were subjected to unforeseen relocation from their place of origin to other sites. A well-known example of this is the famous Gospel codex of Adiši in Svanetia, which, according to the scribe's colophon appended to the right-hand column of fol. 378r, was written by him, a certain Mikael, in the chronicon 117, i.e. between September 896 and August 897 CE.[8] Cf. the reproduction of the column in question[9] together with its transliteration[10] in fig. 3 and the restored text in table 2.[11]

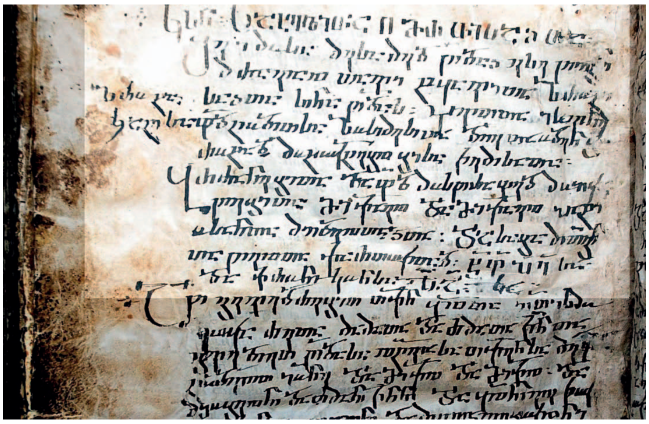


Fig. 2: Cod. Sin. georg. 32-57-33, fol. 274v (upper half; quoted parts of colophon 3 highlighted).

[6] As is visible in fig. 2, Iovane Zosime added two words (over two lines) to the left margin, viz. *zroxa* and *ḳacisa*. Taking them together as a coherent gloss, they might mean something like 'the cow of man', which would remain incomprehensible even if it referred to the 'cowskin' mentioned in the text. I therefore consider the phrase *ḳacisa* ('of [a] man') to relate to the following words, *priad codvilisa* ('very sinful'), and *zroxa* ('cow' – mod. Georgian '*ʒroxa*') to have been added before the ending *sayta* for *zroxi* of the line above, which was probably barely legible even in Iovane Zosime's time. It is true that we would also expect to read *zroxi* in this case, but Iovane Zosime was anything but an accurate scribe.

[7] There is no indication that the second colophon (in minuscules) was added much later than the first (in majuscules). Why should the scribe have left a column for it as neatly as he did (fol. 274rb) if it was not meant to be inserted immediately after the first colophon had been finished?

[8] See Gippert (forthcoming) for an earlier account of this codex and its history.

[9] Image taken from the facsimile edition by Taq̇aišvili 1916, pl. 198. Another reproduction can be found in Sarǯvelaʒe et al. 2003, opp. 433.

[10] In the narrow transliterations, any abbreviations and characters used numerically are marked by overbars. Uncertain readings are enclosed in square brackets and restorations of lost elements in angle brackets.

[11] Unlike Ekvtime Taq̇aišvili, who provided a first transcript of the colophons in his facsimile edition of the *Adiši Gospels* (Taq̇aišvili 1916, 11–14), but in

<Daiçera ç¯y ese çigni>

<dasabamitg¯n çe>

lta : x̅[p̅]<a : kr¯ḳ>

nsa : r̅i̅z̅ : šob[i]<tg¯n>

o¯isa č¯nisa i¯w k¯si[t]

çelta : : : č̅a̅ : k¯e [m]<e>

owpeo šegwçq̇alen [č]<¯n>

ertobit a¯n :

Mçera amisi mikae[l]

locvasa momiq[s]<en>

et da šemindvet s[i]

owcbe čemi :

Da mmoselica mika<el>

diaḳoni momiqse[n]<et>

ç¯sa locvasa tk¯n[s]<a>

o¯i mparvel gwe<kmn>

[en] q̇¯lta er[t]<obit a¯n>

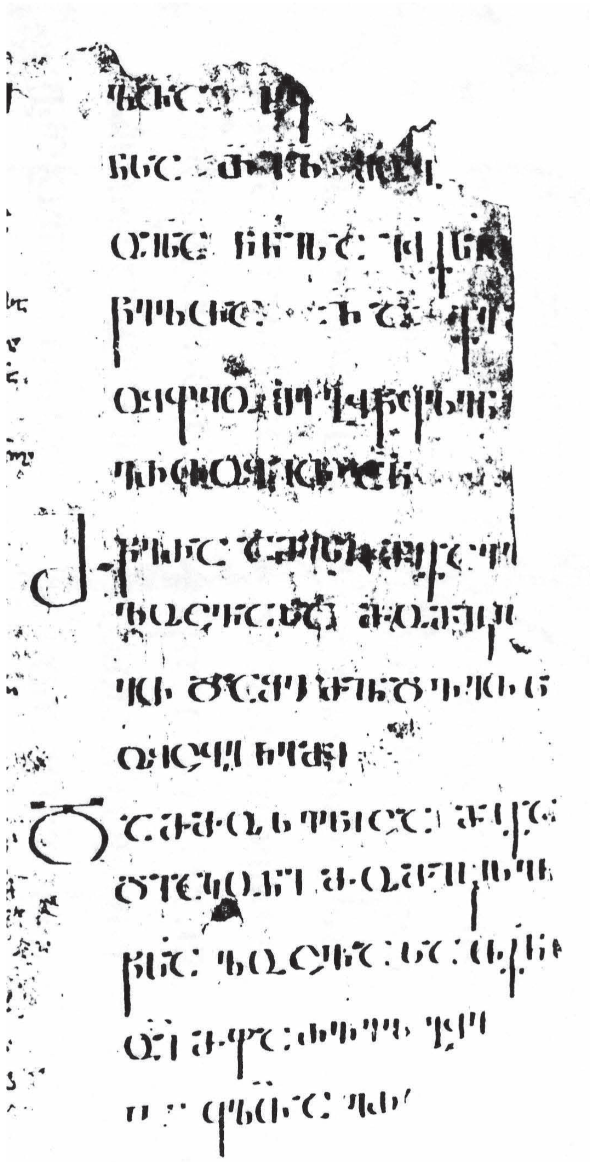


Fig. 3 : Scribe's colophon of the *Adiši Gospels*, fol. 387[rb], with transliteration.

Table 2: Restored and translated text of the scribe's colophon of the *Adiši Gospels*.

Daiçera çmiday ese çigni	This holy book was written
dasabamitgan çelta x̅p̅a̅ kroniḳonsa r̅i̅z̅	in the year 6501 after Creation, in the chronicon 117,
šobitgan uplisa čuenisa iesu krisṭēsit çelta č̅a̅	(and) in the year 1001 after the birth of our Lord Jesus Christ.
krisṭe meupeo šegwçq̇alen čuen ertobit amen :	Christ, Lord, have mercy upon us all. Amen!
Mçera[li][12] *amisi mikael locvasa momiqsenet*	Remember the writer of this, Michael, in (your) prayer
da šemindvet siucbe čemi :	and forgive me my inattentiveness.
Da mmoselica mikael diaḳoni	And the binder, too, Michael the deacon,
momiqsenet çmidasa locvasa tkuensa	remember in your holy prayer.
upali mparvel-gwekmnen q̇ovelta ertobit amen	May the Lord protect us all. Amen!

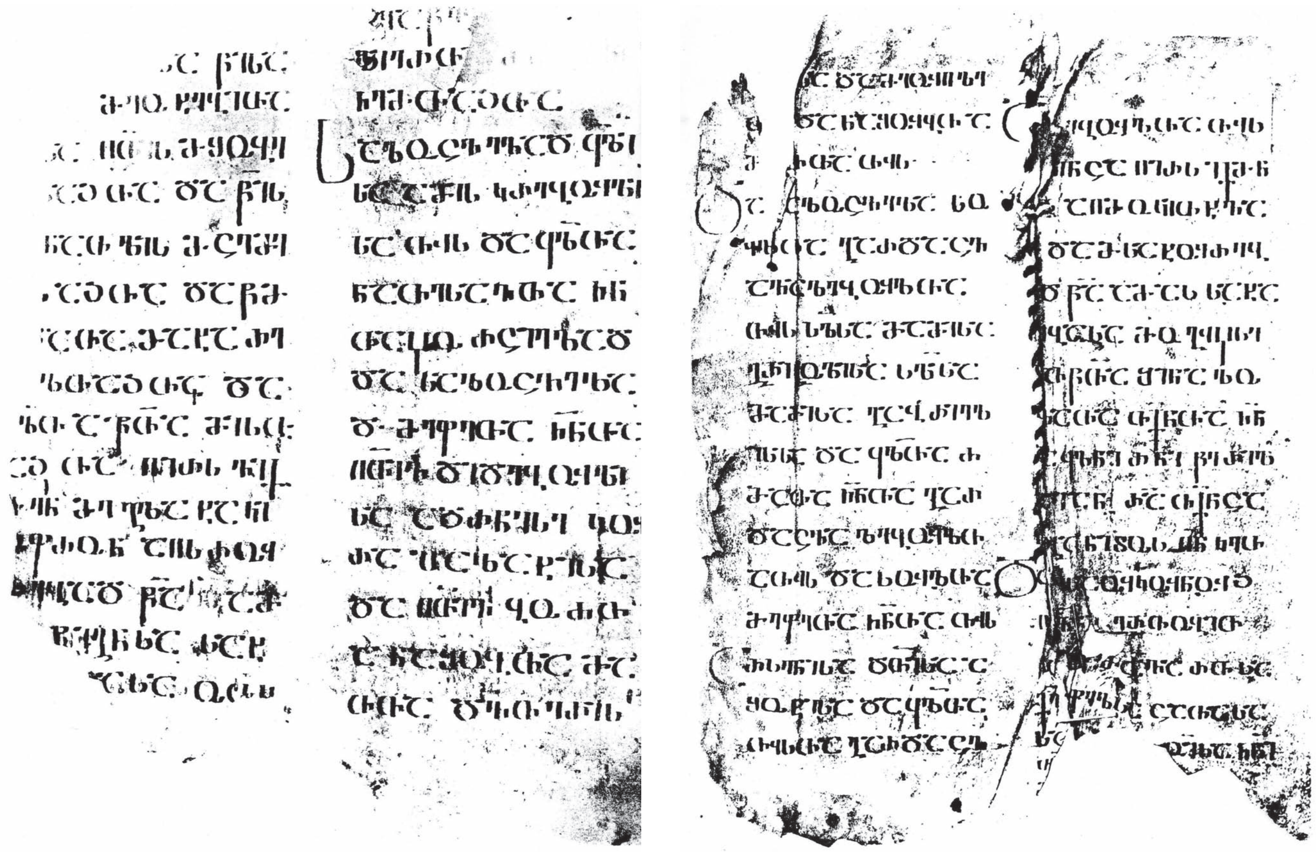


Fig. 4: *Adiši Gospels*, Sopron's colophon, fol. 387v and 388r.

2.2.1

One problematical aspect of this colophon is the date: the year 1001 *post Christum natum* is given here, which does not accord with the 'chronicon' calculation that would suggest 896–7 CE. The dating 'after Creation' does not help, since only the first element of the number in question (*$\overline{\text{xpa}}$ = 6501), $\overline{\text{x}}$ = 6000 is readable with any certainty. Ekvtime Taqaišvili, who was the first person to consider this inconsistency, strongly argued in favour of accepting the earlier date. His main thrust of argumentation was that calculating dates based on the birth of Christ was extremely unusual in ancient Georgia and that it may therefore have been a miscalculation on the part of the scribe – a point that does seem to be well founded.[13] Taqaišvili further hinted at a second colophon written by the same hand and in the same layout, which covers the two subsequent pages of the codex (387v–388r; cf. fig. 4). Similarly to the donor's colophon of the *Sinai mravaltavi*, this colophon, also written in the first person, concerns the person who 'executed' the codex, that is, a certain Sopron. In addition, it mentions several contemporary dignitaries such as King Adarnase *curopalates* and his son, Davit *eristavi*, as well as two deceased fathers, named Grigol and Gabriel, all of them being easily identifiable in Georgian history during the period between 850 and 950 CE. For the sake of convenience, the essential parts of the second colophon have been transcribed and translated and are presented in table 3.[14]

accordance with the reconstruction by Silogava 1986, 47, I assume two lines to have been lost at the top of page 387, taking into account the length of the text of Mk. 14.37 that must be restored above the left-hand column of the page (387ra, cf. below), with *çigni* ('book') instead of Silogava's *otxtavi* ('Tetraevangelion') matching the existing space.

[12] The form *mçera*, as it occurs in the manuscript, is ungrammatical and must be a *lapsus calami* for *mçerali* ('scribe').

[13] Taqaišvili 1916, 13–14; cf. 2.4.2 below as to later usage. The difference suggested, (1001–897 =) 104 years, should be seen within the context of the discrepancy in dating between the Georgian and the Byzantine eras, which consisted of 96 years; see Gippert (forthcoming) on the subject of this discrepancy, erroneously reduced to 94 years in Iovane Zosime's *Praise of the Georgian Language*. The difference in dating remains unexplained thus far, as does the question as to whether it was arrived at by calculating on the basis of years *ante* or *post Christum natum*.

[14] In the transcripts, square brackets indicate the reinsertion of elements in lacunae. A more comprehensive – although not complete – reconstruction has been provided by Silogava 1986, 47–48.

Table 3: Restored and translated text of the compiler's colophon of the *Adiši Gospels*.

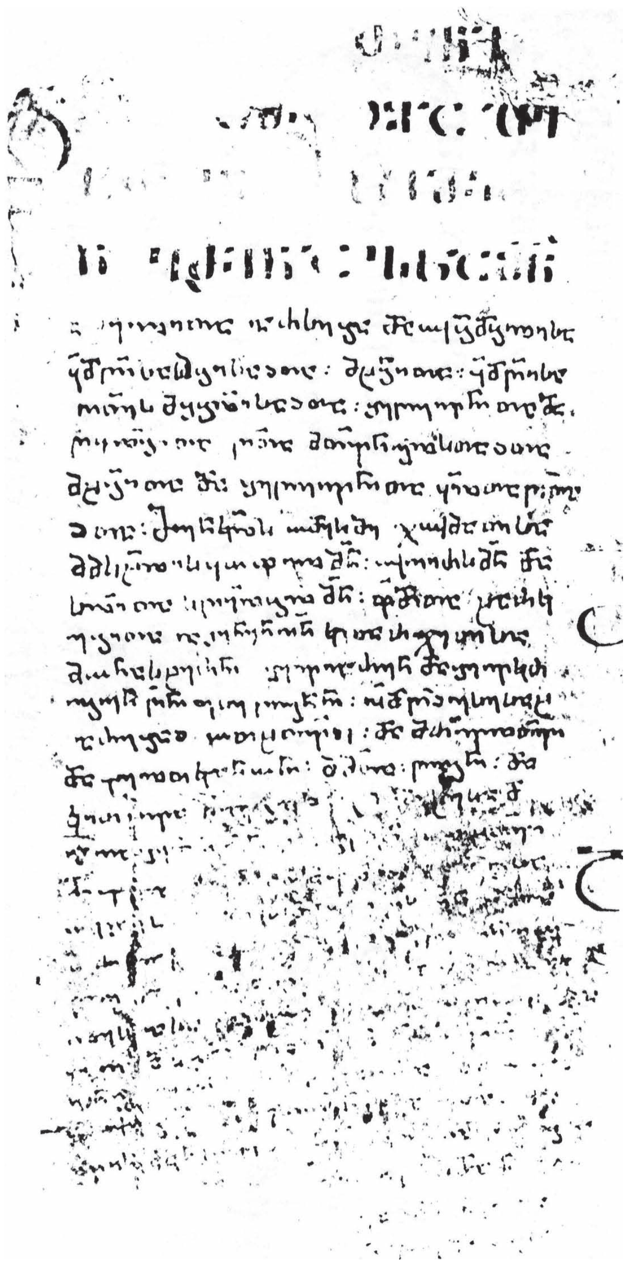
First column (fol. 387va)	
... *meoxebita* [*çmidi*]*sa ġmrtis mšobe*[*li*]*sayta da çmidis*[*a ioane*] *natlis mceme*[*li*]*sayta da çm*[*id*]*ata maxare*[*be*]*ltayta da* [*q̇ove*]*lta çmidata mistayta* ***ġirs vikmen me glaxaḳi*** **[*s*]*opron*** ***aġsrulebad çmidasa am*[*as*] *çignsa sax*[*areb*]*asa otx*[*tavsa*]** ..	... with the help of the holy Theotokos and St John the Baptist and the holy Evangelists and all his saints, **I, poor Sopron, have become worthy to accomplish this holy four-chapter Gospel book** ...
Second column (fol. 387vb)	
... [*moġ*]*uaçe*[*bita su*]*lierta* [*ʒmata*] *čemtayta Salocvelad q̇ovlisa amis ḳrebulisatws da q̇ovelta natesavta čuenta qorcielad da salocvelad* ***mepeta čuenta ġmrtiv didebulisa adrnese ḳurapalaṭisa da ġmrtiv boʒta našobta matta davit eris*[*tavisa*]...**	... with the support of my spiritual brothers, to pray for all this congregation and all our carnal relatives, and to pray **for our kings, Adarnase the *curopalates*, exalted by God, and his children, gifted by God, Davit the *eristavi*** ...
Third column (fol. 388ra)	
... *da meuġlet*[*a*] *da našobta m*[*a*]*ttatws. Da* [*s*]*alocvela*(*d*) *sulta gardacvalebultatws* ***sulisa mamisa grigolisa sulisa mamisa gabrielissa*** *da q̇ovelta ʒmata čuenta gardacvalebultatws da* ***sulta mepeta čuentatws Arsenisa davitisa ašoṭisa*** *da q̇ovelta twsta gardacv*|[*al*]*ebultatws.*	... and their wives and children, and to pray for the souls of the deceased, **the soul of father Grigol, the soul of father Gabriel**, and for (the souls of) all our deceased brothers, and for **the souls of our kings Arseni, Davit, Ašoṭ** and all their deceased.
Fourth column (fol. 388rb)	
A[*ç v*]*inca ġirs ikmn*[*et*] *aġmoḳitxva*[*d*] *da msaxureb*[*a*]*d çmidasa amas saxa*[*re*]*basa mogwqse*[*ne*]*t çmidata šina lo*[*c*]*vata tkuenta* ...	Now, whoever (of you) may become worthy enough to read and do service (with) these holy Gospels, remember us in your holy prayers...

2.2.2

The other problem with the information contained in the two colophons is that they do not indicate the place where the codex was created. In this connection, it is especially the names of royalty mentioned in the colophons that are revealing. According to Taq̇aišvili, the contemporary king is identical to Adarnase, son of Davit *curopalates*, who mounted the Georgian throne in 888 CE, was acknowledged as *curopalates* by the Byzantine government in 891 CE and ruled until 923 CE, before being succeeded by his son, Davit. The deceased kings mentioned in the colophons then are Davit, Adarnase's father, who ruled from 876 to 881 CE, and his younger brother Ašoṭ, who died in 885 CE; only the bearer of the third name, Arseni, has thus far remained unidentified (but may possibly represent the second son of Bagraṭ I, the father of Davit *curopalates* and Ašoṭ, who is also named Adarnase in historical sources).[15] All of these identifications lead us to the Georgian province of Ṭao-Ḳlarǯeti, situated in present-day Eastern Turkey, which was the hereditary land of the dynasty of Bagraṭ I (the so-called 'Ṭao-Ḳlarǯetian Bagratids'). This view is further supported by the fact that the compiler of the codex, Sopron, and the two other clerics who figure in the colophon can be placed in the same province, that is, as priors of the monastery of Šaṭberdi, beginning with Grigol of Xanʒta, who founded the monastery under Bagraṭ I, and ending with Sopron himself, who is mentioned as its renewer in Grigol's vita (by Giorgi Merčule).[16]

[15] Except for the latter proposal, see Taq̇aišvili 1916, 17.

[16] Abulaʒe 1964, 294, l. 5–6, '*didi sopron, sanaṭreli mamay, šaṭberdisa eḳlesiisa ganaxlebit aġmašenebeli da uḳunisamde gwrgwni misi*' ('the great Sopron, the blissful father, the builder [and] renewer of the church of Šaṭberdi and its crown in eternity'). See Taq̇aišvili 1916, 16–17 for further details.



<da ṗovna igini>

<mʒina>reni

D[a hrko]wa ṗe

ṭres simeo

n gʒinavsa š̅n̅

Saxelita arseba daub̅d̅blisa
q̇̅d̅ c̣̅i̅sa smbisayta : mx̅b̅ita : q̇̅d̅ c̣̅i̅sa
ġ̅t̅is mšb̅l̅isayta : šec̣evnita da
c̣q̇̅l̅bita c̣̅t̅a mt̅v̅nglstayta
mxb̅i̅ta da šec̣evnita q̇̅l̅ta c̣̅t̅a
yta : Me nḳ̅l̅s odesme ǯumatisa
mms̅x̅lis q̇opilm̅n̅ : uġirsm̅n̅ da
s̅l̅ta sc̣q̇̅l̅blm̅n̅ : ṗ̅d̅ita xarḳ
ebita ašenen ġ̅n̅ ḳlarǯetisa
monasṭerni ševiaren da ševḳr
iben c̣̅n̅i ese c̣ignni : ṗ̅d̅ c̣̅y̅ ese sax
arebay otxt̅v̅i : da mr̅v̅l̅t̅vi
da qelt ḳanoni : m̅m̅ta c̣igni : da
ḳitxva migebay : Owmeṭesad
aġašenen ġ̅n̅ šaṭberdi : ese otxt̅v̅i
da qelt ḳanoni da m̅m̅ta c̣igni matsa
eḳlesiasa ...

Fig. 5: Niḳolaos' colophon (fol. 387ra).

2.2.3

The assumption that the codex was compiled in the monastery of Šaṭberdi is corroborated beyond doubt by a third colophon that was inserted into the empty part of the column underneath the end of the Gospel text on fol. 386ra[17] and preceding the scribe's colophon. Despite its position, it is clear from both its writing style (in slovenly minuscules, cf. fig. 5) and its contents that it must have been added later. It details the collection, by a certain Niḳolaos, of the *Tetraevangelion* (book containing the text of the four Gospels) together with some other codices at Šaṭberdi. The list of items assembled comprises, besides the *otxtavi* ('Tetraevangelion') itself, a lectionary (*qelt-ḳanoni*) and other 'books' as well as a *mravaltavi* that is not further specified. There is good reason to believe that the latter codex is the so-called *Udabno mravaltavi* (nowadays ms. A-1109 at the National Centre of Manuscripts, Tbilisi), which was detected in (and named after) the monastery of Udabno in Guria in South-west Georgia.[18] This and the fact that Niḳolaos was a

[17] The Gospel verse above is Mark 14:37, part of the passage from Mark 14:33–37, duplicated in a slightly different wording, following the Gospel of John on fol. 386rv. The introductory line ('*sṭovasa mas aġsamaġlebelisasa : evangelē marḳozis tavisay*' ('In the portico of the Ascension: from the Gospel of Mark') indicates that this text version was taken from a Jerusalem-type lectionary; cf. the so-called 'Paris lectionary' (Tarchnischvili 1959, 116–7), which has the lection of Mark 14:33–40 on Maundy Thursday (no. 650), prescribing to proceed to the *locum ascensionis* (*aġsamaġlebelad*) before (no. 645).

[18] See Taqaišvili 1916, 12–13, and Šaniʒe / Čumburiʒe 1994, 5 and 9–10. See Gippert (forthcoming, 2.3) for more information on the *Udabno mravaltavi*.

Table 4: Niḳolaos' colophon, restored text and English translation.

Saxelita arseba daubadebelisa q̇ovlad ç̣midisa samebisayta :	In the name of the all-holy Trinity, substance unborn,
meoxebita q̇ovlad ç̣midisa ġmrtis mšobelisayta :	with the help of the all-holy Theotokos,
šeç̣evnita da ç̣q̇alobita ç̣midata mtavarangelostayta	with the support and mercy of the holy archangels,
meoxebita da šeç̣evnita q̇ovelta ç̣midatayta :	with the help and support of all saints:
Me niḳolaos odesme ǯumatisa mamasaxlis-q̇opilman uġirsman da sulita sac̣q̇alobelman:	I, Niḳolaos, formerly the abbot of (the monastery of) Ǯumati, unworthy and pitiful with (my) soul,
priadita xarḳebita – ašenen ġmertman – ***ḳlarǯetisa monasṭerni***	with much endeavour I have visited the **monasteries of Ḳlarǯeti**
ševiaren da ševḳriben ç̣midani ese ç̣ignni:	– may God build (them) up – and collected these books:
ṗirvelad ç̣miday ese saxarebay otxtavi :	first, this holy Tetraevangelion,
da mravaltavi da qelṭḳanoni	and a *mravaltavi* and a lectionary,
m(a)m(a)ta ç̣igni da ḳitxva-migebay :	a book of the fathers and a questions-and-answers (book).
Umeṭesad aġašenen ġmertman šaṭberdi :	May God build up Šaṭberdi above all!
ese otxtavi da qelṭḳanoni da mamata ç̣igni matsa eḳlesiasa ...	This Tetraevangelion and the lectionary and the fathers' book, in their church ...

former abbot of Ǯumati, another monastery of Guria, leads one to the assumption that the illegible parts of the colophon deal with the transfer of the codices to the latter region.[19]

2.2.4

What remains unresolved, then, is the question as to when the removal from Šaṭberdi to Guria took place and when, how and by whom the Gospel codex was transported to the mountain area of Svanetia. If Taq̇aišvili was right in assuming that Niḳolaos undertook his expedition to Ḳlarǯeti in the second half of the sixteenth century, there was not much time remaining for the Tetraevangelion to have reached Adiši, where it was found by the Svanetian scholar Besarion Nižaraʒe sometime before the end of the nineteenth century.[20] There are, indeed, two later notes in the codex that mention the name of Adiši (on fol. 312ʳ, between Jn. 3.32 and 4.2, and on fols. 345ᵛ–346ʳ, under Jn. 10.41); these, however, are undated (cf. the transcripts provided in figures 6a and b), so that the question must remain unresolved.[21]

2.3

Another Georgian manuscript from Mt Sinai likely to have originated in Jerusalem, namely Cod. Sin. georg. 16, a Gospel codex written in *nusxuri* minuscule, is testament to a particular type of 'wandering'.[22] The main colophon of the codex has now been lost, but it was transcribed by A. Cagareli in his catalogue of the Georgian manuscripts of St Catherine's monastery in 1888[23]. According to this transcript, the codex was executed in 992 CE (chronicon 212) by Gabriel 'the amiable' (*saq̇uareli*) in the Monastery of the Holy Cross.[24] As a matter of fact, Gabriel does figure in other notes in the codex, too, specifically on fol. 94ᵛ at the end of St Matthew's Gospel and on fol. 243ᵛ at the end of St Luke's Gospel. However, he was obviously not the scribe who penned most of the text, given the sharp difference in the handwriting discernible in the former note. Instead, it is obvious that the main text of the Gospels as well as the additional indices contained in the manuscript were written by a 'decanus of the Cross' (*ǯuarisa*

[19] The first five lines pertain to the Gospel text of Mark 14:37. For parts that are illegible today, the transcript provided here is based upon Taq̇aišvili 1916, 11.

[20] See Taq̇aišvili 1916, 7 and 12. As to B. Nižaraʒe, see Gippert 1986, 206–7.

[21] Silogava 1986, 49 proposes (obviously on palaeographic grounds) a dating sometime during the fourteenth or fifteenth centuries for the first note and the fifteenth or sixteenth centuries for the second note; furthermore, he determines the script of Niḳolaos's colophon to be a 'straight *nusxuri* of the eleventh century' ('XI ს-ის სწორი ნუსხური').

[22] These and other manuscripts from Mt Sinai were inspected by the author and several colleagues (M. Shanidze, S. Sarjveladze, D. Tvaltvadze, B. Outtier) during a research trip to the monastery undertaken in May 2009 in connection with the international project entitled 'Critical Edition of the Old Georgian Versions of Matthew's and Mark's Gospels – Catalogue of the Manuscripts Containing the Old Georgian Translation of the Gospels' (a project kindly supported by INTAS, Brussels, ref. no. 05-1000008-8026). The members of the group are extremely grateful to the monastery librarian, Father Justin, for the kind support he provided during their stay.

[23] The last folio (fol. 332) containing the colophon must have disappeared before 1902, since I. Ǯavaxišvili was unable to consult it during his visit to Mt Sinai; see his catalogue (Ǯavaxišvili 1947, 38).

[24] Cagareli 1888b, 198–9, no. 7; reproduced in Garitte 1956, 53.

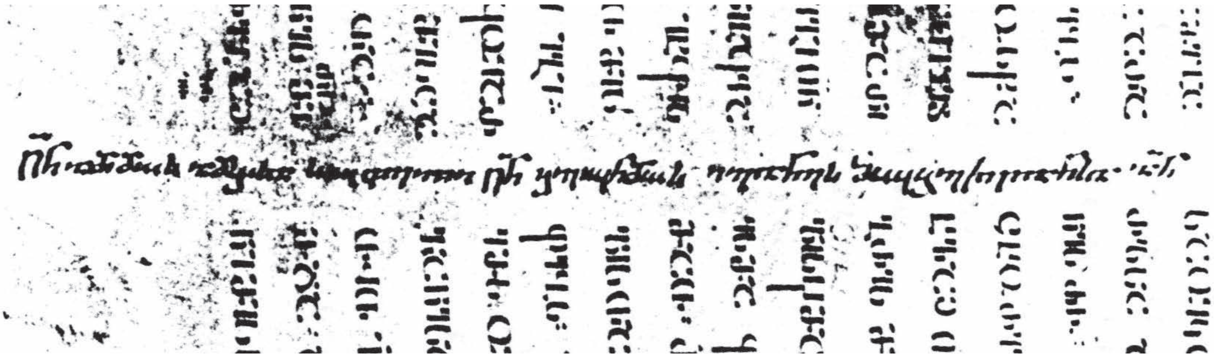


Fig. 6a: *Adiši Gospels*, Ivane Mubečviani's note on fol. 312r.

Ġ(mertma)n adidos ad(i)šisa supeli Ġ(mertma)n šeundos ivanes mubečviansa. a(me)n.

God exalt the village of Adiši! God pardon Ivane Mubečviani! Amen!

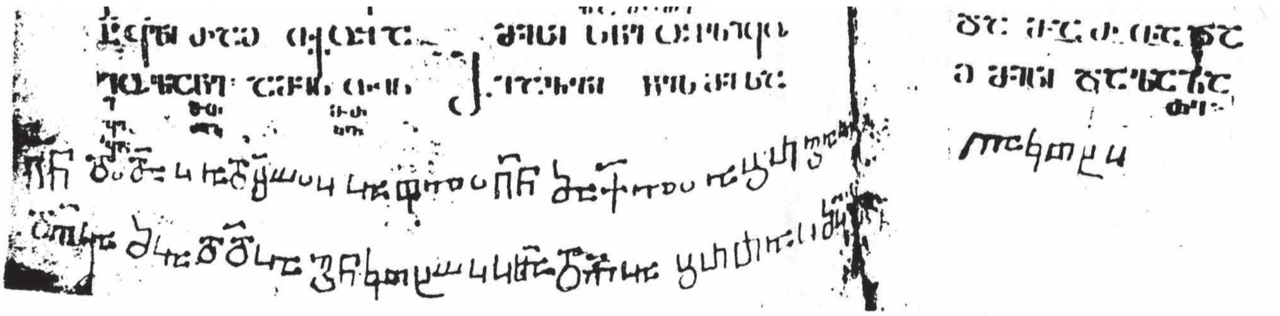


Fig. 6b: Note on fols. 345v-346r.[26]

Ġ̅n̅ dydas ad̅š̅oys saply Ġ̅n̅ ma̅k̅ly abrgan[s]	ġaḳtxs
dġ̅sa msa d̅dsa gnḳtxoss̅s̅a dġ̅sa brʒanbs[a]	
Ġmertman adidos adišis sopeli. Ġmertman mikael abregians	*ġmertma aḳurtxos!*
dġesa mas didisa ganḳitxuisasa, dġesa brʒanebisa	
God exalt the village of Adiši! God bless Mikail Abregiani	
on the day of the big judgement, on the day of the command.	

deḳanozi) named Daniel, whose name appears alongside Gabriel's in the main colophon and the two notes mentioned above, and also in several other short notes, each written in the same hand as the text to which they pertain.[25]

2.3.1

Be that as it may, the present codex is unusual in that its first quires – containing the text of St Matthew's Gospel – were obviously corrected in a second hand, the original text having been erased earlier, at least in parts. A clear example can be seen on fol. 8v where the wording of Matt. 2:2, 'Where is he who was born king of the Jews?', was changed to read *sada ars r(omel)i-igi išva meupe ho(w)riatay*,[27] with the relative clause *romeli-igi išva* ('he who was born') replacing the participial clause *axladšobili igi* ('the newly born one' – cf. fig. 7; the erased text has remained visible in part). Comparing other witnesses to the Old Georgian Gospels, it becomes clear at once that this difference stems from a controversy about different recensions, the erased wording representing the text of the 'Protovulgate', which prevailed in the ninth and tenth centuries, whilst the 'new' text is that of the later 'Vulgate' redaction, worked out by George the Hagiorite on Mt Athos in the early eleventh century (Athonite Vulgate); cf. table 5, where the versions in question are contrasted with the Greek text, which has the participle τεχθείς in the position in question.

[25] See Ǯavaxišvili 1947, 38, and Garitte 1956, 51–2 for the full list; cf. 2.6 below for further details.

[26] Because of its idiosyncratic spelling, the text of this note is provided with both a transliteration and a (tentative) transcription.

[27] Here, and in the following transcripts, restorations of abbreviations are marked by parentheses.

Table 5: Two recensions of Matt. 2:2 represented in Sin. georg. 16, fol. 8v.

Sin.georg. 16, original text	*sada ars* ***axladšobili igi*** *meupe huriatay*
Protovulgate (D,F,G)	*sada ars* ***axladšobili igi*** *meupĕ huriatay*
Sin.georg. 16, corrected text	*sada ars* ***romeli igi išva*** *meupe huriatay*
Athonite Vulgate (H,I,K; B,R,P)	*sada ars* ***romeli igi išva*** *meupe huriatay*
Greek	Ποῦ ἐστιν **ὁ τεχθεὶς** βασιλεὺς τῶν Ἰουδαίων

2.3.2

However, things are not that simple. In some cases, the overwritten text does not agree with the Athonite Vulgate, but instead with the Protovulgate itself. This is true for Matt. 4:12 on fol. 13v, for example. Here, the corrector's text runs: *x(olo) esma r(a)y i(eso)ws v(itarme)d iovane mieca saṗq̇robil(e)d ganešora da çarvida galilead* ('But when Jesus heard that John had been thrown into prison, he withdrew and went away to Galilee'), with *x(olo)* ('but') replacing erased *v(itarc)a* ('as') (in red ink), *v(itarme)d* ('that') replacing erased *r(ametu)* ('id.'), *r(a)y* ('as') added above the line, and *saṗq̇robil(e)d* ('into prison') covering an erasure of the same length, with no traces of the erased wording remaining (cf. fig. 8). The resulting text is clearly that of the Athonite Vulgate again, with the exception of *saṗq̇robiled* ('into prison'), which does not appear in this redaction. Instead, *saṗq̇robiled* is part of the Protovulgate wording, as are the erased words *v(itarc)a* and *r(ametu)*; the closest witness of this redaction, the Palestine Gospels (G), reads: *vitarca esma i(eso)ws, r(ametu) iovane mieca saṗq̇robiled ganešora da çarvida galilead* ('When Jesus heard that John had been thrown into prison, he withdrew and went away to Galilee'). What, then, did the corrector replace by *saṗq̇robiled* at the position specified, if not the same word? Compare table 6, which contrasts the relevant versions with the Greek text again. It proves that there is, indeed, no other candidate available for restoring the erasure, even though *saṗq̇robiled* has no explicit equivalent in the Greek version. Note that two other Sinai Gospel manuscripts, R = Sin. georg. 15 (from 975 CE) and P = Sin. georg. 30 (tenth century), show an intermediate text with the conjunctions of the Protovulgate, but without *saṗq̇robiled*, while the latter word does occur in the oldest redaction, represented in the Adiši and Oṗiza Gospels (C, from 897, cf. above, and A, from 913).

Table 6: Recensions of Matt. 4:12 represented in Sin. georg. 16, fol. 13v.

Sin.georg. 16, original text		***v(itarc)a*** *esma i(eso)ws* ***r(ametu) iovane mieca *saṗq̇robiled*** *ganešora da çarvida...*
Protovulgate	(F,G)	***vitarca*** *esma iesus* ***rametu iovanĕ mieca saṗq̇robiled*** *ganešora da çarvida...*
	(D)	***vitarca*** *esma iesus* ***rametu iovane saṗq̇robiled mieca*** *ganešora da çarvida...*
Intermediate	(R,P)	***vitarca*** *esma iesus* ***rametu iovane mieca*** *ganešora da çarvida...*
Sin.georg. 16, corrected text		***x(olo)*** *esma* ***ray*** *i(eso)ws* ***v(itarme)d iovane mieca saṗq̇robiled*** *ganešora da çarvida...*
Ath. Vulgate	(H,I,K)	***xolo*** *esma* ***ray*** *iesus* ***vitarmed mieca*** *ganešora da çarvida...*
Adiši	(C)	***[x(olo)]*** *esma* ***ray uḳue*** *iesus* ***rametu iovane saṗq̇robiled mieca*** *çarvida...*
Oṗiza	(A)	*esma* ***ray uḳue*** *iesus* ***rametu iovane saṗq̇robiled mieca*** *ganešora da çarvida...*
Greek		**Ἀκούσας δὲ ὅτι Ἰωάννης παρεδόθη** ἀνεχώρησεν εἰς τὴν Γαλιλαίαν.

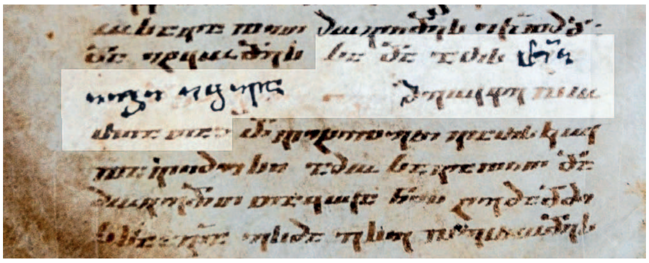


Fig. 7: Sin.georg. 16, fol. 8v, excerpt, with Matt. 2:2 highlighted.

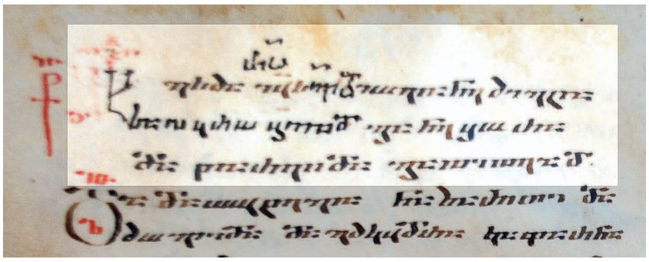


Fig. 8: Sin.georg. 16, fol. 13v, excerpt, with Matt. 4:12 highlighted.

2.3.3

A similar case is encountered in the next verse (Matt. 4:13). Here, the corrected text comprises the phrase *zġws ḳidit ḳerʒo* ('by the seashore') and the article-like pronominal form *m(a)t* ('those'), both again inserted into erasures of the same length, thus resulting in the text *movida daemḳwdra ḳaparnaums zġws ḳidit ḳerʒo sazġvarta m(a)t zabulonista* ('He came [and] settled in Capernaum by the seashore in the confines of Zabulon') (cf. fig. 9). In this form, however, the text is not compliant with the Athonite redaction, which has neither *zġws ḳidit ḳerʒo* nor *mat*, but with that of the Protovulgate, which does contain these words. So again we must assume that the 'corrections' reinstate words that had been previously erased. Table 7 contrasts the relevant versions again; note that the absence of *da* ('and') between the two verbal forms cannot be taken as a decisive feature, since it may have been omitted haplographically prior to *daemḳwdra* ('he settled'). In this verse, the Adiši and Oṗiza versions are closer to the Protovulgate in that they do have *zġws ḳide-* ('seashore') (parallelling Greek τὴν παραθαλασσίαν), but in the dative-locative case.

2.3.4

Why, then, did the corrector replace *saṗq̇robiled, zġws ḳidit ḳerʒo* and *mat* with the same words? In my view, the perplexing picture we have can only be accounted for if we assume that the corrector first attempted to adapt the text to the 'new' Vulgate, but was then forced – for whatever reason – to re-establish the 'older' reading. There is no indication that this was performed by another person, the hand of both types of corrections being the same. However, the erasures might have been applied independently beforehand. This is suggested by Matt. 4:10 (fol. 13r), where the corrector provided a contaminated text, with both the 'new' and the 'old' readings covering the same erasure, side by side (cf. fig. 10). The words in question are the vocative forms *saṭ(a)na* and *ešmaḳo*, both denoting the 'devil' ('Go away from me, devil, for it is written...'), the former appearing in the Athonite text and the latter in the Protovulgate (as well as the Adiši Gospels); and it is clear that it must have been *ešmaḳo* that was erased first (see table 8, which displays the relevant versions as a synopsis).

If the corrector had intended to simply replace the older text with the newer one here, he would certainly have written

Table 7: Recensions of Matt. 4:13 represented in Sin. georg. 16, fol. 13v.

Sin. georg. 16, original text			*movida daemḳwdra ḳaparnaums* ***zġws ḳidit ḳerʒo*** *sazġvarta* ***m(a)t*** *zabulonista...*
Protovulgate		F,G,R,P	*movida* ***da*** *daemḳwdra ḳaparnaums* ***zġws ḳidit ḳerʒo*** *sazġvarta* ***mat*** *zabulonista...*
		D	*movida* ***da*** *daemḳwdra ḳaparnaums* ***zġws ḳidit ḳerʒo*** *sazġvarta zabulonista...*
	Oṗiza	A	*movida* ***da*** *daemḳwdra ḳaparnaums* ***zġws ḳidesa*** *sazġvarta zabulonista...*
	Adiši	C	*movida daešena ḳaparnaomd* ***zġws ḳidesa*** *sazġvarta zabulonista...*
Sin.georg. 16, corrected text			*movida daemḳwdra ḳaparnaums* ***zġws ḳidit ḳerʒo*** *sazġvarta* ***m(a)t*** *zabulonista...*
Ath. Vulgate		H,I	*movida daemḳwdra ḳaparnaums sazġvarta zabulonista...*
		K	*movida* ***da*** *daemḳwdra ḳaparnaums sazġvarta zabulonista...*
Greek			ἐλθὼν κατῴκησεν εἰς Καφαρναοὺμ **τὴν παραθαλασσίαν** ἐν ὁρίοις Ζαβουλὼν ...

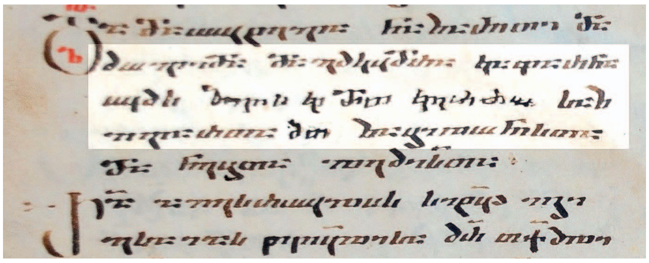


Fig. 9: Sin.georg. 16, fol. 13v, excerpt, with Matt. 4:13 highlighted.

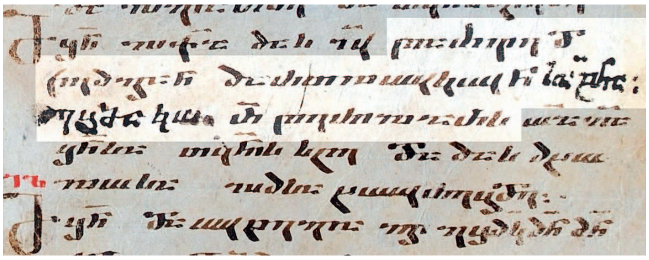


Fig. 10: Sin.georg. 16, fol. 13r, excerpt, with Matt. 4:10 highlighted.

Table 8: Recensions of Matt. 4:10 represented in Sin. georg. 16, fol. 13r.

Sin. georg. 16, original text		*çarved čemgan martluḳun* ****ešmaḳo*** *: r(ametu) çeril ars...*
Protovulgate	(D,F,G,R,P,B)	*çarved čemgan martluḳun* ***ešmaḳo****, rametu çeril ars...*
Adiši	(C)	*vidode,* ***ešmaḳo****, rametu çeril ars...*
Sin. georg. 16, corrected text		*çarved čemgan martluḳun* ***saṭ(a)na : ešmaḳo*** *. r(ametu) çeril ars...*
Ath. Vulgate	(H,I,K)	*çarved čemgan martluḳun* ***saṭana****, rametu çeril ars...*
Greek		Ὕπαγε, **Σατανᾶ·** γέγραπται γάρ ...

saṭana over the erasure in the lower line, and if he had added *ešmaḳo* later, he would have squashed this in at the end of the previous line instead of *saṭana*. It thus seems that the corrector was intending from the outset to execute the 'mixed' text seen in the manuscript today – with but a slight preference for the Athonite Vulgate.

2.3.5

In any case, the codex clearly presupposes – and bears witness to – contacts between the Georgian communities on Mt Sinai and Mt Athos, where the Vulgate was established by about 1025 CE. These contacts are not precisely datable, of course, since the corrector left no colophon or other information in the manuscript on which he worked. However,

Table 9: The scribe's colophon of Sin. georg. 19, fol. 262r.

K(risṭe)s moq̇uareno . m(a)m(a)no da ʒmano . Vis t(a)naca moiçi-	Lovers of Christ, fathers and brothers! To whomever
os : ç(mida)y ese : s(a)x(a)r(e)b(a)y : š(emdgoma)d č(ue)nsa :	these holy Gospels will fall after us, pray for him
Locva q̇avt	
ġ(mrt)isa t(w)s : da r(omel)i dameḳlos šemindevit .	to God! And pardon me for what I have missed!
Axal . targmnilisag(an) . dagwçera . da de-	We have written it down from the new translation and
dad : diad . martal ars : Am(a)t ʒuelta	it is very faithful to its mother. Of those old
sax(a)r(e)bata : Zogzogi siṭq̇(ua)y : ara eçamebis :	Gospels it does not testify many a word.
K(risṭ)e š(eicq̇al)e moʒġuari . č(ue)ni d(avi)t : da m(i)k(ae)l : ucbad mčx-	Christ, have mercy on our leader Davit and Michael, the
reḳali : Da mose :. Da m(i)k(ae)l : da čiṭay da s(wmeo)n	inattentive writer, and Mose and Michael and Čiṭay and Symeon
da ǯerasime : Da grigol : Da mšobel-	and Gerasime and Grigol and their
ni : da ʒm(a)ni m(a)tni : a(me)n :. X(olo) daiçera mtasa	parents and brothers, amen! And it was written
ç(mida)sa : sinas : Saq̇opelsa : ç(mid)isa da ġ(mrt)is-	on the holy Mount Sinai, in the abode of the holy
mxilvelisa : Mosessa ***Kroniḳoni iq̇o***	and God-viewing Moses. **The chronicon was**
: SŽB : Ricxw . *haysten eçera*[28] *M[(i)k(ae)ls]*[29]	**number 292.** My goodness! Mikael has written so much!
eṭraṭi : da mçerali : ornive hg[ian][30]	The parchment and the writer, both remain.
K(risṭ)e aqmare . Moses : nebisaebr š[enisa]	Christ, let it be useful to Moses as you like!

[28] The present formula has not yet been identified with any certainty. Garitte (1956, 58) hesitatingly read *laysten* instead of *haysten*, which remains incomprehensible and can be ruled out on closer inspection. A more promising interpretation has recently been provided by B. Outtier (2012, 19–22) who saw *haysten* as a variant of *esten* (< *esoden* < *eseoden*) ('so much'), with *e* > *ay* representing an otherwise unknown 'inverted development' (*ucnobia akamde piruḳuġma moʒraoba*) of the adaptation of (Greek) 'αἴσθησις to (Georgian) ესთეტიკა' (i.e. *esteṭiḳa*), with the initial *h*- being an 'addition' (*damaṭebuli*) as in *haba*, *haeri*, and *hegre*. The interpretation preferred here presupposes instead that *haysten* is a contamination of *esten* ('so much') with the interjection *hai* ('goodness me!', 'my God!'). A similar exclamation is found in a colophon in the Tbilisi manuscript S-30, the fifteenth-century 'Queen Mary' codex of the Georgian chronicle, Kartlis Cxovreba, where the scribe exclaimed: *dedasa esten eçera* ('Mother, he has written so much!') after enumerating the texts authored by Leonṭi Mroveli; cf. Bregaʒe et al. 1959, 42 and Ḳeḳeliʒe 1980, 236. A comparable formation is *haysre* ('thus') (recorded in Sarǯvelaʒe 1995, 279a with an attestation in the thirteenth century ms. A-85, fol. 327r), which is likely to consist of *hai* and *esre* ('id.'). The word *esten* itself is attested as early as the Adiši Gospels (Jn. 14.9), while *hai* appears in Šota Rustaveli's epic (Vepx. 309a) and later texts.

[29] The restoration of the name is highly uncertain, only the initial capital *M* being discernible. We might also read M(o)s(e)s if it was the Mose named previously as the writer of the present Gospels, as suggested by the last line of the colophon.

[30] The last word has not been identified yet, but the two first letters seem quite clear.

Fig. 11: Sin. georg. 10, fol. 262^{r}, excerpt, with date within colophon highlighted.

there is another witness among the Georgian manuscripts from St Catherine's monastery that provides evidence of the existence of such contacts during the eleventh century, shortly after the execution of the Vulgate. This is Cod. Sin. georg. 19, another Gospel manuscript written in *nusxuri* minuscules, which represents the Athonite Vulgate text throughout. The scribe's colophon has been preserved in this manuscript (on fol. 262^{r}), and it records that it was written in the year 1072 (chronicon 292), possibly by a certain Mikael, whom it mentions as an 'inattentive writer'.[31] What is more, it explicitly states that it contains the text of the 'new translation', whilst some of the 'old words' no longer appear. Given its importance for the history of Georgian manuscript culture, I have reproduced the colophon *in toto* in table 9, in as far as it is legible today (cf. fig. 11).[32]

2.3.6

The very fact that Cod. 19 was written on Mt Sinai presupposes that the Gospel text from Mt Athos must also have been

[31] In Modern Georgian, *ucbad*, an adverbial form of the adjective *uceb-i*, means 'suddenly, unexpectedly, quickly' (Rayfield 2006, 1263), which would suggest Mikael was considered to 'write fast'. Within the present context, however, we may assume a pejorative meaning ('negligent, inattentive') if we consider that the writer of the *Adiši Gospels* begged forgiveness for his *si-ucb-e*, i.e. 'inattentiveness' (cf. 2.2 above); Rayfield 2006, 1188 translates *siucbe* as 'ignorance', which seems hard to justify.

[32] The photo taken *in situ* in 2009 shows that the ends of the last four lines have been largely obliterated. Multispectral analysis would be necessary to enhance the legibility.

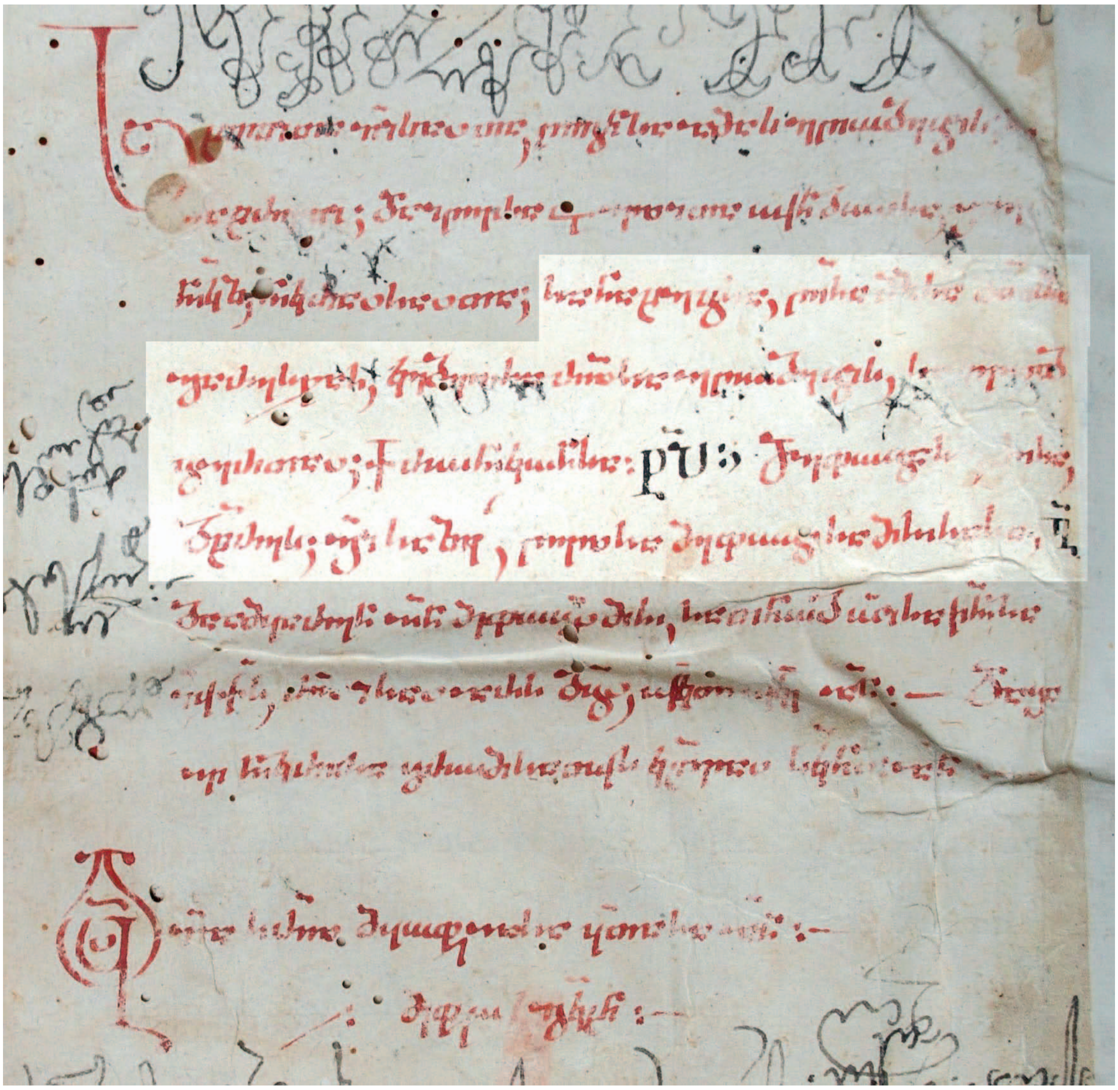


Fig. 12: Cod. Vind. georg. 4, scribe's colophon on fol. 304^{v}, with place and date highlighted.

Table 10: Scribe's colophon of Cod. Vind. georg. 4, fol. 304^{v}.

Saxelita ġmrtisayta, çignsa amas eçodebis sa-	In the name of God! This book is named 'the blissful
naṭreli; daiçera qelita undoysa, šavisa	one'; it was written by the hand of the unapt 'Black'
niḳ(olao)z niḳraysayta; ***sanaxebsa ç(mid)isa mamisa d(avi)tissa***	Niḳolaoz 'the Niḳra', ***in the vicinity of the (monastery of) the holy Father David***
gareǯas, ḳedvasa r(ome)lsa eçodebis soplad	***in Gareǯa, in Ḳedva, which as a village is named***
bertay; Kroniḳonsa : T̄P̄ :, Mepobasa ʒisa,	***Berta; in the chronicon 380, under the reign of the son***
d(eme)ṭres; g(iorg)isa ze, çelsa mepobisa misisasa Ḡ.	***of Demeṭre, Giorgi, in the third year of his reign.***
daamqaren ġ(mertma)n mepob(a)y misi, satnod o(wpl)isa č(ue)nisa	May God consolidate his dominion, to the delight of our Lord
i(eso)w k(risṭe)s, r(om)lisay ars d(ide)b(a)y; uḳ(uni)ti	Jesus Christ, whose is the glory forever and ever.
uḳ(unisamd)e a(me)n : — Da ša-	— And for the
v niḳrasa šromisatws ḳ(urt)x(e)vay s(au)ḳ(u)n(o)y : a(me)n	black Niḳra eternal benediction for his endeavour! Amen!
D(ide)b(a)y ġ(merts)a sr(u)l-mq̇op(e)lsa q̇(ovel)tasa a(me)n: —	Glory to God, the accomplisher of all! Amen!
— : me(u)peo[33] *g(ua)ḳ(urt)x(e)n : —*	Ruler, bless us!

present there as the ‘mother’, i.e. the template from which it was copied. We do not know whether there was a direct route leading from the Iviron monastery to St Catherine’s or whether the contact indicated went via Jerusalem. The latter proposal is suggested by the fact that the founder of the Georgian monastery on Mt Athos, Eptwme the Hagiorite, is commemorated in the *menaion* of May (i.e., the liturgical book containing the varying parts of the liturgy for that month), which represents the overwriting of the palimpsest codex, Vind. georg. 2, another codex that originated in Jerusalem (cf. 2.5).[34]

2.4

The Georgians in Jerusalem were not only in contact with their compatriots on Mt Sinai and Mt Athos, but also with the centres of manuscript production in their Caucasian homeland. Cod. Vind. georg. 4, a large, illuminated homiliary codex in *nusxuri* minuscule now kept in the Austrian National Library, Vienna, is testament to this.[36] According to the scribe’s colophon written in red ink on fol. 304^{v} (cf. fig. 12), the codex was produced in the year 1160 CE (chronicon 380) by Niḳoloz Niḳra at a place called Berta, which was close to the monastery of St David of Gareǯa in South-east Georgia; compare the transcript with its English translation in table 10.[37]

2.4.1

Sometime after its completion, the codex must have been moved to Jerusalem. This is implied by another colophon added on the subsequent page (305^{r}) by Vlasi, archbishop of Urbnisi, who visited Palestine between 1570 and 1572 to restore the Georgian manuscripts of the Monastery of the Holy Cross.[38] His colophon (fig. 13) clearly states that he undertook the restoration of the present codex in the year 1570 (chronicon 258); cf. the transcript provided in table 11.

Table 11: Vlasi’s colophon of Cod. Vind. georg. 4, fol. 305^{r}.

Didebay ġmrtisa srul-mq̇opelsa q̇ovlisa ḳetilisasa:	Glory to God, the accomplisher of everything good!
ġirs-vikmen me ***urbnel mtavarebisḳoṗosi. vlasi*** *. šeḳazmad çmidisa amis çignisa sanaṭrelisa: rametu žamta sigrʒisagan ganrq̇unil, da uqmar-kmnil iq̇o.*	I, the **archbishop of Urbnisi, Vlasi,** have become worthy of restoring this holy ‘blissful’ book. For due to the length of time, it has become rotten and unusable.
da čuen axlad brʒanebita da ǯerčinebita mamisa čuenisa ṭpilel mtavarebisḳoṗosisa barnabaysita qel-vq̇av šeḳazmad salocvelad codvilisa sulisa čemisa da codvata čemta šesandobelad. da q̇ovelta čuenta twsta da natesavta micvalebulta šesandobelad.	And upon the order and regulation of our father, the archbishop of Tbilisi, Barnaba, I have undertaken to restore it to receive prayers for my sinful soul and forgiveness of my sins, and forgiveness for all our deceased kin and relatives.
da aç gevedrebi q̇ovelta romelnica ikitxwdit çmidasa amas çignsa, rayta qsenebit vikmnebdet çmidata šina locvata tkuenta, rayta tkuenca moiġot sasq̇ideli uxuvad mimniçebelisa mis q̇oveltatwsgan, da ertobit ġirs vikmnnet sasupevelsa catasa amen :	And now I beg all of you who read this holy book that we may be remembered in your holy prayers, that you, too, may receive ample reward from Him who gives to all, and that we may become worthy of the kingdom of the heavens. Amen!
locvay q̇avt mamisa barnabastws da čuen sulierta ʒmatatws. da čem codvilisa vlasestws romelman çmiday ese çigni ševhḳazme. mravali č̣iri vixile, upalman uçq̇is.	Pray for Father Barnaba and for us, the brethren in spirit, and myself, sinful Vlase, I who have restored this holy book. I have seen many hardships, as God knows!
Šeiḳazma[35] ***çmiday ese çigni kroniḳonsa : S̄̌N̄Ē :***	**This holy book was restored in the chronicon 258.**

[33] The colophon has *mepeo* without an abbreviation mark, which would mean ‘King!’; *meupeo* (‘Ruler!’) is preferred here as it is more commonly used to address God.

[34] See Gippert 2013b as to further details.

[35] The colophon reads *šeiḳazmay* with a hyper-archaising addition of the suffix ‘ y’, typical of post-Old Georgian writers.

[36] My thanks are due to the staff of the Austrian National Library, who made the Cod. Vind. georg. 4 and several other manuscripts in its collection available to the members of the aforementioned INTAS project during a stay in Vienna in June 2008.

[37] A German translation of the colophon can be found in Peradze 1940, 226.

[38] See Peradze 1940, 227 following Cagareli.

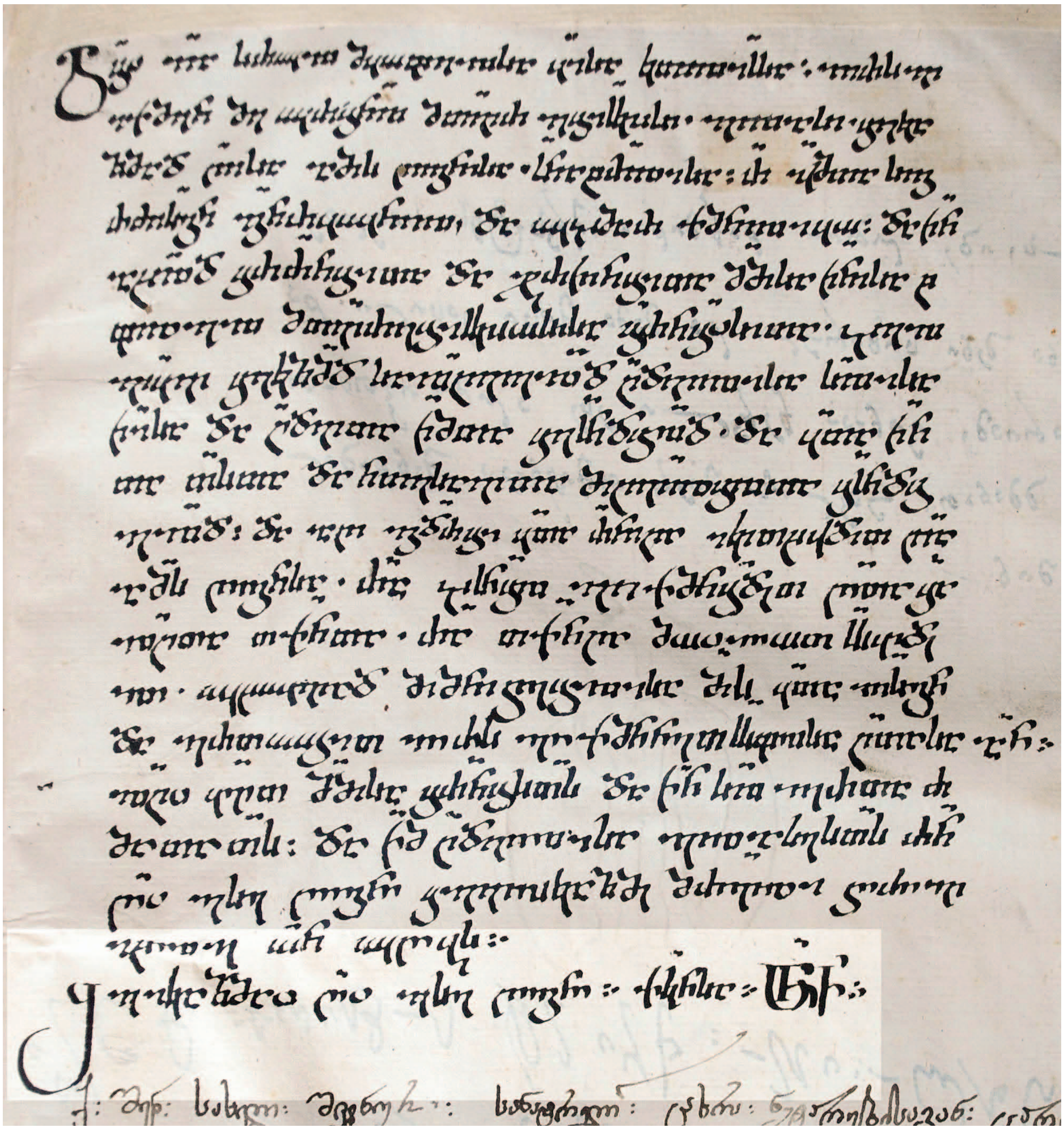


Fig. 13: Cod.Vind.georg. 4, Vlasi's colophon on fol. 305^{r}, with date highlighted.

Table 12: Besarion's colophon and note on Cod. Vind. georg. 4, fol. 8^{r}.

çmindano mamano[39] *vinac ixilet çminda da sasuliero çigni*	Holy fathers, you who have seen this holy and spiritual book (before):
ese bevrgan damġiluli iq̇o. mravalgzis vtvale davaḳazme. meca vevedre	it was extensively eaten by worms (?). Many times I have considered restoring it. And I have implored
u(pals)a amis mçerlis da mḳitxvelisatvis. meca šendobas (?) mibʒanet r(ayt)a tkuenca šen-	God for its writer and reader. Grant me forgiveness so that you, too, may
dobil iq̇vnet u(pli)sa mier. Ġ(mert)o da cxovels-mq̇opelo, ***ǯvaro krisṭeso, saplao krisṭe-***	achieve forgiveness from the Lord. God and Redeemer, **Christ's Cross, Christ's Sepulchre,**
[so], *****, saplao krisṭeso, s(eiçq̇al)e besario-ni k(risṭe)s (?) čq̄yd***	**********, Christ's Sepulchre, have mercy on me, Besarion, (in the year) of Christ 1864.**
ġme(rt)o š(eiçq̇al)e besarion saçq̇ali da codvili, amin.[40]	God, have mercy on Besarion, poor and sinful. Amen!

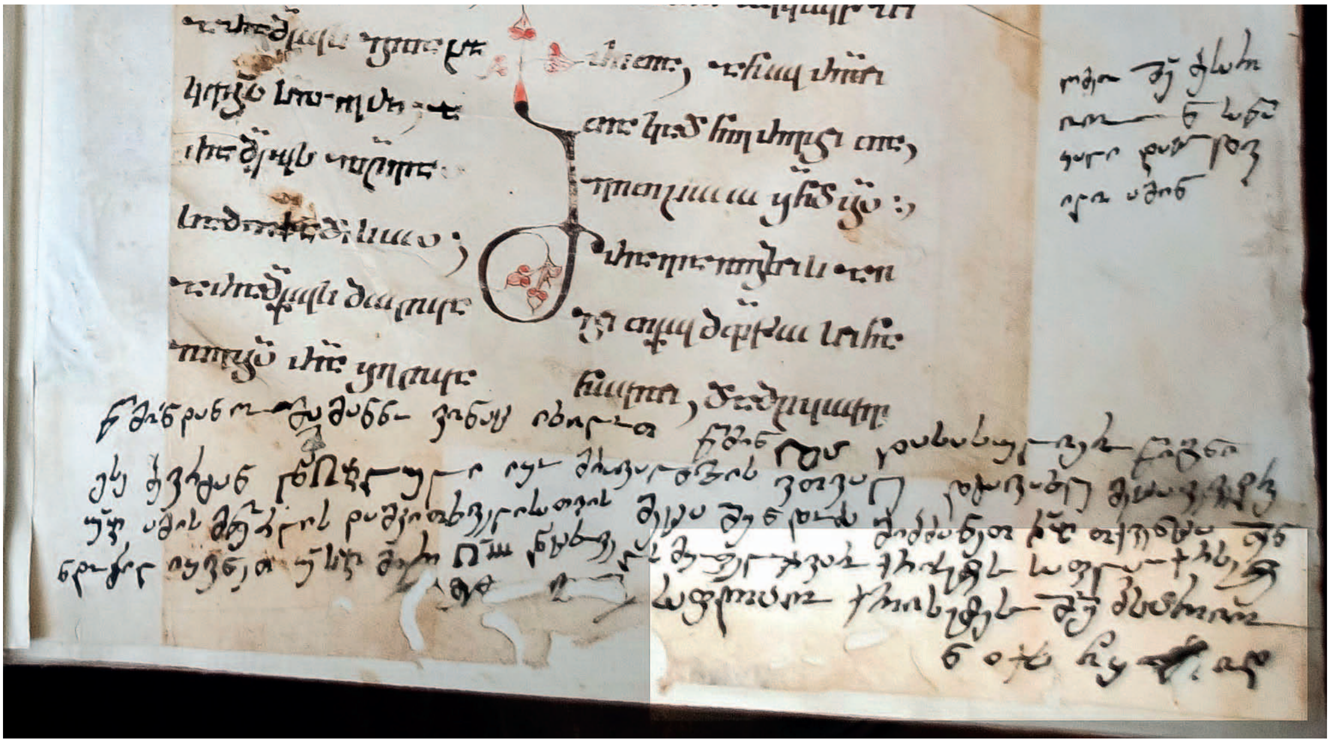


Fig. 14: Cod. Vind. georg. 4, Besarion's colophon on fol. 8r, with date and place highlighted.

2.4.2

It is true that the colophon does not indicate the place where the restoration – which is styled *šeḳazma* here, lit. 'decoration' – took place. However, the codex contains the colophon of a second restorer named Besarion Kioṭišvili,[41] which clearly refers to the Holy Cross and the Sepulchre of Christ. This text, written in a fugitive *mxedruli* cursive, was added at the bottom of fol. 8r, with an additional note in the right-hand margin of the same page (fig. 14), being dated 1864.[42] The transcript and translation provided in table 12 is tentative, since parts of the colophon are no longer legible.

2.4.3

An explicit reference to Jerusalem, then, is found in a lengthy note, again in *mxedruli* script on the verso of the front flyleaf of the Vienna codex (fig. 15). This note, by a mute monk named Ioane, reports on the deposition of several printed books in the Monastery of the Holy Cross and is dated 25 March 1772[43] (cf. the transcript and translation in table 13). It is true that the flyleaf may have been added later, but it seems obvious that this was also done in Jerusalem.

2.4.4

Although it seems clear, then, that the codex was in the possession of the Monastery of the Holy Cross at least from the middle of the sixteenth century until the second half of the nineteenth, it did not find its way into the catalogue of the Monastery library compiled by A. Cagareli during his stay in Jerusalem in 1883. G. Peradze was certainly right in

[39] The colophon reads *mamanno* with a hyper-archaising repetition of the plural suffix.

[40] A similar wording is found in other marginal notes by Besarion, e.g. on fol. 81r: *ġmerto samebit didebulo da cxovels-mq̇opelo, ǯvaro krisṭeso, š(eiċq̇a-l)e besarion saċq̇ali am ċerilis mxilveln|ni š(eundo)s ġ(mertma)n da šendobis-bʒanebeli š(eundo)s ġ(mertma)n amin*, i.e. 'God, exalted with the Trinity and Redeemer, Christ's Cross, have mercy on pitiful Besarion! May God pardon the reader|s of this note and may God pardon him who grants forgiveness. Amen!' See also the notes on fol. 129r and 180r (right margin, dated 10 Oct. 1863).

[41] The family name is not contained in the present colophon, nor in most of the other notes written by (or referring to) Besarion (on fols. 4r; 39r; 41v–42r; 56r; 81r; 128v–129r; 180r, right margin; and fol. 292v). However, a note in the bottom margin of fol. 180r does contain the family name; cf. 3.1 below.

[42] The dating *post Christum natum* is usually only encountered in Georgian manuscripts after the fifteenth century. The note referring to Besarion on fol. 4r of the present codex bears the date *tvesa deḳembersa t k(risṭe)s čq̇yg*, i.e. 'in the month of December, 9; (in the year) of Christ, 1863'.

[43] Peradze 1940, 231, erroneously gives the date as 1770 ('*čġo*'), omitting the last character; his transcript (*ibid.*, note 3) has '*čġom*', with *b* (= 2) misinterpreted as *m* (= 40). A second note on the same page, which refers to that of Ioane, bears the date *čġoē oḳṭombers ḳe*, i.e. '1778, October 25'.

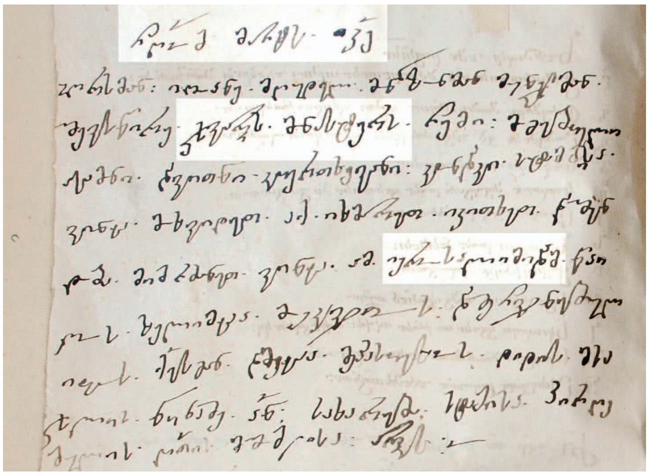


Fig. 15: Cod. Vind. georg. 4, Ioane's note on the verso of the front flyleaf, with date and places highlighted.

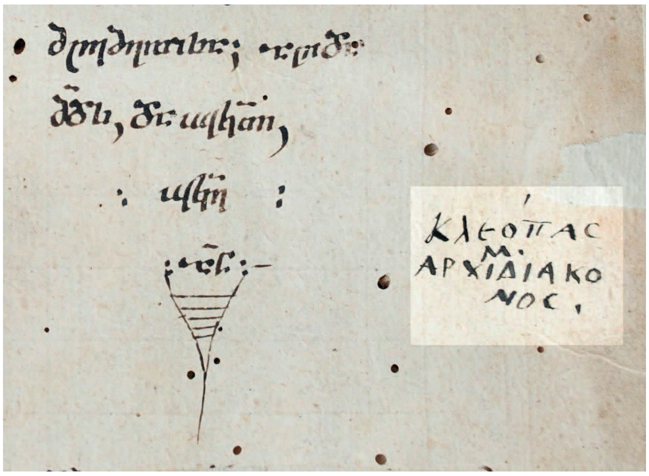


Fig. 16: Cod. Vind. georg. 4, owner's mark on fol. 303r (highlighted).

Table 13: Ioane's note on the front flyleaf of Cod. Vind. georg. 4.

čǧ̅ob marṭs ḳ̅e	**1772, March 25**
uġirsman : ioane . mġdeli . monazonman munǯman .	I, Ioane the mute, the unworthy priest (and) monk,
ševsçire . ***ǯvars monasṭers .*** čemi : m(o)gebuli	have donated **to the Monastery of the Holy Cross** the (following books) acquired by me:
žamni . davitni . ḳurtxevani : ḳondaḳi . sṭambisa .	a book of hours, a psalter, a *euchologion*, (and) a *kontakion*, printed. [45]
vinca . moxvidet . ak . ixmaret . iḳitxet . da šen-	You who come here, use them, read them and grant forgiveness to me. Whoever takes them away **from Jerusalem** here –
*doba . mibrʒanet . vinca . am . **ierosalimidam** . çai-*	
ġos . xelimca . moeḳvetos . da šečvenebul	his hand shall be cut off and he shall be cursed
iqos . k(risṭ)esgan . da meca . meṗasuxos . didis . msa-	by Christ! And he shall have to answer to me before
ǯulis . çinaše . a(me)n . saxareba . sṭabisa . ṗirġe-	the great judge. Amen! The printed Gospels belong
bulis . ġ(mr)tis mšobelisa : aris :—	to the Theotokos 'with a coloured face'.[46]

assuming that the codex had previously been transferred to the private library of an archdeacon named Kleopas, who left his own name in the codex in the form of an owner's mark on fol. 303r (fig. 16). As Peradze further proposed, an heir to the archdeacon,[44] who later became the Archbishop of Nazareth, may have sold the codex to an antiquarian at Alexandria, from where it was acquired by the Austrian National Library in 1931, thus ending its journey from South-east Georgia via Jerusalem to Central Europe.

2.5

Kleopas's codex is not the only Georgian manuscript to have found its way from Jerusalem to Vienna via an antiquarian in Alexandria.[47] According to G. Peradze, the National Library acquired two further Georgian codices at the same time and place, among them the large palimpsest volume styled Cod. Vind. georg. 2,[48] which was the object of an international edition project undertaken between 1997

[44] Recte: Grand Archdeacon. The 'M.' in the note is likely to stand for Μέγας and may have been added later (with the archdeacon climbing up the greasy pole).

[45] The word in question is the genitive of *sṭamba* ('press'), while further down in the text it is spelled *sṭabisa*. It is unclear whether it refers to all four books mentioned or just to the *kontakion*.

[46] The word *ṗirġebul-i* is unattested elsewhere, and it remains unclear which icon or statue of the Theotokos, i.e., the Mother of God, is meant here, cf. Peradze 1940, 231, n. 4. The translation is tentative.

[47] In a similar way, several manuscripts from St Catherine's Monastery on Mt Sinai, including a *xanmeṭi-haemeṭi* lectionary, were removed and taken to Austria, where they ended up in Graz University Library; for details, see Imnaišvili 1977 and 2004.

[48] Peradze 1940, 222. The third codex is Cod. Vind. georg. 3, a *menaion* for the month of February.

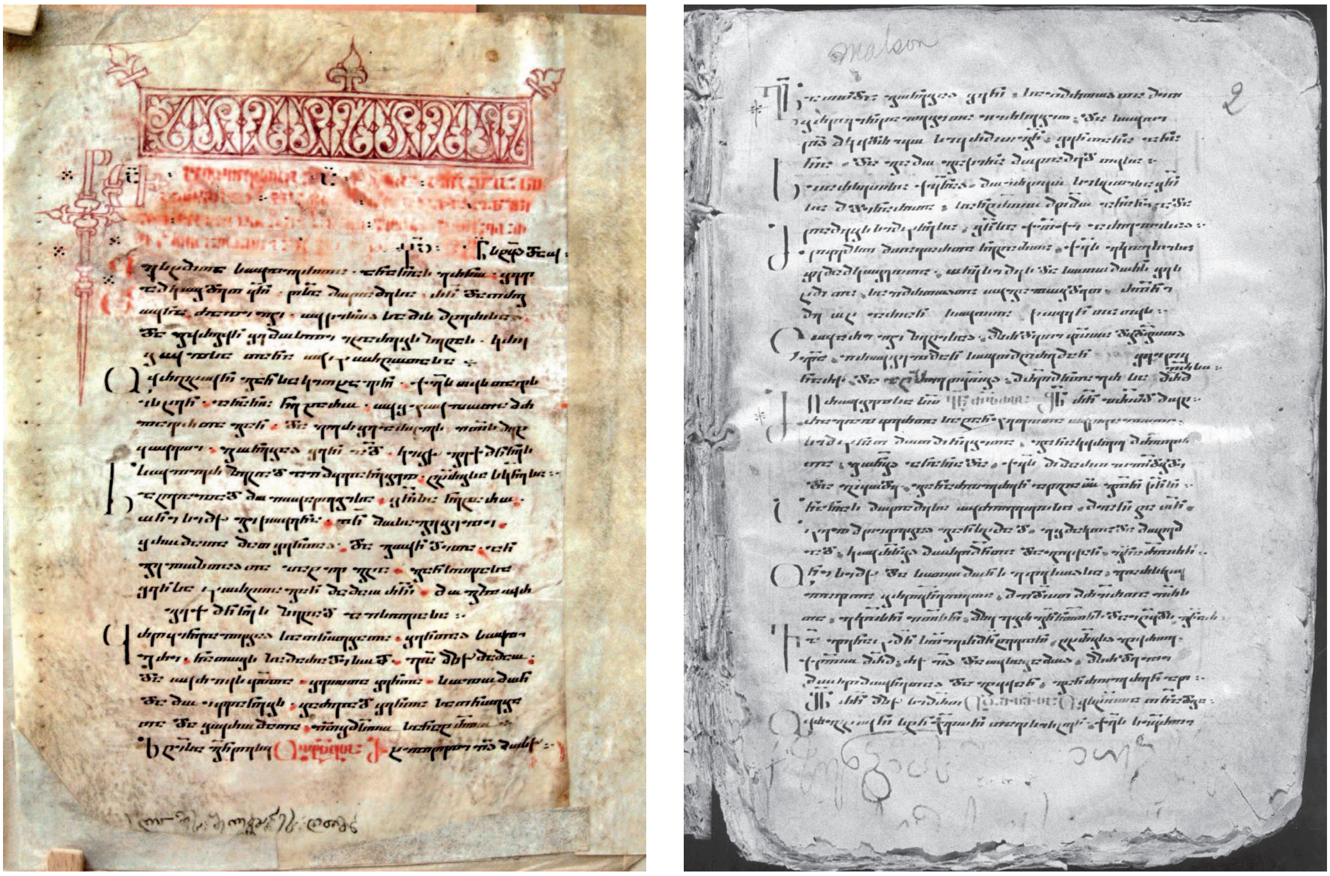


Figure 17: Verso of front flyleaf of Cod.Vind.georg. 2 and fol. 2r of Dumbarton Oaks *menaion* BZ.1952.1 in contrast.

and 2007.[49] Different from Vind.georg. 4, the palimpsest codex was included by A. Cagareli in his catalogue of the library of the Monastery of the Holy Cross, appearing as no. 37 in the collection. Cagareli described it, in accordance with its overtext, as a *menaion* of the month of May.[50] As the manuscript was no longer present in Jerusalem when N. Ja. Marr and Iv. Ǯavaxišvili undertook their inspection of the Georgian manuscripts of the Monastery in 1902,[51] it must have disappeared from the collection before this date, possibly in the course of the removal of the Monastery library to the Greek patriarchate in the 1890s.[52]

2.5.1

In the course of the editing work on the palimpsest, it came to light that the front flyleaf (and perhaps the back flyleaf as well) belonged to another codex from the Monastery of the Holy Cross, that is, the one described by Cagareli as no. 36, which contains a *menaion* of the months of December, January and February. This codex had also disappeared from the collection when Marr and Ǯavaxišvili visited the site; it did not go to Vienna, however, but to Dumbarton Oaks Library in Washington, DC, where it bears the access signature BZ.1952.1.[53] There is no room for doubt that the front flyleaf of the Vienna palimpsest codex is the first leaf of the Dumbarton Oaks *menaion*, which must have become detached from it during the move.[54] Fig. 17 contrasts the verso of the flyleaf with fol. 2r of the *menaion*.

[49] The edition (Gippert et al. 2007) focuses on the undertexts in *asomtavruli* majuscules; work on undertexts in *nusxuri* minuscules is continuing.

[50] Cagareli 1888a, 164, no. 37. Cf. 2.3.6 above for the commemoration of Eptwme the Hagiorite in the *menaion*.

[51] See the catalogue posthumously published as Marr 1955.

[52] See Gippert et al. 2007, V with n. 13 for further references.

[53] Other signatures mentioned in the literature are D.O. 53.60.1 and WAS.1.2; see http://www.doaks.org/library-archives/library/mmdb/microfilms/2207 for information on a microfilm of the manuscript.

[54] See Gippert et al. 2007, xii–xvii for further details. Note that the Graz lectionary (cf. note 46 above) was detached in a similar way, its first leaf being found in the Bibliothèque Nationale in Paris (ms. géorgien 30, fol. 1); cf. Outtier 1972.

Figure 18: Cod.Vind.georg. 2, fols. 25^{v}-31^{r} and ms. A-737, fols. 134^{r}-135^{v}+141^{v}-140^{r} in contrast.

Table 14: Distribution of leaves from ms. A-737 among the leaves of Cod. Vind. georg. 2.

25^{r}	25^{v}	$A134^{r}$–$A141^{v}$	$A141^{r}$–$A134^{v}$	21^{r}	21^{v}	71^{r}	71^{v}
31^{v}	31^{r}	$A135^{v}$–$A140^{r}$	$A140^{v}$–$A135^{r}$	20^{v}	20^{r}	63^{v}	63^{r}
70^{r}	70^{v}	22^{r}	22^{v}	$A136^{r}$–$A139^{v}$	$A139^{r}$–$A136^{v}$	26^{r}	26^{v}
64^{v}	64^{r}	19^{v}	19^{r}	$A137^{v}$–$A138^{r}$	$A138^{v}$–$A137^{r}$	30^{v}	30^{r}

2.5.2

Another remarkable case of disintegration of the Vienna codex concerned one of the manuscripts that were reused in it in palimpsest form. Of the twelve original manuscripts in *asomtavruli* majuscules that have been identified in it so far,[55] one contains the legends of St Christina and Sts Cyprianus and Justina in an archaic linguistic form datable to the fifth to seventh centuries (the so-called *xanmeṭi* period of Old Georgian). As early as 1974, L. Kaǯaia proposed that some leaves from the same original manuscript might be included in another palimpsest codex, viz. ms. A-737 of the Kekelidze Institute of Manuscripts (today the National Centre of Manuscripts) in Tbilisi,[56] a multiple-text manuscript rewritten by around the fourteenth century.[57] As a matter of fact, the eight leaves of the Tbilisi codex in question fit exactly into two lacunae in the Vienna palimpsest within St Christina's legend, as illustrated in table 14 above (where the pages from A-737 are marked

[55] See Gippert et al. 2007, 18–25 for details.

[56] See Kaǯaia 1974, 419.

[57] See Žordania 1902, 198.

with an 'A' and a grey background). Note that when reused, the folios belonging to the original manuscript were prepared in different ways, so that they yielded one bifoliate each of the Vienna codex (turned round by 90°), but two bifoliates each in the Tbilisi codex (cut horizontally and folded in the middle). The resulting effect is illustrated in fig. 18.[58]

2.5.3

The question now is where and when the disintegration of the leaves of the original *xanmeṭi* codex took place and how the two different sets resulting from it came to be reused in the production of two different palimpsests. Several scenarios can be drawn up here. The original codex might have been kept in Georgia before it was divided up there, with parts of it being taken to Jerusalem prior to being palimpsested, or vice versa. On the other hand, both palimpsests may have been produced in the same location, in Jerusalem or in Georgia, with one of them being moved to the other site later. The palimpsests may even have been produced at a third site such as Mt Sinai or Antioch. As no hints have been found as yet in the upper layers of the palimpsests, which would indicate where they were written, the question must be left open until other (possibly scientific) means have been devised to determine the provenance of the individual layers.

3. Secondary use of manuscripts

Regardless of their place of origin and their later whereabouts, Georgian manuscripts were subjected to various types of reuse. Leaving aside the special case of palimpsests, this was especially true for blessings, rogations and prayers added by later readers, users or owners, and also for less 'immanent' additions such as prescriptions, contracts or writing exercises. A few examples will again suffice to illustrate this.

3.1

It was, indeed, quite common throughout the history of Georgian manuscript production for blessings, rogations and prayers to be added by readers and users, both for their own and for others' purposes. A good example of this is the Vienna codex no. 4, discussed above, to which Besarion Kioṭišvili added not only a restorer's colophon (on fol. 8^{r}; cf. 2.4.2 above), but also, as marginal notes, a whole set of

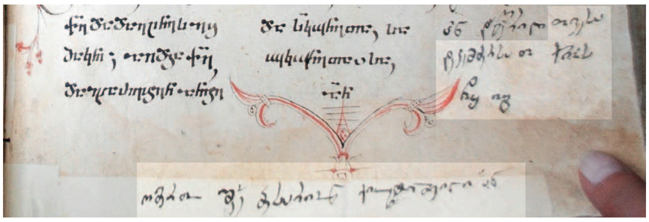


Fig. 19: Cod.Vind.georg. 4, Besarion Kioṭišvili's note on fol. 180^{r} (name and date highlighted).
ġmerto še(içq̇al)e besarion kioṭišvili. a(mi)n
'God, have mercy on Besarion Kioṭišvili. Amin!'

rogations of the type *ġme(rt)o š(eiçq̇al)e besarion saçq̇ali da codvili, amin* ('God, have mercy on Besarion, poor and sinful. Amen!').[59] This type is also encountered in Besarion's last note, applied to the lower margin of fol. 180^{r}, the only note that contains his family name (cf. fig. 19 where the note is highlighted).[60]

3.2

The interplay of (primary) colophons with (secondary) notes can easily be demonstrated with one of the three manuscripts from Svanetia (northwestern region of Georgia) that have not been transferred to the Museum of Mesṭia or the National Centre of Manuscripts, that is, the Laxamula Gospels, a Tetraevangelion written in *nusxuri* minuscules dating to around the twelfth century.[61] The codex, which is still preserved in the village church of Laxamula,[62] has been dismantled in part and considerably damaged by moisture and other harmful effects, with the result that many pages are now only partly legible. Some important colophons have survived, however. This is true, above all, for two notes that provide us with the name of the scribe, a certain Grigol, and a deacon of his, named Sṭepane (on fol. 36^{v}, at the end of the index of lections from St John's Gospel, and on fol. 52^{r}, following another liturgical index; cf. figs. 20a and b).

[58] Edited multispectral images taken from Gippert et al. 2007, 6–36 and 6–38.

[59] See the list in note 41 above.

[60] The right-hand margin of the same page shows a lengthier note by Besarion, dated 9 September 1683 (the date is also highlighted in fig. 19).

[61] For an earlier discussion, see Silogava 1986, 59–60. The codex was inspected by the present author and several colleagues during two trips to Svanetia in 2007 (as part of the above-mentioned INTAS project) and in 2010 (as part of the 'Old Georgian palimpsests' project, funded by the Volkswagen Foundation, 2009–14). My thanks are due to the inhabitants of the village for allowing us access to this important codex.

[62] Located at 43°3'6" N and 42°26'27" E.

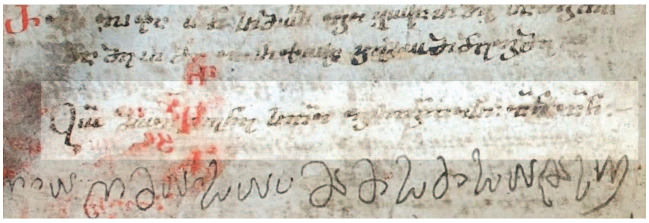


Fig. 20a: Laxamula Gospels, scribe's note on fol. 180^{r} (highlighted).

O(wpal)o moiqsene s(u)li grigolisi : a(me)n a(me)n :—

'Lord, remember the soul of Grigol! Amen, amen!'

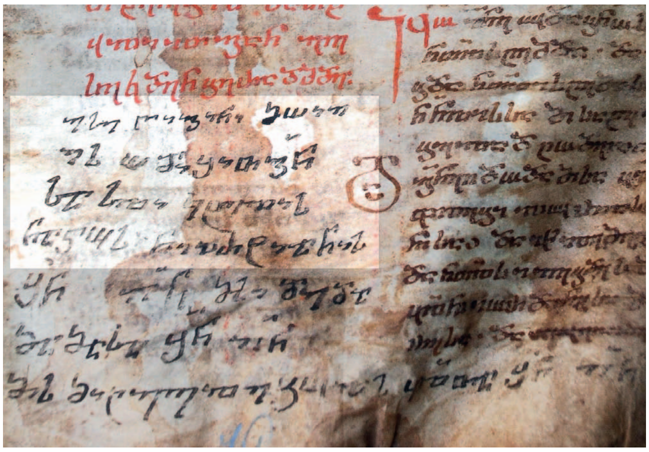


Fig. 21: Laxamula Gospels, Naču Nip̣arṭiani's colophon on fol. 79^{r} (highlighted).

ese çigini*[63] *moiġ|es odišitg(a)n | ***s(uls)a suli-ḳ(urt)x(e)v(u)lis*** | ***naçus nip̣(a)rṭianis*** | *š(eiçq̇ale)n ġ(mertma)n*

m(i)si deda | *mamasa š(eiçq̇ale)n ġ(mertma)n* | *mis micv(a)-lebuls q̇(ove)lta š(eiçq̇ale)n ġ(mertma)n*

'**This book was brought here from Odiši.** | God have mercy *on the soul* | **of Naču Nip̣arṭiani, blessed by the (Holy) Spirit**; God have mercy on his mother | and father; | God have mercy on all his deceased!'

3.2.1

On fol. 79^{r}, below the colophon (in red), which provides details about the execution of the Gospel of Matthew, the much later hand of Naču Nip̣arṭiani informs us that the codex was brought (to Svanetia?) from Odiši, i.e. Mingrelia (cf. fig. 21, where the important parts of the note are highlighted).

[63] The correct form would be *çigni*; the insertion of the anaptyctical *i* can be taken as an influence of spoken *Svan*.

[64] The usual form would be *s(ul)sa* 'for the soul'. Possibly the word was added in the left margin to correct the spelling *Sōl* (for *so(w)l(sa)*?) at the beginning of the line; but cf. Naču Nip̣arṭiani's note treated above.

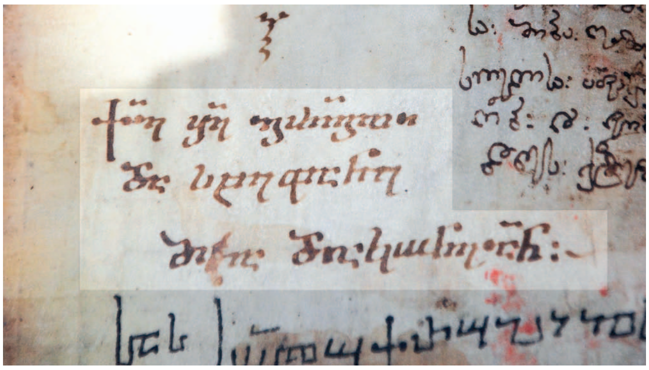


Fig. 20b: Laxamula Gospels, scribe's note on fol. 52^{r} (highlighted).

K(risṭ)e š(eiçq̇al)e grig(o)li | *da sṭepane* | *misa diaḳone a(me)n :—*

'Christ, have mercy on Grigol | and Stepane | his deacon! Amen!'

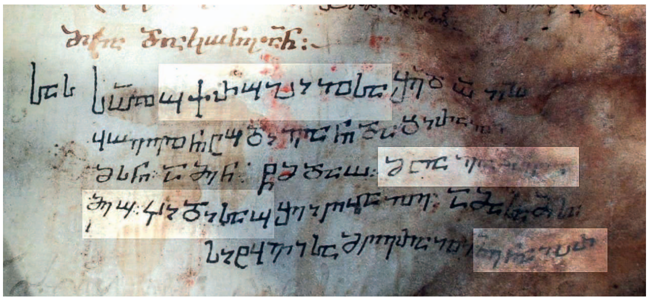


Fig. 22: Laxamula Gospels, Zenahar's note on fol. 52^{r} (name highlighted).

s(ul)sas[64] ***sōl ukrup̣ilsa*** *še(un)d(ven) o(wpalo) ġ(mert)o* | *q̇ovelni cudivani da birali*[65] | *m(i)sni : amen:*

çm(i)dao : ***mtavarm(o)ça|meu : qidisau*** *šeiçq̇ale : ama samisa* | *siṭq̇visa mçerali zenah(a)r*

For the soul of **Okrop̣iri**, forgive, Lord, God, all | his sins and guilt! Amen!

Holy **Archimartyr of the Bridge**, have mercy on the writer of these three words, **Zenahar**!

3.2.2

Another note written in a clumsy late *nusxuri* minuscule, added below the scribe's note on fol. 52^{r} by a certain Zenahar on behalf of one 'Chrysostom' (*ukrup̣il*, a Svanicised variant of Georgian *okrop̣iri* ('golden-mouthed')), addresses the church of St George in Laxamula by its traditional name, *mtavarmoçame qidisa*, i.e. 'the Archimartyr of the Bridge' (cf. fig. 22, where the names are highlighted again).

[65] The correct forms would be *codvani* and *brali*; again we have Svanicized forms here.

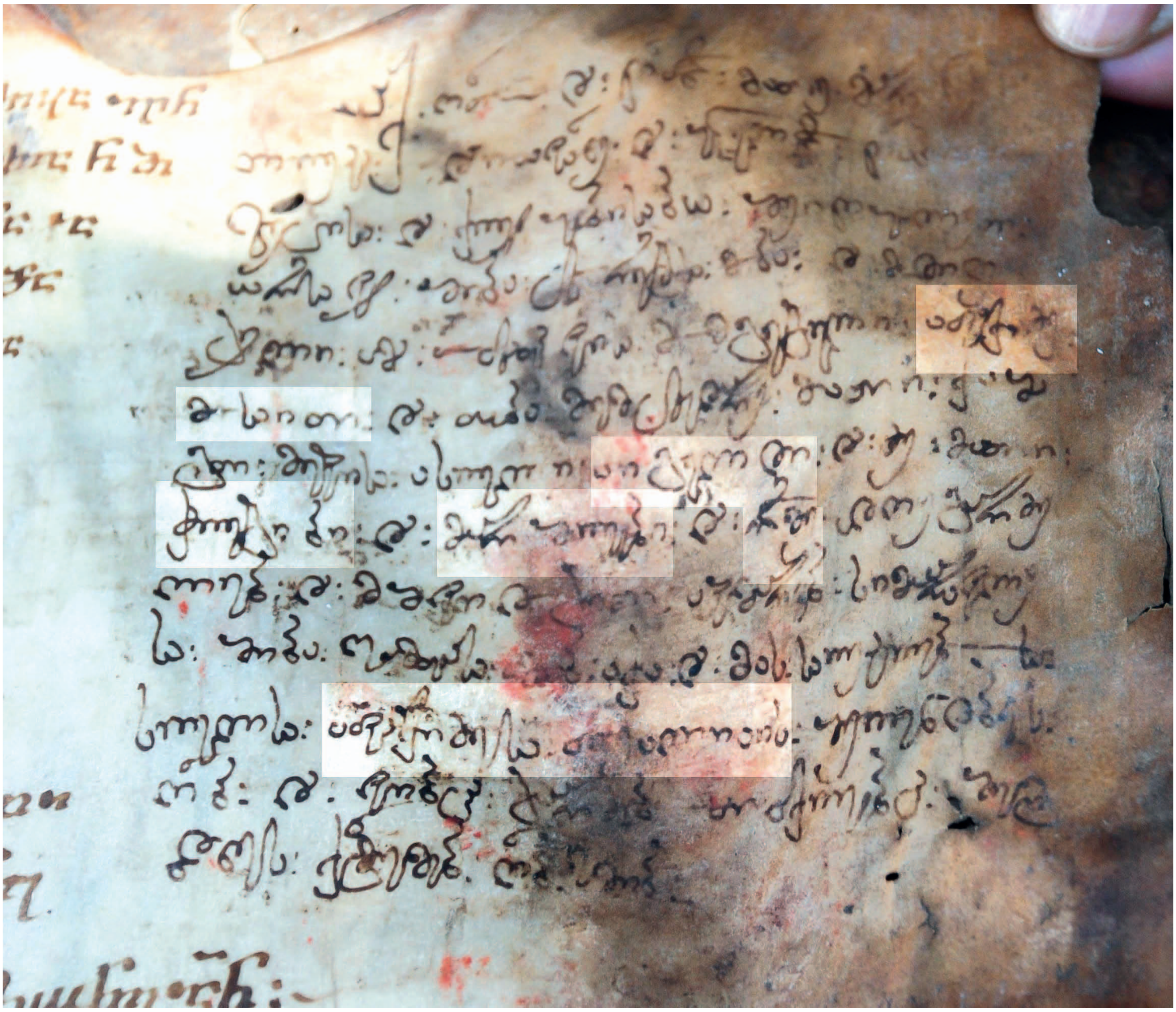


Fig. 23: Laxamula Gospels, the Apakiʒes' note on fol. 52r (names highlighted).

Table 15: Laxamula Gospels, the Apakiʒes' note on fol. 52r.

K(risṭe) : ġ(mer)to da : ç(mid)ano : mate . marḳoz	Christ, God and Sts Matthew, Mark,
luḳa : da iovane : da : q̇ovelno ġ(mrtisan)o	Luke and John and all God's (crowd)
zecisa : da : kueq̇anisano : šeiçq̇alet :	in heaven and on earth, have mercy
orsave : šina : cxorebasa : mona : da madide-	in both worlds on (your) servant and praiser,
beli : am : otxtavisa : momgebeli : ***apakiʒe***	the acquirer of these Gospels, **Apakiʒe**
mosaiti *:da tanamemcxedre : mati : kaša-*	**Mosaiti**, and their (!) bedfellow, the Circassian
gi : mepisa : asuli : ***aigeldi***[66] *: da : ʒe : mati :*	king's daughter **Aygeldi**, and their son(s)
čubini *: da :* ***maršueni***[67] *: da :* ***rome***[68] *: adġegrʒe-*	**Čubini** and **Maršueni** and **Rome**! May they live
len : da : mšvidobit : aqmaren : simravle-	long and may they be supportful in peace for plenty
sa : šina : žamtasa : amin : aka : da : mas : sauḳunosa	of times, amen, now and in eternity!
*sulsa :****apakiʒesa tualiaisa*** *: šeundnes :*	May God pardon the soul of **Apakiʒe Tualia**,
ġ(mertma)n : da : vinca brʒan[debi]t . tkuenca : šegi-	and whoever you deign to be, may you be pardoned
ndes : k(ris)ṭeman : ġ(mertma)n : amin :	by Christ the God, too! Amen!

3.2.3

The same page features yet another colophon that is legible, but unlike the notes mentioned above, it is written in a *mxedruli* cursive (cf. fig. 23).[69] Its subject (and author?) is Apakiʒe Mosaiti, who is styled as an 'acquirer' (*momgebeli*) of the Gospel codex, together with his wife (of Circassian origin) and his family. It may be important within this context to note that the name Apakiʒe is well known in both Svanetia and Mingrelia, the most prominent family members being known as the 'princes of Odiši'. However, neither Mosaiti[70] nor his deceased relative, Tualia, can be identified historically. The transcript given in table 15 is again tentative.

3.2.4

Apart from the rogations discussed thus far, the codex contains at least three notes that can be categorised as treaties or oaths, either uttered by the village community (addressing themselves as *laxamlelni*) or by individual persons.[71] For this kind of text, the Gospel codex obviously served as a guarantee of their validity. The following example (from fol. 35ʳ; fig. 24) even addresses the subject of blood feuds, a practice upheld in Svanetia at least until the nineteenth century. Again, the church of Laxamula is mentioned by its traditional name (cf. table 16). Note that in applying the note, the codex was turned 90°.

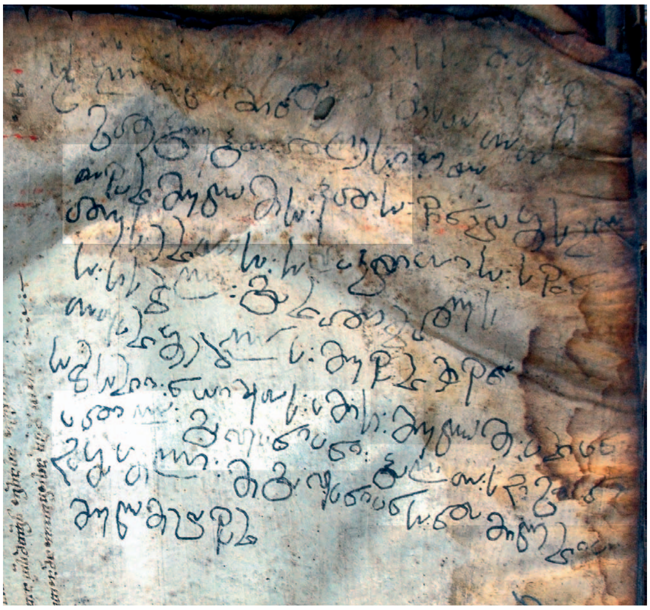


Fig. 24: Laxamula Gospels, Gažaniani's note on fol. 52ʳ (names highlighted).

Table 16: Laxamula Gospels, Gažaniani's note on fol. 35ʳ.

K(risṭe) ǵ(mr)tisa dedisa misisa da q̇ove-	At the will of Christ God, his mother and all
lta ç̣mindata mista tau-	his saints!
sdebubita : dǵes ikita	If from now on someone should sin
tavarmuç̣amesa : q(i)disa : *vinca šesco-*	against the **Archimartyr of the Bridge**,
dus ertisa : sap̣aṭioisa : svani-	he should pay with the blood
sa : sisxli : gardixadus	of one noble Svan.
tu ar šeeʒlos : muvarčvna<t> :	If he is not able, we will suffocate him,
saxsari : no iq̇os : amisi : muç̣ame : arian :	there will be no redemption. Witnesses of this are:
adila : gažaniani : balta : sḳiziani	**Adila Gažaniani, Balta Sḳiziani,**
ḳašašeli : me, ***gažaniansa*** *damiç̣eria .*	from Ḳašaši. I, **Gažaniani**, have written it,
muç̣ameca var	(and) I am a witness, too.

[66] Silogava 1986, 59, reads *aiageldi*. However, there is no second *a* in the name, and *Aygeldi* is a perfect Turkic name formation (lit. 'the moon has come').

[67] Silogava 1986, 59, reads *maršuebi*; however, the first from last character is clearly the same as the first from last, not the third, of the preceding name, *ç̌ubini*. The name is otherwise unknown.

[68] Silogava 1986, 59, reads *romi*. However, the curved descender of the final *e* is clearly visible and interferes with the *r* of *aqmaren* in the line below.

[69] A fourth note (in large *mxedruli* letters) added under Zenahar's note at the bottom of the page is too faint to be deciphered.

[70] The name probably reflects Arabic *musā'id* ('helper'), cf. Turk. *müsait* ('apt'). In the Georgian chronicle of the Mongol period (by the anonymous 'chronicler', *Žamtaaǵmç̣ereli*), Musait is the name of the Ilkhanid ruler, Öljaitü, who is otherwise known as Abu Sa'id Bahadur Khan (Q̇auxčišvili 1959, 324, l. 22 and 325, l. 4).

[71] These 'documentary' texts were first edited by P̣. Ingoroq̇va (1941, 19, no. 17, and 72, nos. 73 and 74) and, secondly, by V. Silogava (1986, 121–122, nos. 16–18); the notes in question, dated by Silogava to the fifteenth century, are on fols. 35ʳᵛ and 36ᵛ.

Table 17: Laxamula Gospels, Pipia's colophon on fol. 20r.

çaviḳitxe ese çmida	I have read this holy
otxtavi saxareba uġirsma	*Tetraevangelion*, (me), the unworthy
deḳanozma daviti pipiam	decanus Davit Pipia.
1975 ç. 19-20 ivlisi.	Year 1975, 19–20 July.
ar šeiʒleba çm(ida) saxarebis	It is not allowed in front of the holy Gospels
çinaše pici cru da ukmi da	to swear a false oath and to pronounce idle and
ušveri siṭq̇vis geba, rac aris	obscene word(s), which is
didi šeçuxeba çm(ida) saxarebisa	a great torment for the holy Gospels.
arca šeuʒleba çm(ida) saxarebas	Nor is it allowed that the holy Gospels
xeli šeaxos dedaḳacma arca	be touched by a woman, or
q̇ovelsa ḳacsa tu ar aris	by any man if he is not
çmidad da monatluli	clean and baptised.

3.2.5

The habit of adding notes to the Laxamula Gospel codex lasted at least until 1975, when a decanus named Davit Pipia inspected it, leaving his handwritten comments on several pages. On fol. 20r, he provided a clear statement as to further usage of the codex (fig. 25), including the practice of swearing oaths before it (cf. table 17).[72]

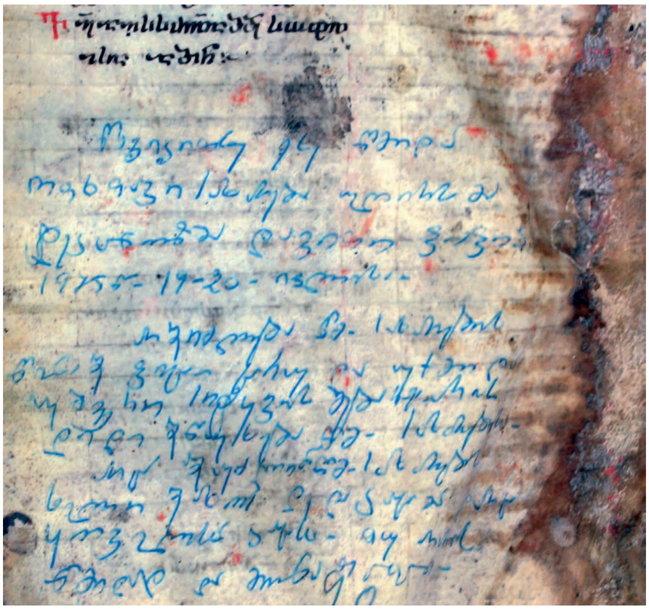


Fig. 25: Laxamula Gospels, Pipia's note on fol. 20r.

[72] Pipia's note is written in blue ink, possibly the same ink used for the page numbering of the codex (which deviates enormously from the original order). Further notes by Pipia are found on the inner sides of the (wooden) front and back covers of the Laxamula Gospels.

3.3

The custom of using Gospel codices for blessings, rogations and other personal notes was not restricted to Laxamula, however. The same type of notes occurs, in even greater variety, in another codex kept in a village church in Upper Svanetia, viz. the *Tetraevangelion* of Kurashi, another Gospel manuscript dating from around the twelfth century and written in *nusxuri* minuscules. This codex, too, contains a scribe's colophon (by a certain Giorgi; fol. 138r), as well as one by its donor (Inay Xešṭinisʒe; fol. 85r). Additionally, there is a note by the 'rulers of Kurashi' who possessed the 'cemetery in front of the Archimartyr of Kurashi', stating that they deposited the book there (fol. 161v). Furthermore, the codex abounds in rogations of priests, deacons and other people. A remarkable example of this is one by Deṭo (Gurčiani), who styles himself the priest of 'St George of Ṭexiši' (fol. 113r), thus using the traditional name of the church in question. What is peculiar about this codex is the occurrence of at least three notes in the Lower-Bal dialect of the Svan language, obviously written by the same Deṭo Gurčiani in the same *nusxuri* hand as the above-mentioned rogation, which dates to around the seventeenth century, and thus represent the oldest extant specimens of written Svan. Moreover, these notes deviate considerably from the 'usual' type of rogation-like notes; instead, they represent rather personal reproaches addressed to the priest's deacon (and, probably, nephew), Guṭu Gurčiani. The latter, on the other hand, is likely to have been responsible for a good many notes consisting of nothing more than characters in their alphabetic sequence, with or without their numerical values,

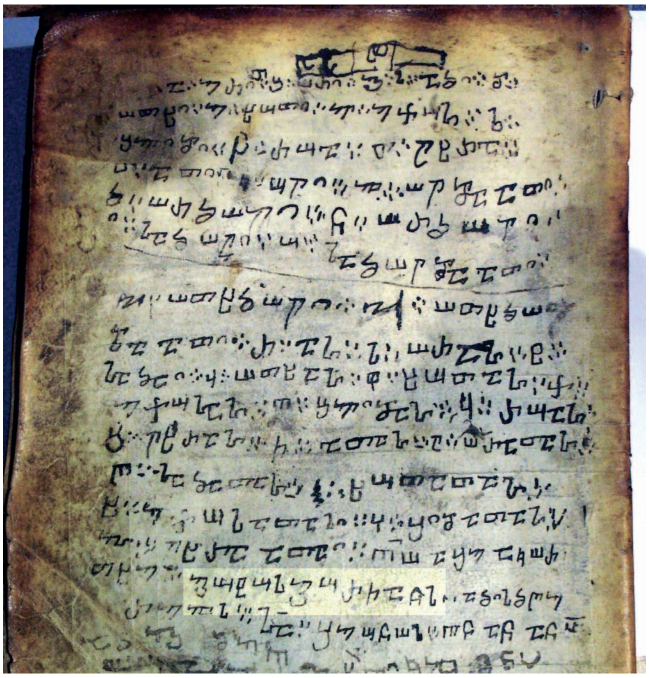


Fig. 26: Kurashi Gospels, Guṭu Gurčiani's writing exercise and rogation on fol. 85v (name highlighted).

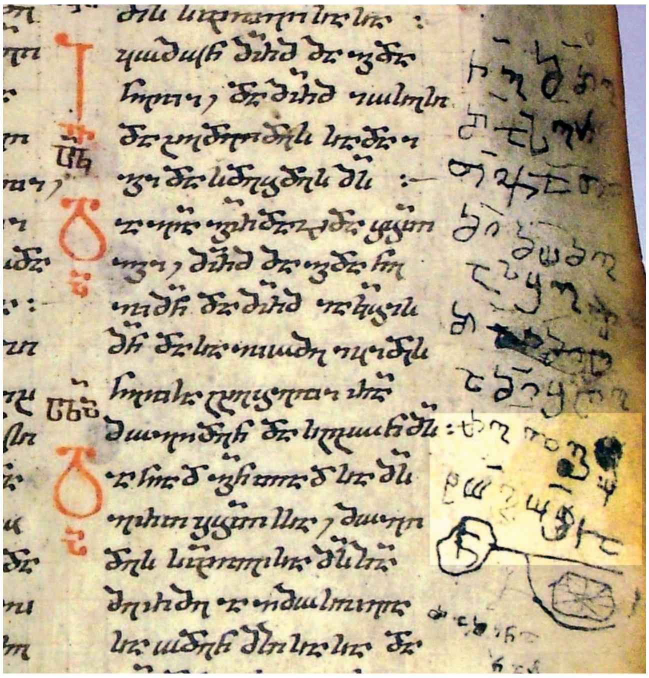


Fig. 27: Kurashi Gospels, Guṭu Gurčiani's writing exercise on fol. 84v (name highlighted).

Table 18 : Kurashi Gospels, Guṭu Gurčiani's rogation on fol. 85v.

ġ(mert)o aše(ne) aḳurtxe	God, build up (and) bless (the home)
guṭus gurčans	of **Guṭu Gurčiani**,
amis mc̣erels	the writer of this!
s(uls)a šeundos o(wpalma)n	May the Lord forgive (his) soul,
a(me)n a(me)n o(wpalo)	amen, amen, Lord!

spanning the complete alphabet or parts of it, as well as other unintelligible material. Considering Guṭu's clumsy hand, it seems highly conceivable that most of his 'notes' were mere writing exercises. As the Kurashi Gospel codex, which also comprises one palimpsest bifoliate, has been the subject of a comprehensive study recently,[73] it should suffice if only a few examples of notes of this type are cited here.

3.3.1

More than half of fol. 85v (fig. 26), originally a *vacat* between the Gospels of Mark and Luke, comprises a nearly complete *nusxuri* alphabet (from a to h; only the last letter, ō, is missing), with the numerical value of every character added in full. The last item, *h = cxraata(s)i* ('9,000'), is followed by two and a half lines which read *ġo aše aḳort|xe : guṭus gurčans : amis mc̣e|rals : sa ; šeunos : on an an ō.* This can easily be interpreted as a rogation of the writer, Guṭu Gurčiani, for himself, as proposed in table 18. At the bottom of the page, we find one more alphabetic sequence (from *a* to *s*, with no numerical values), but obviously written in another hand, thus suggesting that it was not only Guṭu Gurčiani who used the codex for his writing exercises.

[73] See Gippert 2013a, which includes reproductions of the main colophons and the Svan notes.

3.3.2

A strange note abounding in unusual abbreviations in the right margin of fol. 84r (fig. 27) may also have been intended as a writing exercise. It was written in the hand of Guṭu and 'signed' by him again. It reads: *čemde|daser|tikat|mimome | aššek|miaymic̣ | amiš c̣e|rel gu|ṭo gurča|n.* It is clear that the last four words once more stand for *amis mc̣eral(i) guṭu gurčian(i)* ('the writer of this, Guṭu Gurčiani'), with amiš (instead of *amis)* and the missing nominative endings clearly stemming from the influence of spoken Svan. If we ignore the abbreviation marks

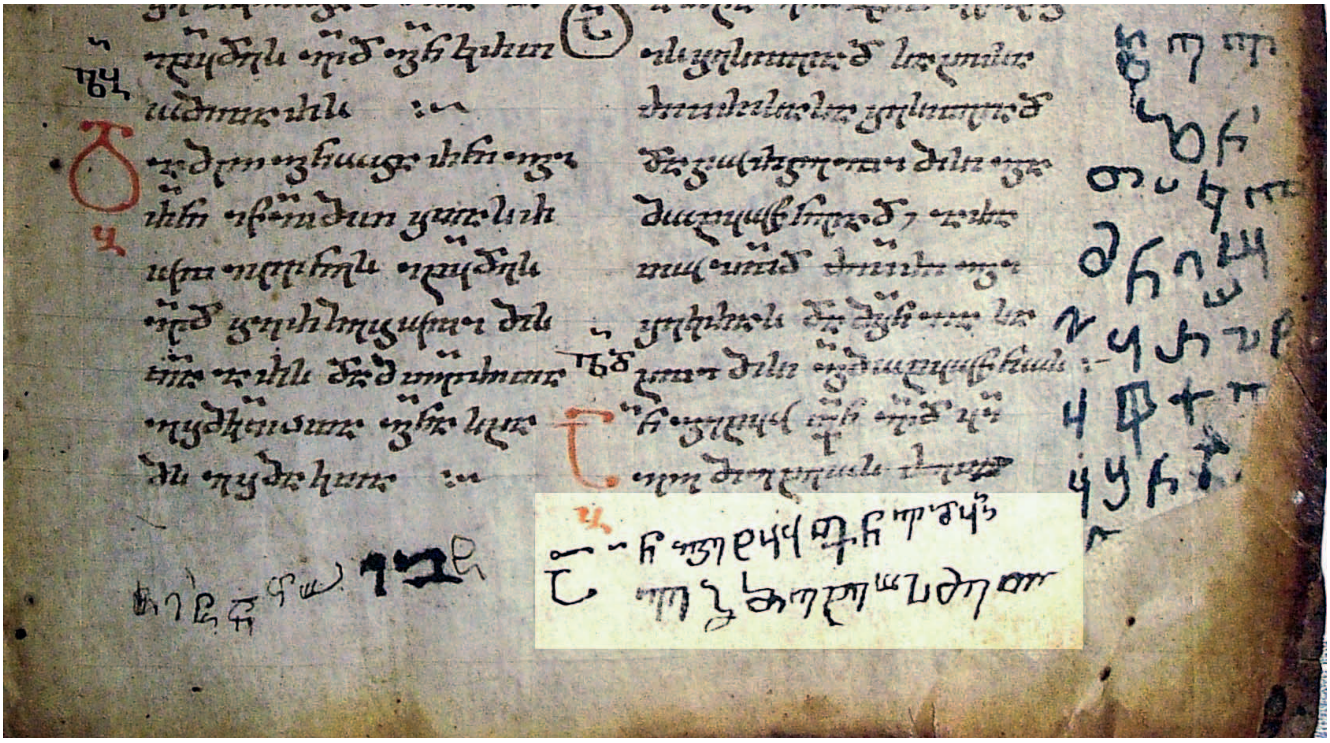


Fig. 28: Kurashi Gospels, writing exercise on fol. 59r (text copy highlighted).

Table 19: Cod. Sin. georg. 16, anonymous complaint on fol. 5v.

š(eiçq̇ale)n . s(a)šinelo : m(a)::q̇(u)l(o)v(a)nis :::: ġ(mrt)is-	Have mercy, frightful Theotokos of the (Unburnt) Bush, on
mšob(e)lo ese . orni ʒm(a)ni damemṭer-	these two brethren. They have become hostile to me,
nes da š(e)n da š(e)ni ʒē x(a)rt mebrčve .	and you and your son are (my) judges
tu rays memartlebian.	as to what they want from me.

in the first half of the note, we may tentatively read it as *čem(s) dedas erti kat(a)mi mome(c),* which would mean something like ‘give me one hen for my mother’. The ‘word’ in the middle, which may read *aššekmiaymiç*, remains enigmatic,[74] as do the characters preceding and following the note (*a|ṭyš|gud|d* and *ʒamina|nar|ai?).*

3.3.3

Another type of writing exercise is encountered for instance on fol. 85r, where somebody (not necessarily Guṭu Gurčiani) copied the first four lines of the donor’s colophon, including the outdented initial letter,[75] or on fol. 59r, where the last two lines of the Gospel text on the page (Mark 3:29) were copied into the lower right-hand margin (alongside an almost complete *nusxuri* alphabet spelled out in another hand in the right-hand margin and an unintelligible sequence of characters added in yet another hand in the bottom margin below the first column and turned round 180°;[76] fig. 28). Conversely, we find that the Gospel text of Matthew 28:16–18 in the lower margins of fols. 71r and 70r (again turned 180°; fig. 29) is not a copy of the ‘main’ text of the pages in question, which contain Mark 9:18–10:1. Instead, it is likely that this is a copy from a lectionary manuscript, given that Matt. 27:58–28:20 is missing in the Kurashi Gospels and the ‘quotation’ begins with a typical introductory formulation, *mas žamsa šina* (‘by that time’).[77]

[74] It is possible that the *k* does not belong to the note, since it is written in a different style. It may simply be a sign of the cross.

[75] See Gippert 2013a, 92 with fig. 7.

[76] This note might represent a (Turkic) personal name ending in *beg* in the dative case, given that it ends in *bgs* (names like *zaurbeg* were quite common in Svanetia).

[77] See Gippert 2013a, 102–103 for further details and *ibid*. 103–104 for another ‘quotation’ of this type (from Mt. 1.1–11), which appears on fol. 116r.

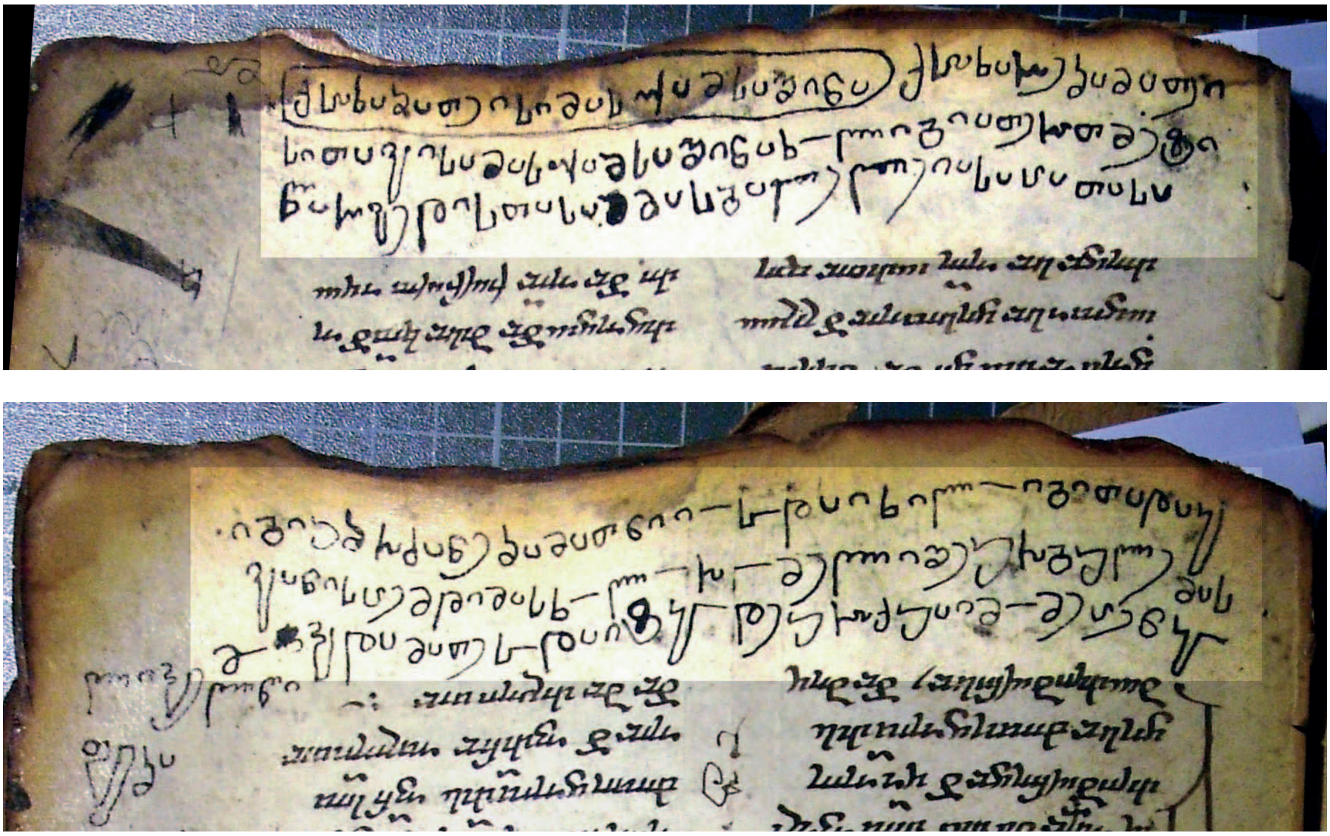


Fig. 29: Kurashi Gospels, Lectionary quotation on fols. 71r–70r (highlighted).

Table 20: Cod. Sin. georg. 16, Davit's rogation on fol. 5v.

dvitas[78]	*d(a)vits,*	Davit
Codvilsa	*Codvilsa*	the sinful
Šeondnes	*Šeundvnes*	may be pardoned
ng̅n d vinc	*ġ(mertma)n d(a) vinc*	by God and (you) whoever
šndoba q̇vtan	*š(e)ndoba-q̇avt. a(me)n*	practice forgiveness. Amen![79]

3.4

Most of the 'secondary' types of notes dealt with above are not limited to manuscripts from Svanetia. This is true, first of all, of rogations added by laymen or other uneducated people, discernible by the clumsy and faulty way in which they are written. A series of good examples of this is to be found in the Gospel codex, Sin. georg. 16, mentioned above. On fol. 5v (fig. 30a) after the short rogation *k(risṭ)e š(eiçq̇al)e d(a)n(i-e)l, a(me)n,* ('Christ, have mercy on Daniel, amen!'), added by the scribe in red ink after the index of miracles taken from the Gospel of Matthew, there is, firstly, a four-line complaint made by an anonymous person, also in red ink, addressed to the Theotokos 'of the (Unburnt) Bush'[80] (see the transcript in table 19), and, secondly, another rogation by one Davit, written in extremely large and awkward *nusxuri* characters with many additional dots (cf. the transliteration and the transcript in table 20).

[78] The cross-shaped symbol at the end of the line might be taken to be the letter *k* (an abbreviation for *krisṭe*, 'Christ'), but this seems unlikely when placed between the name of Davit and his epithet, 'sinful'.

[79] A sixth line at the bottom edge of the page, beginning with *ō*, i.e. an abbreviated form of *upali* ('Lord'), is no longer decipherable today.

[80] The Unburnt Bush of Mt Sinai is a symbol of the Virgin birth of Jesus in Eastern Orthodoxy. The mention of the bush as part of the present complaint speaks in favour of the text having been written down on Mt Sinai. For a previous discussion of this note, see Ǯavaxišvili 1947, 38.

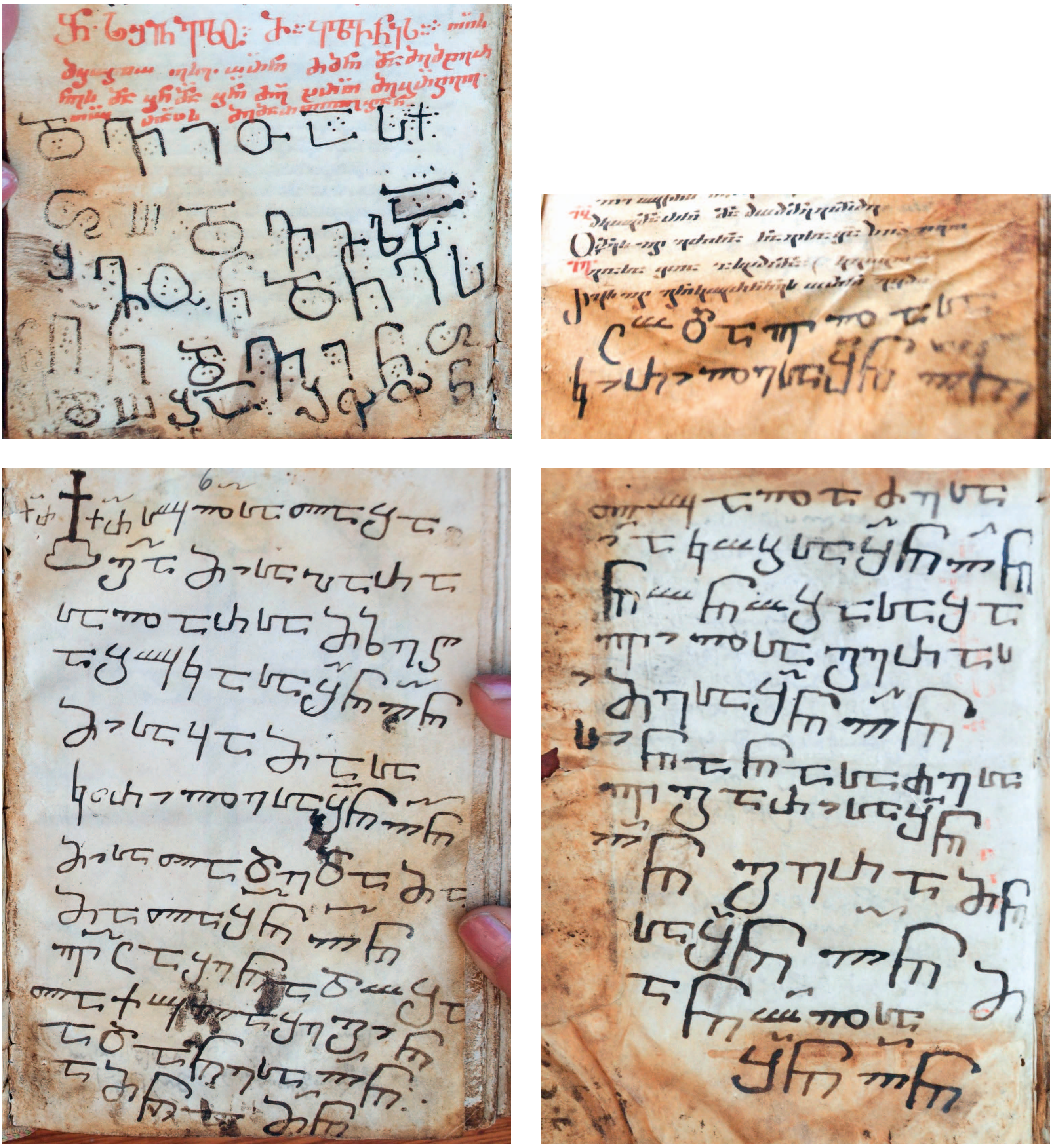


Fig. 30a-d: Cod.Sin.georg. 16, rogations on fols. 5v, 6r, 2r, 1v.

3.4.1

In the same codex, there are at least three further lengthy rogations of this sort, possibly written in the same hand (on fols. 1v, 2r and 6r; figs 30c, 30d and 30b).[81] Of the persons mentioned in them, at least one seems to occur twice: Ḳirile, who is likely to have been the author of the note on fol. 2r and is introduced as the 'page' (*q̇ma-*) of Mzečabuḳ on fol. 6r. The latter person, if his title is correctly restored

[81] Garitte 1956, 51, also considered the note on fol. 5v to be in the same hand. This is unlikely, however, given the peculiar extension of the *m* and *n* characters and the acute form of the *i* character in the other three notes. Cagareli 1888b, 198–9, no. 7, does not mention these notes, nor does Ǯavaxišvili 1947, 36–8, no. 16.

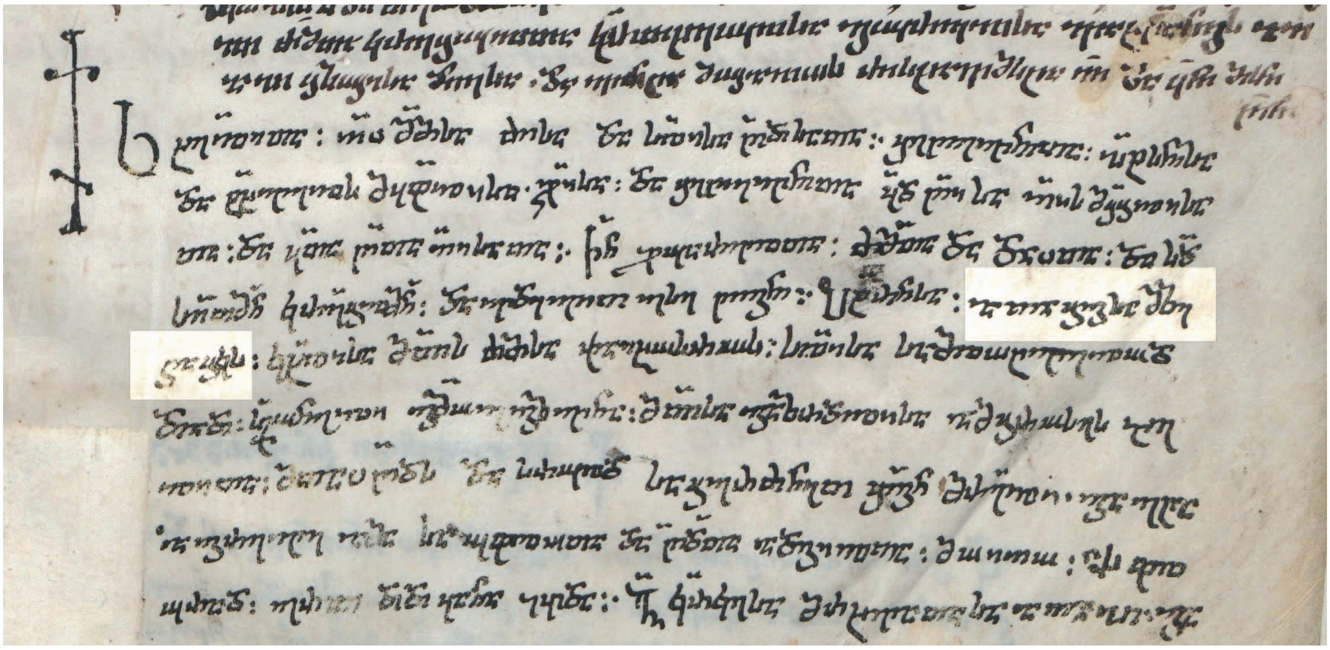


Fig. 30e: Leipzig Cod. no. V 1095, fol. 15r (name of Atabag Mzeč̣abuḳ highlighted).

as *atabag-amirsp̣asalari*, i.e. '*atabag* (and) commander-in-chief', can be identified as the son of Q̇uarq̇uare II (the Great), ruler of the south-western Georgian province of Samcxe in the second half of the fifteenth century. Mzeč̣abuḳ, who bore the title of *atabag* from 1500 to 1515 CE, adopted the name of Iaḳob after retreating from the secular world.[82] He is not identical, however, with a Iaḳob who is mentioned in the note on fol. 1v of the present codex, given that this person bore the patronym Tualaʒe (lit. 'son of Tuala'). There is no information available as to whether Mzeč̣abuḳ ever visited Mt Sinai. However, he is mentioned in a codex from Jerusalem, which was brought to the University Library of Leipzig by C. Tischendorf (Cod. V 1095, fol. 15r; fig. 30e) in an *aġap̣i* (a requiem-like record of deceased persons).[83] This suggests that he may well also have been the object of commemoration at St Catherine's Monastery.[84] Due to the orthographical inconsistencies, the transcripts given in tables 21a–c on the following page are again tentative.

3.4.2

An attempt to copy a previously added note can be seen on fol. 146v of the Gospel manuscript, no. 76 from the Historical-Ethnographical Museum of Kutaisi[85] where, after the end of the Gospel of Mark (fig. 31), Ioane Kaselaʒe begs for mercy for his deceased parents using the same words as a relative of his, Manavel Kaselaʒe, had previously done on

[82] This is clear from the Tbilisi codex Q-969, which mentions a 'Iaḳob who was Mzeč̣abuḳ before' (*mzeč̣abuḳ-q̇opilisa iaḳobisi*) in a series of notes concerning the *atabag*s of Ṭao, amongst the 'orthodox kings' (*martlmadidebli mepeebi*) of Georgia, beginning with the *atabag-amirsp̣asalari* Q̇uarq̇uare, his wife Dedisimedi and his first son Kaixosro, the elder brother of Mzeč̣abuḳ; cf. Bregaʒe et al. 1958, 381–2 and Šarašiʒe 1961, 15–6. The name *mzeč̣abuḳ*, lit. 'sun-squire', first occurs within the Georgian tradition in the twelfth-century epic *Amirandarež̌aniani*, where it is borne by one of the protagonists. This Mzeč̣abuḳ is mentioned in the anonymous chronicle of Queen Tamar, *Isṭoriani da azmani šaravandedtani* ('Histories and praises of the garlanded'; thirteenth century) together with the 'sun of the Khazars', i.e. the daughter of the Khazar king, whom he married according to the epic (ch. 10; Lolašvili 1968, 432: *xvasro xazarta mepeman ... šerto asuli misi colad mze-č̣abuḳsa* ['Khosrow the king of the Khazars ... gave Mzeč̣abuḳ his daughter in marriage']), in a list of amorous couples compared to Tamar and her first husband (Q̇auxčišvili 1959, 36: *vitar mzeč̣abuḳ mzisatws xazartasa* ['like Mzeč̣abuḳ for the sun of the Khazars']). Remarkably enough, the next couple in the list are Jacob and his wife, Rachel (*vitar iaḳob rakelistws* ['like Jacob for Rachel']). One wonders if this was the reason for the *atabag*'s choice of *iaḳob* as his second name.

[83] For a complete transcript of the *aġap̣i*, see Meṭreveli 1962, 77, no. 90. The first edition of the *aġap̣i*s by N. Ja. Marr (1914) does not contain the present text.

[84] See Šarašiʒe 1961, 94–7 for more information on Mzeč̣abuḳ's 'ecclesiastical politics'. Further details of Mzeč̣abuḳ's life are provided in Šarašiʒe 1954, 198–203.

[85] My thanks are due to the staff of the Kutaisi Museum, who made this manuscript available to the members of the above-mentioned INTAS project in April 2007.

Table 21a: Cod. Sin. georg. 16, rogation on fol. 2[r].

codavlasa	*Codvilsa*	May God pardon the sinful
ḳirilesa š̅n̅ ġ̅n̅	*Ḳirilesa š(eundve)n ġ(mertma)n*	Ḳirile!

Table 21b: Cod. Sin. georg. 16, rogation on fol. 6[r].

kr k kr sulsa taba	*Kr(isṭe), kr(isṭe)! sulsa ataba-*	Christ, Christ! May God pardon the soul of the
g̅amisaṗara	*g-amirsṗa-*	Atabag (and) Commander-in-Chief,
salarsa mzeč̣	*salarisa mzeč̣-*	Mzeč̣abuḳ!
abuḳasa š̅n̅ ġ̅n̅	*abuḳissa š(eundve)n ġ(mertma)n*	
misa q̇amasa	*missa q̇(r)masa*	May God pardon his page,
ḳyrilesa š̅n̅ ġ̅n̅	*ḳirilesa š(eundve)n ġ(mertma)n*	Ḳirile!
misata dedama	*mista deda-ma-*	May God pardon their
mata š̅n̅ ġ̅n̅	*mata š(eundve)n ġ(mertma)n*	mothers and fathers!
v̅ca šenadoba	*v(in)ca šendoba-*	May God pardon
t akuta šegin	*t akut šegin-*	you whoever grant (lit. have)
adanes ġ̅n̅	dnes ġ(mertma)n	forgiveness!
amn am̅n̅	*am(e)n am(e)n*	Amen, amen!

Table 21c: Cod. Sin. georg. 16, rogation on fol. 1[v].

tuala ʒesa	*Tualaʒesa*	May God pardon Iaḳob
i̅aḳobsa š̅n̅ ġ̅n̅	*Iaḳobsa š(eundve)n ġ(mertma)n*	Tualaʒe!
nonobasa ša	*Nonobasšvilsa*	May God pardon
vilsa geras	*Geras-*	Gerasime
imesa š̅n̅ ġ̅n̅	*imesa š(eundve)n ġ(mertma)n*	Nonobašvili!
inanasa ʒesa	*Inanasaʒesa*	May God pardon Avgari
vgarisa š̅n̅	*Avgarisa š(eundve)n*	Inanaʒe!
ġ̅n̅ geramn	*ġ(mertma)n Gerasime-*	May God pardon
sa š̅n̅ ġ̅n̅ m	*sa š(eundve)n ġ(mertma)n M-*	Gerasime!
ano̅lsa	*ano(we)lsa*	May God pardon
š̅n̅ ġ̅n̅	*š(eundve)n ġ(mertma)n*	Manoel!

his own behalf (cf. the transcripts in table 22).[86] Note that in addition to the two rogations (both of which are faulty in their grammar), the page contains the drawing of a rectangular object, which may be identified as a scribe's writing tablet, strongly reminiscent of a similar image added to the grave inscription of Lauritius, which is exhibited in the cloister of S. Lorenzo fuori le mura in Rome (fig. 32).[87]

3.4.3

An attempt at copying some of the original text of a manuscript into the margins can be seen on fol. 36[r] of the fragmentary Gospel ms. A-1699 held by the National Centre of Manuscripts, Tbilisi, where the heading (in red ink), *sašabatoy,* i.e. 'Sabbath service', and the words, *quvilisasa* ('of the ear'), *tavsa* ('the head') and *da* ('and') of Mark 2:23 seem to be repeated (in black ink and in a clumsy hand) in the lower margin of the page (fig. 33). As it stands, the gloss may be taken to serve

[86] Both Ioane and Manavel Kaselaʒe, and other members of the family, are also the subject of a lengthy rogation on fol. 7[r] of the same codex.

[87] See Becker 1881, 27 and Greeven 1897, 53, which reads *Lauricio con(iu) g(i) benemerenti | uxor pientisima posuit q(ui) v(ixit) an(nos) XXV*. The images contained in the plate were first published by Perret (1851, pl. LXXIII/6) as part of a series of wall paintings in the catacombs, which may indicate the origin of the monument; cf. also Martigny 1865, 368 and Reusens 1885, 98 as to the interpretation of the images.

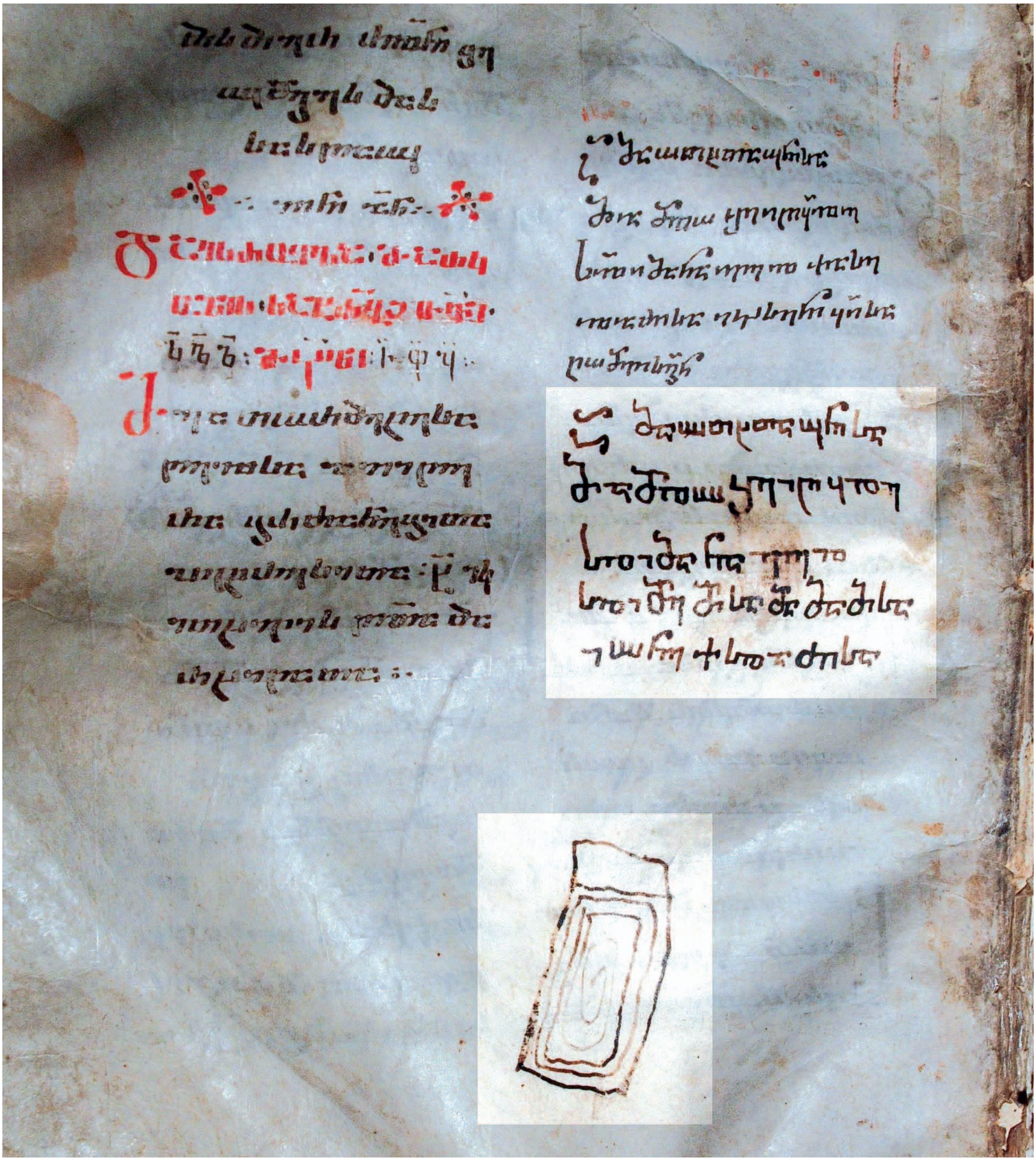


Fig. 31: Kutaisi Gospel Cod. no. 76, fol. 146v ('copied' note and drawing highlighted).

Fig. 32: Grave inscription of Lauritius, S. Lorenzo fuori le mura (drawing highlighted).

Table 22: Cod. Kut. 76, rogations on fol. 146v.

ama otxtavni sa-	May he have mercy on these Gospels
madlo šeiçq̇(a)le	charitably!
s(u)li manavel kase-	May the soul of Manavel Kase-
laʒisa iqseni q̇(ovl)isa	laʒe be freed of all
codvis(a)g(a)n	sin!
ama otxtavni sa-	May he have mercy on these Gospels
madlo šeiçq̇(a)le	charitably,
s(u)li manavel	on the soul (of) Manavel,
s(u)li dedisa mamisa	on the soul of the mother (and) father of
io(a)ne k(a)s(e)laʒisa	Ioane Kaselaʒe!

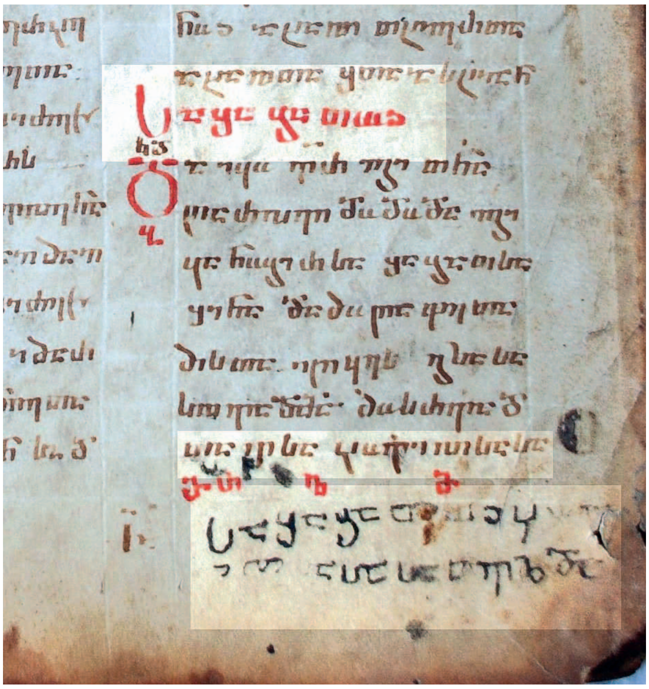


Fig. 33: Cod. A-1699, fol. 36r ('copy' and 'source' highlighted).

the purpose of clarifying the day on which the Gospel passage was to be read ('Sabbath of the ear heads'). However, Mark 2:23 sqq. seem not to have been a usual lection in the Georgian tradition,[88] and in its given form, the note is too faulty to be taken seriously as a piece of liturgical advice (cf. the transcript of both the Gospel passage and the note in table 23).

3.4.4

Unlike this, the lengthy (and very faulty) note in the left-hand margin of fol. 1r of the fragmentary Tbilisi Gospel ms. H-1887 (fig. 34) is not a copy of the main text of the page, which cites Matt. 17:9–18, but another quotation from a lectionary, in this case comprising the very end of the Gospel, Matt. 28:16–20, which was usually read on the Holy Saturday, according to the Jerusalem rite. Due to the bad state of the folio in question, not all of it can be restored with any certainty, as indicated in table 24; the intended text seems clear enough, though.

3.4.5

In rare cases, the authors of secondary notes deemed it appropriate to use a secret script for their 'private' texts. One such case is encountered in Cod. H-372 held by the National Centre of Manuscripts, Tbilisi, a fragmentary Gospel codex considered to date from the twelfth century.[89] The note in question is found after the index of lections from the Gospel of Matthew (fig. 35).[90]

[88] That the Gospel passage in question is Mark 2:23 and not one of its synoptical parallels (Matt. 12:1; Luke 6:1) is clear from the last word of the previous passage, *štaasxian* ('they pour in'), which closes Mark 2:22. The Gospel text is that of the Protovulgate. The passage taken from Mark 2:23 sqq. is not contained in the Paris Lectionary (ed. Tarchnischvili 1959–60), whereas the Greek lectionary (in the Byzantine style) has it on the Saturday of the first week of Great Lent. The Paris Lectionary does include Matt. 12:1–8 amongst the lections for Saturdays (Tarchnischvili 1960, 106, no. 1674).

[89] My thanks are due to Teimuraz Jojua of the National Centre of Manuscripts, Tbilisi, for drawing my attention to this note and to Bernard Outtier, Paris, who discussed its deciphering with me in July 2013.

[90] There is no information on this peculiar note in the catalogue by Kutatelaʒe and Ḳasraʒe 1946, 273.

[91] Sic; note the dittography of the syllable *do*.

[92] Corrected from *slva da* (for *slvad da*?)

[93] Between the last text line and the marginal note, the abbreviations *MR* = Mark, *L* = Luke, and *M* =Matthew appear in the codex as headings to the Eusebian apparatus (in red).

Table 23: Cod. A-1699, 'liturgical note' on fol. 36ʳ.

Sašabatoy	**Sabbath service**
Da iq̇o v(ita)r igi t(a)na-	And it was, when he
ċarhvidododa (!)[91] *igi*	went along
q̇anobirsa šabatsa	in the corn field on the Sabbath,
šina da moċapeta	and his disciples
mista iċq̇es gzasa	began on the way
slvay ***da***[92] *mosrvad*	to walk **and** to pluck
tavsa qovilisasa[93]	**the head of the ear (of grain).**
sašabatoy quv	**Sabbath service of**
ilsasasa tvz da	**the head of the ear (of grain) and (?)**

Fig. 34: Cod. H-1887, fol. 1ʳ (marginal note highlighted).

Table 24: Cod. H-1887, lectionary passage of Matthew 28:16–20 on fol. 1^{v}.

sxrebyma	*saxarebay ma-*	Gospel of Matthew.
teysa mas	*teysay mas*	In those
žisa ša	*žamsa šina*	days:
x̄igi	*xolo igi[ni ...*	But the[y...
... brʒa	*... brʒa-*	... Jesus
nebamat	*nebda mat*	ordered them
iso da eṭq̇o	*iesow da eṭq̇o-*	and said to
des hkra mo	*da (da) hrkua: mo-*	them and spoke:
mec me q̇ly qe	*mec(a) me q̇oveli qe-*	‘All authority has been given to me
lçypa cata	*lmçipebay cata*	in the heavens
da k̄eq̇anasa	*da kueq̇anasa*	and on earth.
[z̄a çarva]	*zeda. çarve-*	Go (and)
dis moimo	*dit, moimo-*	make
çapenlta	*çapenit*	Disciples
mamsata sx	*mamisata sax-*	of the Father in the
ilta ʒisa	*elita (mamisayta da) ʒisa-*	name of the (Father and the) Son
saa da sa	*yta da suli-*	and the Holy
sa çmsa d	*sa çmidisayta, da*	Spirit, and
asçave	*asçave-*	teach
bdt mt	*bdet mat.*	them.’

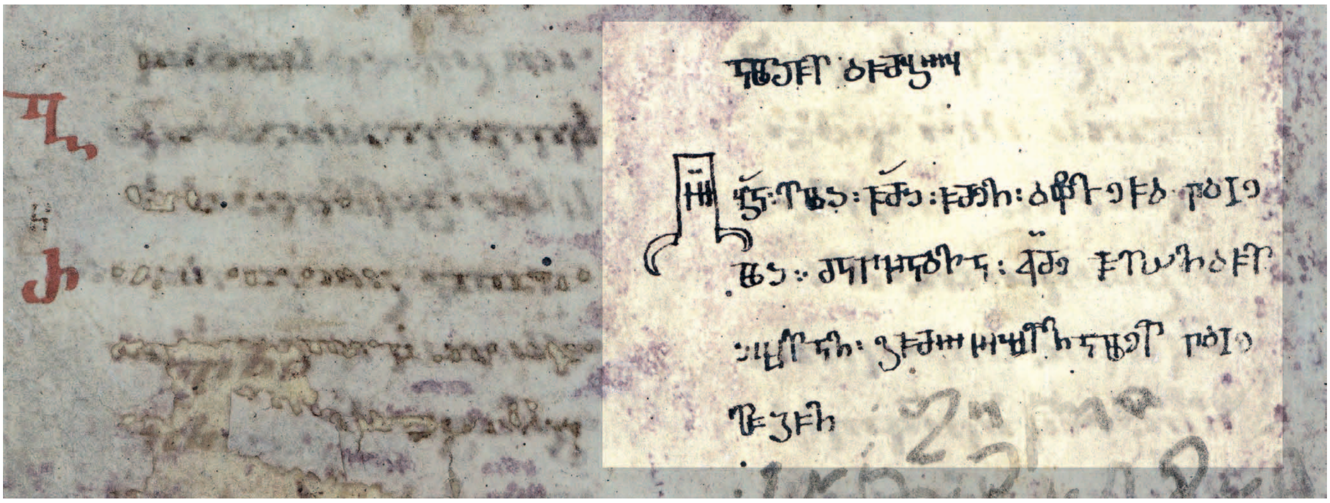


Fig. 35: Cod. H-372, Elia’s note (highlighted).

Table 25: Cod. H-372, Elia’s note in secret script.

O(wpal)o š(eicq̇al)e : s(u)li : a(braa)m(is)i : amin :	Lord,[94] have mercy on the soul of Abraham, amen!
d(a) priad . c(o)dvi-	And the very sin-
li : mecxedre : č(e)mi aswrdas	ful spouse of mine, Asordas,[95]
iqsen : gamouqsnelis c(o)dvi-	resolve from the unresolvable
sagan	sin!

Its author is likely to be a certain Elia, who, however, mentions himself only in a single defective line that can be read as *elias damšo,* possibly restorable as *elias da mšobelta mista* ('for Elia and his parents').[96] In the more verbose text that follows, he prays for two other persons whose names are, however, not certain. The transliteration printed in table 25 is tentative, given that there is no other example of the secret script that has become available to date.

4.

The examples given above were intended to show how and to what extent Georgian manuscripts from the Middle Ages were reused in later times by people seeking support, health or welfare, or just trying to work in accord with the tradition of writing and reproducing 'holy' scriptures. Not all of those who left their personal traces in the manuscripts were as certain of the durability of their notes as the scribe of Sin. georg. 19, who stated with confidence in his colophon that 'The parchment and the writer, both remain' (cf. 2.3.5 above). One hundred years before him, the scribe of another Gospel codex of Mt Sinai (Sin. georg. 30), a certain Ezra Kobuleani, added the following words to his colophon in a much less optimistic vein after completing his transcription of the Gospel of Matthew (on fol. 75ʳ, fig. 36 and table 26): *nakmari egos, xolo mokmedi ara* ('The work will remain, but not the creator'). His endeavour produced not just the Gospel codex itself, but also one of the very first specimens of the *mxedruli* cursive, employed by him as if to increase its personalising effect.

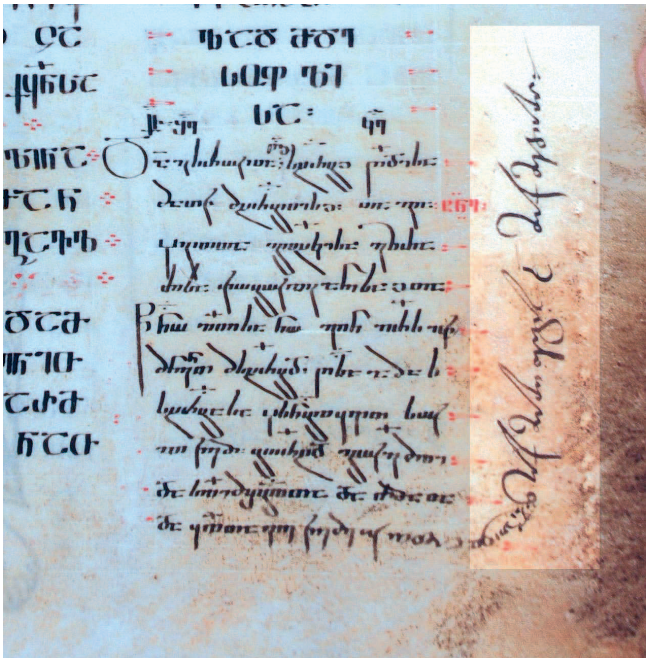


Fig. 36: Cod.Sin. georg. 30, fol. 75ʳ, scribe's colophon (personal note highlighted).

Table 26: Cod. Sin. georg. 30, scribe's colophon on fol. 75ʳ.

Daesrula : ç(mida)y s(a)x(a)r(e)b(a)y ç(mi)disa :—	It has been accomplished the Holy Gospel of St
matē m(a)x(a)r(e)b(e)lis(a)y : tavi : ṭne :	Matthew the Evangelist, chapter 355,
qelita g(la)x(a)ḳisa ezra :—	by the hand of poor Ezra,
ʒisa kobuleanisayta :—	the son of Kobuleani.
Ç(mida)no ġ(mr)tisano vin ġ(i)rs ik- :—	Holy ones in God, you who will become
mnenit ms(a)x(u)r(e)b(a)d : ç(mida)sa amas :—	worthy of doing service with this holy
s(a)x(a)r(e)basa qs(e)n(e)b(u)l-q̇(a)vt su- :—	Gospel, keep remembrance of my
li čemi : bor(o)ṭ(a)d guem(u)li :—	soul, badly tortured,
da s(u)li mš(o)b(e)lta da ʒmata :—	and of the soul(s) of my parents and brothers
da q̇(ove)ltave čemeultay am(e)n l(o)cv(a) q̇(av)t	and of all my (relatives), amen! Pray a prayer!
nakmari egos x(olo) mokmedi ara	**The work will remain, but not the creator.**

[94] *Ġ(mert)o* ('God') would also be possible. The initial letter only occurs here.

[95] B. Outtier (letter of 31 July 2013) drew my attention to the family name, *asrdašvili*, which is listed in Ḳldiašvili et al., 1991 as documented from 1692 onwards. This might stem from the name present in this note.

[96] On fol. 78ᵛ of the same manuscript, we find another note by one Elia (in a hand dating from the fifteenth or sixteenth century, in black ink), saying that he had tried to 'revive' obscure passages of the manuscript; see Ǯoǯua 2014, 370-372 and 380 with fig. 6. This Elia is likely to be the same person as the author of the 'secret' note.

REFERENCES

Abulaʒe et al. (1964) *Ʒveli kartuli agiograpiuli liṭeraṭuris ʒeglebi*. I. Dasabeč̣dad moamzades Il[ia] Abulaʒem, N. Atanelišvilma, N. Goguaʒem, L. Kaǯaiam, C. Kurciḳiʒem, C. Č̣anḳievma da C. Ǯġamaiam (Tbilisi).

Becker, Ferdinand (1881), *Die heidnische Weihformel D · M (Diis Manibus sc. Sacrum) auf altchristlichen Grabsteinen. Ein Beitrag zur Kenntniß des christlichen Alterthums* (Gera).

Bregaʒe, Tamar, Enukiʒe, T., Ḳasraʒe, N., Meṭreveli, Elene, Kutatelaʒe, Lili, Šarašiʒe, Krisṭine (1958), *Kartul xelnaçerta aġçeriloba. Axali* (Q) *ḳolekcia,* II (Tbilisi).

——, ——, ——, ——, —— , —— (1959), *Kartul xelnaçerta aġçeriloba. Q̇opili kartvelta šoris çera-ḳitxvis gamavrcelebeli sazogadoebis* (S) *ḳolekcia,* I (Tbilisi).

Cagareli, Aleksandre (1888a), *Katalog gruzinskix rukopisej monastyrja sv. Kresta, bliz Ierusalima*. Priloženie I to: *Pamjatniki gruzinskoj stariny v Svjatoj Zemlě i na Sinaě* (S.-Peterburg; = *Pravoslavnjy Palestinskij sbornik* IV/1, 143–192); also in *Svěděnija o pamjatnikax gruzinskoj pis'mennosti*, t. I, vyp. 2 (Sanktpeterburg 1889), 143–192.

—— (1888b), *Katalog gruzinskix rukopisej Sinajskago monastyrja*. Priloženie II to: *Pamjatniki gruzinskoj stariny v Svjatoj Zemlě i na Sinaě* (S.-Peterburg; = *Pravoslavnjy Palestinskij sbornik* IV/1, 193–240); also in *Svěděnija o pamjatnikax gruzinskoj pis'mennosti*, t. I, vyp. 2 (Sanktpeterburg 1889), 193–240.

Gippert, Jost (1986), *Drei svanische Phonogramme* (Wien; Mitteilungen des Phonogrammarchivs, 89; also in *Anzeiger der Österreichischen Akademie der Wissenschaften* 123/8: 186–230).

——, Sarjveladze, Zurab, and Kajaia, Lamara (2007), *The Old Georgian Palimpsest Codex Vindobonensis georgicus 2* (Turnhout; Monumenta Palaeographica Medii Aevi, Series Ibero-Caucasica, 1).

—— (2013a), 'The Gospel Manuscript of Kurashi. A preliminary account', *Le Muséon*, 126: 83–160.

—— (2013b), 'The Georgian Hagiorites and their impact on the centres of Georgian eruditeness', in David Muskhelishvili (ed.), *Georgian Athonites and Christian Civilization* (New York), 75–83.

—— (forthcoming), '*Mravaltavi* – A Special Type of Old Georgian Multi-Text Manuscripts', in Michael Friedrich, Cosima Schwarke (eds.), *One-Volume Libraries. Multiple-text and Composite Manuscripts* (Berlin).

Greeven, Gustav Carl (1897), *Die Siglen D M auf altchristlichen Grabschriften und ihre Bedeutung*, Diss. Erlangen (Rheydt).

Ingoroq̇va, Ṗavle (1941), *Svanetis saisṭorio ʒeglebi*, naḳv. 2. *Ṭeksṭebi* (Tbilisi).

Karanadze, Maia, Shatirishvili, Lela, Chkhikvadze, Nestan, Abuladze, Tamar (2010), *Georgian Manuscript Book. 5th–19th centuries. On-line Album / Kartuli xelnac'eri c'igni. V-XIX ss. Elekt'ronuli albomi* (Tbilisi), http://geomanuscript.ge/Kartuli_Khelnaweri_Albomi.pdf; http://dspace.nplg.gov.ge/handle/1234/8834.

Kaǯaia, Lamara (1974), 'Xanmėtnye palimpsesty', in *Problemy paleografii i kodikologii v SSSR* (Moskva), 409–427.

Ḳeḳeliʒe, Ḳorneli (1980), *Ʒveli kartuli liṭeraṭuris isṭoria*, vol. I (Tbilisi, 5th edition).

Ḳldiašvili, D., Surgulaʒe, M., Cagareišvili, E., Ǯandieri, G. (1991), *Ṗirta anoṭirebuli leksiḳoni. XI–XII ss. kartuli isṭoriuli sabutebis mixedvit*, Ṭ. 1 (Tbilisi).

Kutatelaʒe, Lili, Ḳasraʒe, N. (1946), *Sakartvelos saxelmçipo muzeumis kartul xelnaçerta aġçeriloba. Sakartvelos saisṭorio da saetnograpio sazogadoebis q'opili muzeumis xelnaçerebi* (H *ḳolekcia*) / *Catalogue of the Georgian manuscripts of the State Museum of Georgia. Manuscripts of the former Museum of the Georgian Society for History and Ethnography (H collection)*, I (Tbilisi).

Lolašvili, Ivane (1968), 'Amirandareǯaniani', in *Čveni saunǯe. Ʒveli mçerloba*. (Tbilisi; Čveni saunǯe. Kartuli mçerloba oc ṭomad. 2), 283–452.

Marr, Nikolaj Jakovlevič (1914), *Ağapni ḍuaris monastrisani ierusalimsa шina. qarϑuli dedani iv paleograφiuli suraϑiϑ-urϑ gamosϑa* (Petropoli; Bibliotheca Armeno-georgica, 3).

—— (Mari, N[iḳo]) (1955), *Ierusalimis berʒnuli saṗaṭriarko çignsacavis kartuli xelnaçerebis moḳle aġçeriloba*, Dasabeč̣dad moamzada El. Meṭrevelma (Tbilisi).

Martigny, Joseph Alexandre (1865), *Dictionnaire des antiquités chrétiennes* (Paris).

Meṭreveli, Elene (1962), *Masalebi ierusalimis kartuli ḳoloniis isṭoriisatvis (XV–XVII ss.)* (Tbilisi).

Outtier, Bernard (1972), 'Un feuillet du lectionnaire géorgien ḫanmeti à Paris', *Le Muséon*, 85: 399–402.

—— (2012), 'Erti ucnobi siṭq̇vis porma sinas mtis erti kartuli xelnaçeris anderʒši', in Maia Rapava (red.), *Mušaḳi sulierisa venaxisay. Eʒġvneba Mixeil Kavtaraʒis 80 çlis iubiles* (Tbilisi), 19–22.

Peradze, Gregor (1940), 'Über die georgischen Handschriften in Österreich', *Wiener Zeitschrift für die Kunde des Morgenlandes*, 47: 219–232.

Perret, Louis (1851), *Catacombes de Rome: Architecture, peintures, murales, lampes, vases, pierres precieuses gravées, instruments, objets divers, fragments de vases en verre doré, inscriptions, figures et symboles graves sur pierre*, V*: Inscriptions, figures et symboles gravés sur pierre* (Paris).

Qauxčišvili, Simon (1959), *Kartlis cxovreba. Ṭeksṭi dadgenili q̇vela ʒiritadi xelnaçeris mixedvit* S[imon] Qauxčišvilis *mier*, II (Tbilisi).

Rayfield, Donald (2006), *A Comprehensive Georgian-English Dictionary* (London).

Šaniʒe, Aḳaḳi, Čumburiʒe, Zurab (1994), *Udabnos mravaltavi* (Tbilisi).

Šarašiʒe, Krisṭine (1954), 'Sakartvelos isṭoriis masalebi (XV–XVIII ss.)', *Masalebi Sakartvelosa da Ḳavḳasiis isṭoriisatvis* 30: 198–304.

—— (1961), *Samxret Sakartvelos isṭoriis masalebi (XV–XVI ss.)* (Tbilisi).

Sarǯvelaʒe, Zurab (1995), *Ʒveli kartuli enis leksiḳoni. Masalebi* (Tbilisi).

Sarǯvelaʒe et al. (2003), *Adišis otxtavi 897 çlisa*, Ṭeksṭi gamosacemad moamzades, gamoḳvleva da leksiḳoni daurtes Elguǯa Giunašvilma, Dareǯan Tvaltvaʒem, Manana Mačxanelma, Zurab Sarǯvelaʒem da Sopio Sarǯvelaʒem, Zurab Sarǯvelaʒis saerto redakciit (Tbilisi).

Silogava, Valeri (1986), *Svanetis çerilobiti ʒeglebi*. I: *Isṭoriuli sabutebi da sulta maṭianebi* (Tbilisi).

Taq̇aišvili, E. S. (1916), *Adyšskoe evangelie. 200 fototipičeskix tablic i predislovie* (Moskva; Materialy po arxeologii Kavkaza, 14)

Tarchnischvili, Michel (1959–60), *Le grand lectionnaire de l'église de Jérusalem (Ve-VIIIe siècle)* [edition]. I–II. (Louvain; Corpus Scriptorum Christianorum Orientalium, 188/204; Scriptores Iberici, 9 /13).

Žordania, Th. D. (1902), *Opisanie rukopisej Tiflisskago Cerkovnago Muzeja Kartalino-Kaxetinskago duxovenstva*, II (Tiflis; Izdanie Cerkovnago Muzeja, 9).

Ǯavaxišvili, Ivane (1947), *Sinis mtis kartul xelnaçerta aġçeriloba.* Dasabeč̣dad moamzada Iv. Ǯavaxišvilis saxelobis ḳabineṭma (Tbilisi).

Ǯoǯua, Temo (2014), 'Saros cixis aġmšeneblis Vače Gvirgvinais ʒis daḳvetit gadaçerili 1120–1150-iani çlebis otxtavi (H-372) da misi XII–XVI sauḳuneebis anderʒ-minaçerebi / Tetraevangelion H-372 (1120–1150) Commissioned by Vache Gvirgvinais Dze, Ktetor of the Saro Fortress, and its Colophons (12th–16th cc.)', *Saisṭorio ḳrebuli* 4: 342–381.

PICTURE CREDITS

Figs. 1 – 6, 8 – 36: © Jost Gippert.

Fig. 7: The greyscale image of this page is © Dumbarton Oaks, Byzantine Collection, Washington, DC. It was kindly provided in January 2007.

Article

Some Preliminary Observations on the Afterlife of Notre Dame Fragments*

Eva M. Maschke | Hamburg

In the broad spectrum of dimensions a manuscript's afterlife[1] can take on, the use of manuscript fragments as binding material was a very common case in the European Middle Ages and the Early Modern Period. Attempts to reconstruct dismembered manuscripts which were reused as binding fragments have often benefited from the systematic work of the bookbinder, who usually reused several pages of the same manuscript in various bookbindings of the same collection. Considering, however, that the majority of historic collections from the European Middle Ages are now widely dispersed, the reconstruction of historic libraries is usually the first step of a systematic search for binding fragments.

Attempts to virtually reunite widely distributed fragments or dispersed manuscript collections allow the state of a particular collection at a particular point of time to be shown, and also the paths taken by manuscripts from one collection to another; they might also enable scholars to assign further dismembered fragments to these contexts. Projects like the Virtual Manuscript Library of Switzerland[2] and the Penn/Cambridge Genizah Fragment Project[3] have developed tools for future research which address an interdisciplinary audience.

Musicological research on fragments, too, has shown increasing activity during recent decades and has benefited from major projects in which fragments have been catalogued; only a few random examples from different countries will be mentioned here. In the United Kingdom, Wathey, Bent and Craig-McFeely happily announced a decade ago that 'the number of manuscript leaves known from pre-Reformation Britain has expanded by over a third, with new finds frequently forcing the re-ordering of a repertory or an individual composer's output.'[4]

In the course of major cataloguing projects in Scandinavia, like the MPO project (*Databas över medeltida pergamentomslag*) conducted by the National Archives of Stockholm, a number of important fragments containing musical notation were unearthed, among them the organum fragments S-Sr Fr 535[5] and the motet fragments S-Sr Fr 813 and S-Sr Fr 5786.[6] In Germany, Martin Staehelin initiated a research project and a series dedicated to fragmentary

* This article is based on research undertaken in the context of the musicological subproject B03 ('Manuscript Culture and Chant Communities') in SFB 950 'Manuscript Cultures in Asia, Africa and Europe' directed by Prof Dr Oliver Huck and within the scope of the Centre for the Studies of Manuscript Cultures (CSMC). My research would not have been possible without the generous funding of the German Research Foundation (Deutsche Forschungsgemeinschaft), and with the help of various librarians in Cambridge, New Haven, Münster and Soest, who granted me access to all manuscripts and fragments relevant for this project. The research in progress was discussed in Hamburg ('Manuscripts in Motion', conference in November 2012, and 'The Second(ary) Life of Manuscripts', workshop in July 2013, both organised by the Centre for the Study of Manuscript Cultures (SFB 950), Southampton ('Cantum pulcriorem invenire: Music in Western Europe 1150-1350', conference in September 2013), Dresden ('Jahrestagung der Gesellschaft für Musikforschung 2013', September 2013), Sheffield ('Sources of Identity: Makers, Owners and Users of Music Sources Before 1600', October 2013) and Berkeley ('The Material Middle Ages', 28 February and 1 March 2014). I should like to thank Oliver Huck, Stephen Jones and Miriam Wendling for their comments on this text.

1 The terminology of an afterlife of a manuscript will here be used metaphorically as a category which comprises everything that happened to a manuscript after it lost its original function. For a recent article in which a religious connotation is attached to the term 'afterlife', see Heikkilä 2013, 172, who discusses 'The Afterlife and Resurrection' of a Parisian Lectionary in Medieval Finland. In musicological research, the afterlife of music manuscripts has only recently started to attract the attention it deserves; in her handbook article about thirteenth-century music manuscripts, Emma Dillon emphasises that 'the afterlife of manuscripts is also a lens through which to view other historical narratives' (Dillon 2011, 317).

2 Austenfeld 2010.

3 Lerner, Jerchower, 2006.

4 Wathey, Bent, and Craig-McFeely 2001, 228.

5 The library sigla are based on the standard system as established by RISM (*Répertoire International des Sources Musicales*) and will be explained in the list of manuscripts and fragments (Appendix A).

6 A comprehensive bibliography on this research project is found in Brunius 2013. For a first introduction to the organum and motet fragments see Björkvall, Brunius, and Wolodarski 1996; I should like to thank the MPO project team for providing me with an English translation of this article. I am currently preparing an extended study on the *organum* fragments, including a transcription based on new multi-spectral images of the fragments.

sources in 1999 and has recently published some concluding methodological observations, expressing the hope that similar projects will be undertaken in the future.[7] Feeling indebted to the previous projects, our recently completed has taken as its point of departure a survey of all fragmentary sources associated with the polyphonic repertoire of Notre Dame of Paris. After several new fragments transmitting this repertoire, written in the characteristic layout in square notation, had been found during recent decades, a systematic search for further binding fragments seemed overdue.

The Notre Dame repertoire is among the most famous and most intensively studied repertoires of music history. A comprehensive account of all manuscripts and fragments available at the time was provided by Friedrich Ludwig in 1910.[8] Since these music manuscripts survive as (almost) complete codices and transmit the main repertoires of the time in the same characteristic manuscript organization, Ludwig considered the three music manuscripts I-Fl Plut. 29.1 (hereafter F), D-W Cod. Guelf. 628 Helmst. (677) (hereafter W1) and D-W Cod. Guelf. 1099 Helmst. (1206) (hereafter W2) as the main Notre Dame sources.[9]

All of these manuscripts now in Florence and Wolfenbüttel have travelled; none of the Notre Dame manuscripts is at its original home anymore. Whereas, in the manuscript W1, an owner entry pointing to St Andrews Cathedral in Scotland is found,[10] the prior owners of the surviving main Notre Dame manuscripts F and W2 are subject to conjecture. Research holds that F and W2 were produced in Paris; the commissioners and first owners, however, are not known. Haggh and Huglo argued for the thirteenth-century French King Louis IX being a potential first owner of the precious music manuscript F; two centuries later, King Louis XI might have presented the manuscript as a diplomatic gift to the Medici family.[11] Taking the motet texts of W2 as a point of departure, Mary Wolinski has shown textual connections to the Low Countries[12] and has recently examined *Topics of Devotion in the Latin Motets*, which point to a Franciscan context of some motet texts.[13] Future research will have to show if these observations can be extrapolated to the manuscript's prior owners.

In her article 'Notre Dame Manuscripts and Their Owners: Lost and Found' from 1987, Rebecca Baltzer reviewed the available evidence on lost books which were likely to have contained the Notre Dame repertoire and traced hints on 17 lost manuscripts in France, England and Italy, ten of which were mentioned during the thirteenth and seven during the fourteenth century. Popes and kings were among the known owners, as well as some higher dignitaries and lesser known donors associated with St Paul's Cathedral in London.[14]

A comprehensive study of all fragments of the Notre Dame repertoire known today has provided new insights into the question of owners. The most recent discoveries relating to German-speaking medieval Europe have all highlighted the importance of Dominican convents in the transmission of the Notre Dame repertoire, or have, at the very least, pointed to Dominican bookbinders reusing fragments of the Notre Dame repertoire. In different sets of binding fragments now dispersed across various European and American libraries, remnants of at least five different Notre Dame manuscripts have emerged, pointing to Dominican libraries in Frankfurt am Main,[15] Wimpfen am Neckar,[16] Nuremberg,[17] Basle,[18] and

[7] Staehelin 2012, 1–19. See also Staehelin 1997.

[8] Ludwig 1910.

[9] See list of manuscripts and fragments (Appendix A).

[10] Staehelin 1995, fol. 64^r (56^r). On the origins of W1 see Everist 1990 and Roesner 1976. A recently completed Princeton dissertation again emphasises the role of the francophile Bishop Malveisin as an agent of transmission of the Notre Dame repertoire (Steiner 2013). For a survey of W1 in the context of Scottish music see Edwards 2000. For the latest research on the question of date and a literature review see Baltzer 2008.

[11] Haggh and Huglo 2004.

[12] Wolinski 2008; Lievois and Wolinski 2002.

[13] Mary Wolinski, *Topics of Devotion in the Latin Motets of W2*, paper presented at the conference 'Cantum pulcriorem invenire: Music in Western Europe, 1150–1350', University of Southampton, 9–11 September 2013. I should like to thank Mary Wolinski for sharing her unpublished research with me.

[14] Baltzer 1987.

[15] On the *conductus* fragments D-F Fragm. lat. VI. 41 see Staehelin 1987 and Maschke 2010. On the reconstruction of the Dominican library of Frankfurt see Powitz 1968 and Powitz 1994.

[16] For musicological studies on the Wimpfen fragments (now D-DS 3471) see, for example, Ludwig 1923, 203–205; Gennrich 1958; Flotzinger 1970. On the history of the Dominican library of Wimpfen see Staub 1967 and Staub 1980. – Our project's attempt to look for further binding fragments which might contain parts of the dismembered music manuscript in incunables from Wimpfen now preserved in the University Library of Gießen (on which see Schüling 1966) did not lead to further discoveries. Nevertheless, I should like to thank Dr Olaf Schneider, Justus-Liebig-Universität Gießen, for supporting our project and for his helpful advice.

[17] On the organum fragments D-Nst Inc. 304. 2° see Jacobsen 2006 and Flotzinger 2007.

[18] On the organum fragments CH-BU F.X. 37 see Arlt and Haas 1975. For

Soest in Westphalia.[19] Our research project initially focused on these groups of fragments. Here a short summary of the results will be given, relating to the set of fragments reused at the Dominican convent of Soest in Westphalia.

After the discovery of further remnants of the Frankfurt *conductus* fragments (D-F Fragm. lat. VI. 41) in New York (US-NYcub N-66) two decades later than the initial Frankfurt findings,[20] the reconstruction of the Soest *conductus* fragments reads like another detective story which links fragments found at several libraries and archives. Taking the mirror-image offset on the wooden board of the manuscript D-MÜsa Mscr. VII Nr. 6115[21] (Münster, Landesarchiv Nordrhein-Westfalen Abteilung Westfalen) (see fig. 5) as a point of departure, I was able to assign five further leaves to this set of *conductus* fragments in Münster (University Library), Cambridge and New Haven (back flyleaves of D-MÜu 378 and D-MÜu 382, GB-Cssc 117* [formerly pastedown and flyleaf of D-MÜsa Mscr. VII Nr. 6115], and US-NHub Beinecke MS 712.59).[22] The earliest verification of the history of destruction of this music manuscript dates from the fifteenth century, when a bookbinder of the Dominican convent of Soest reused several leaves of the thirteenth-century music manuscript as flyleaves and pastedowns in bindings of autographs of Jacob of Soest.[23]

Some of the flyleaves are still *in situ*, like the two new (re-)discoveries from the University Library of Münster (see figs. 1-4).[24] When their host volumes (D-MÜu 378 and D-MÜu 382) received modern bindings, the flyleaves were not removed from these manuscripts; however, it is likely that, as in D-MÜsa Mscr. VII Nr. 6115, pastedowns from the same music manuscript might have also been attached to the original wooden boards of the bindings, which are now lost. In two other cases (relating to the manuscripts D-MÜu Hs 377 and D-MÜu Hs 379), traces of red staves offset on the last page of the host volume adjacent to the back flyleaf indicate that the respective back flyleaves from the same music manuscript must have been removed; the leaves are now lost.[25]

Another former flyleaf (now US-NHub Beinecke MS 712.59) matching with the other fragments in terms of layout, script, decoration and repertoire, which must have been removed from another binding of a lost host manuscript from Soest,[26] was in private ownership before 2002 and was bought by the Beinecke Rare Book and Manuscript Library, Yale University, New Haven, in an auction from Maggs Brothers Ltd. (see figs. 10–11). In the process of production of the music manuscript under discussion here, the notation of the leaf now in the Beinecke Library was not inserted, but six double staves per page had already been provided.[27]

Both sets of fragments now in Münster and New Haven had already been known, but were not precisely catalogued.[28] Both the Beinecke Digital Collections and the catalogue of manuscripts of the University Library of Münster categorised them as hymnal fragments; as their texts are edited in *Analecta Hymnica*,[29] the very general umbrella term offered itself as

a recent study on the history of the Dominican library of Basle see Dolbeau 2011a and 2011b.

19 For a first description of the *conductus* fragments D-MÜsa Mscr. VII Nr. 6115 see Eickermann 1974. On the reconstruction of the historic collection of the Dominican library of Soest see Michael 1990a.

20 For a description of D-F Fragm. lat. VI. 41 see Staehelin 1987. On the *conductus* fragments in US-NYcub N-66 and their connection to D-F Fragm. lat. VI. 41 see Maschke 2010.

21 First described by Norbert Eickermann in 1974.

22 For a first announcement of my research see Maschke 2013. Dominique Gatté drew attention to a hymnal fragment that the Beinecke Rare Book and Manuscript Library, Yale University, had made available online as part of the Beinecke Digital Collections (US-NHub Beinecke MS 712.59): http://brbl-dl.library.yale.edu/vufind/Record/3736895 (last accessed: 17 October 2015). – My cordial thanks to Dominique Gatté for generously sharing this link with the Ars Antiqua group on Facebook in September 2013.

23 For a discussion of these autographs see Overgaauw 2006.

24 The *incipits* of the *conductus* fragments will be provided together with the images in Appendix B. The numbers assigned to them are based on Anderson's catalogue of 'Notre-Dame and Related Conductus' (Anderson 1972 and Anderson 1975).

25 See Maschke 2015, 113.

26 The former host volume of the single leaf has not yet been identified, but its context of reuse points to the Dominican convent of Soest. Like on many other bindings produced for Soest, traces of rusted nails of a former metal sign are found on the fragment (see Michael 1990b, 27), as well as strong wormhole infestation (which is particularly well visible on the back flyleaf of D-MÜu 382 [see figs. 3–4]). The two manuscripts D-MÜu Hs 377 and D-MÜu Hs 379, from which the back flyleaves were removed, do not show a matching pattern of wormholes and rusty holes. Cp. Maschke 2015, 113–114.

27 The phenomenon that staves have remained empty is found throughout all of the Notre-Dame sources. Interestingly, *Omni pene curie* (I34) has remained without notation both in W2 and in US-NHub Beinecke MS 712.59, and in both sources, the same order of pieces is found: *Omni pene curie* follows *Regnum Dei vim patitur* (H33). However, why *Regnum Dei vim patitur* is fully notated in W2, whereas the notation in US-NHub Beinecke MS 712.59 is missing, is an open question.

28 Overgaauw 1996, 109–110 and 116–117; Beinecke Rare Book and Manuscript Library, Yale University, Beinecke Digital Collections: http://brbl-dl.library.yale.edu/vufind/Record/3736895 (last accessed: 17 October 2015).

29 Dreves 1895.

a working hypothesis. More precisely, however, the two-part musical settings belong to the genre of the polyphonic *conductus*, one of the main genres of the Notre Dame repertoire.

Another set of *conductus* fragments discovered in Cambridge during the 1990s (GB-Cssc 117*), which can now be assigned to the Soest *conductus* fragments, was known, too (see figs. 6–9).[30] However, its particular connection to the wooden board of the binding of manuscript D-MÜsa Mscr. VII Nr. 6115 has heretofore been overlooked. The two trimmed leaves are in fact the very pastedown and flyleaf which were removed from their host volume during the nineteenth century and of which only the mirror-image offset now in Münster has remained. During the 1850s, the two parchment leaves were reused a second time as a wrapper of a Book of Hours, which was sold in several auctions during the twentieth century and which was finally acquired by Sidney Sussex College, Cambridge.[31]

Therefore, up to now, five single leaves from the thirteenth-century music manuscript – reused once or twice in four different host volumes now in four different libraries and archives – have come to be known, one of them in two different representations as pastedown (now in Cambridge, see figs. 6–7) and mirror-image offset (now in Münster, see fig. 5).[32] A detailed discussion of the reconstructed source itself as well as the afterlife of its individual leaves was published elsewhere;[33] a facsimile of all leaves known by now is provided here (see Appendix B, figs. 1–11).

In addition to this, while working in the Beinecke Library in March 2014, I checked two further single leaves taken from manuscripts transmitting ancient and theological works for connections to the same context of reuse in bookbindings of the Dominican convent of Soest. One of them, the fragment US-NHub Beinecke MS 712.60, bought together with the music fragment now US-NHub Beinecke MS 712.59, suggested a potential connection to the fragment D-SO Fragm. 119, formerly a binding fragment in the Codex D-SO Cod. 36 and now preserved separately in the Wissenschaftliche Stadtbibliothek Soest.[34] Both fragments transmit parts of the *Dialogi* by Sulpicius Severus. However, as the scribal hands differ, it cannot be said with certainty whether the two leaves originally came from the same manuscript or from two different copies of the same work.[35]

Contrary to this, Krämer's and Michael's shared assumption that the fragment of English origin now US-NHub Beinecke MS 516, might once have been part of the historic collection of the Dominican convent of Soest,[36] could be confirmed by the owner entry 'liber iste est fratris reyneri de capella / orate pro eo' in the margin which is also found in other manuscripts from Soest.[37] The fragment contains Pope Gregory I's *Moralia in Job* and is written in 'a graceful, firm, precise English uncial hand very similar to, if not identical with, that of the Codex Amiatinus'.[38] A connection to the binding fragment in the Soest codex D-SO Cod. 25/3 containing Pope Gregory I's *Dialogi in Ezechielem* can be ruled out, as this fragment is written in a minuscule script (according to Bernd Michael a twelfth-century Romanesque book script).[39] Furthermore, its host volume does not come from the library of the Dominicans, but from the Ratsbibliothek of Soest.

30 First described by Everist 1994.

31 Everist 1994.

32 When the former pastedown and flyleaf of D-MÜsa Mscr. VII Nr. 6115 were stuck together as a wrapper of the *Book of Hours* now GB-Cssc 117, the stave containing the lower voice 'verba celica dum verbum conci-[pit]' from the *conductus Iam vetus littera* (H24), now fol. 1^{r}, was glued on the last available stave of *Dei sapientia* (J06), fol. 2^{v}. After the two leaves were removed from each other during the 1990s, the mirror image offset of one stave on the other has remained visible (see fig. 7). Thus, again, one stave is available in two representations; in this case, however, the legibility of the original stave is better than its mirror and the mirror does not contain any important additional information, whereas the mirror image representing the pastedown now GB-Cssc 117* is of much better legibility than the remnants of the pastedown itself.

33 See Maschke 2015, Chapter 3 (87–131).

34 A description of D-SO Fragm. 119 and its former host volume, Cod. 36, is found in Michael 1990b, 225–231 and 261.

35 The dating of the two fragments, too, differs slightly. Whereas Michael roughly suggests a twelfth-century date for D-SO Fragm. 119 (Michael 1990b, 227 and 261), the Beinecke library proposes an earlier date for US-NHub Beinecke MS 712.60 (ca. 1075–1100). A preliminary catalogue description of US-NHub Beinecke MS 712.60 is found online at: http://brbl-dl.library.yale.edu/vufind/Record/3736896 (last accessed: 17 October 2015).

36 Michael 1990a, 27, and Krämer 1989, 729. For a hypothesis on the scriptorium in which this manuscript might have been copied see Lutz 1973.

37 On the characteristic owner entries of Reynerus de Capella see Michael 1990a, 16. Catalogue descriptions of US-NHub Beinecke MS 516 are found online at: http://brbl-dl.library.yale.edu/vufind/Record/3592142 and http://hdl.handle.net/10079/bibid/9651478 (last accessed: 17 October 2015). It is not clear where Reynerus de Capella acquired this book. As Lutz 1973 has shown, the manuscript was produced in an English scriptorium (probably in Bede's monastery) between 700 and 750 and later came to the Soest convent, a thirteenth-century foundation.

38 Lutz 1973, 136.

39 For a description of the fragment see Michael 1990b, 165. The host volume contains a fourteenth-century copy of the first part of the *Sachsenspiegel* (*Survey of Saxon Law*), described ibid., 166.

Thus, two of the fragments now in the Beinecke Library, US-NHub Beinecke MS 516 and US-NHub Beinecke MS 712.59, must formerly have been part of the collection of the Soest Dominicans and later have come into private ownership. These unknown private owners sold the fragments in auctions, and the Beinecke library purchased them in 1972 (MS 516) and 2002 (MS 712.59). After the dissolution of the Dominican library of Soest during the nineteenth century, various occasions are documented in which manuscripts and fragments changed owners.[40] One of the most recent cases, however, is particularly striking: in 1969, the Wissenschaftliche Stadtbibliothek Soest donated an unknown number of fragments to American exchange students.[41] It is, thus, not impossible that the unknown private owners who later sold the fragments were once among the young exchange students who visited Westphalia in 1969 and who benefited from a keeper of the archives who generously gave away cultural heritage. Further fragments might still be in private ownership and might one day be assigned to this collection by way of owner entries, matching wormhole patterns or other characteristic traces of reuse.

As this case study from Soest shows, the interplay between systematic research and chance finds has played a major role in the rediscovery of further leaves of this dismembered music manuscript. Without Bernd Michael's reconstruction of the historic book collections of the Soest Dominicans, the systematic search for further binding fragments in books which were scattered to several different and widely separated libraries after the secularisation would not have been possible in a short period of time. The few remaining complete thirteenth-century manuscripts and thirteenth-century fragments from the Dominican convent of Soest could be used to reconstruct the intellectual life of the convent since its foundations during the 1230s.

Virtual reunifications of both the dismembered Notre Dame manuscript presented in facsimile here and the collection of the Soest Dominicans as a whole would be a helpful tool for future research. The framework for this, however, has yet to be developed in a broader international context.[42] Not all of the libraries have the capacity or policy to digitise all of the related manuscripts, which would be the first step in this process. Anne Marie Austenfeld has recently outlined the main goals of virtual reunification projects, which 'offer the various owner libraries a chance to work together while not feeling pressured to give up control of materials they have come to cherish as their own.'[43]

The importance of precise cataloguing has become clear, too. Whereas nineteenth-century catalogues rarely mention binding fragments at all, the most recent catalogue projects have started to include them systematically and will thus facilitate future research on fragments. As for Germany, the German Research Foundation (DFG) first published guidelines as to the cataloguing of manuscripts in 1963; the current guidelines, last edited in 1992, stipulate that all fragments in bindings have to be included into the descriptions and that links to fragments which once belonged to a certain host volume, but are now preserved separately, are to be given.[44]

Considering that further factors remain beyond our control, such as the unknown number of fragments in private ownership which might one day be bequeathed to libraries or sold in auctions, the search for remnants of dismembered manuscripts might seem like a bottomless pit. However, the more precise the catalogue descriptions are, and the more the growing number of digital collections enable the global access to manuscripts and fragments, the better these research tools enable scholars of all disciplines to discover connections between scattered fragments and to trace the journeys of dismembered manuscripts.

---

[40] See Michael 1990a.

[41] According to Gerhard Köhn, this must have happened when the position of the head of the archives was vacant ('während der Vakanz in der Leiterstelle im September 1969', Gerhard Köhn, preface of Michael 1990b, 8-9). According to the personal information of the late Siegfried E. Fuchs, Soest, the students were hosted at the Aldegrever Gymnasium at Soest while attending German classes with the Goethe Institute; the majority of them studied at the University of Marburg later. The Fuchs family hosted one of these students in 1969 and made him return the fragment to the archive. I should like to thank Siegfried E. Fuchs and Marianne Fuchs, Soest, for providing testimony regarding this case when I visited Soest in May 2014. Further research could try to find out a list of these American students in order to hunt for fragments now in private ownership.

[42] Austenfeld 2010, 153.

[43] Austenfeld 2010, 146.

[44] Deutsche Forschungsgemeinschaft 1992, 11. Incunables are subject to different cataloguing systems; as the traditional printed incunable catalogues do not include any information on binding fragments, scholars usually have to check for fragments on site. New policies of cataloguing would be worth discussing.

APPENDIX A

List of manuscripts and fragments cited:

RISM Sigla[45]	Full reference
CH-Bu F.X. 37	Basel, Universitätsbibliothek, Fragmentensammlung, F.X. 37
D-DS Hs 3471	Darmstadt, Hessische Landes- und Hochschulbibliothek, Hs 3471
D-F Fragm. lat. VI. 41	Frankfurt, Universitätsbibliothek Johann Christian Senckenberg der Johann Wolfgang Goethe-Universität, Fragm. lat. VI. 41
D-MÜsa Mscr. VII Nr. 6115	Münster, Landesarchiv Nordrhein-Westfalen, Abteilung Westfalen, Mscr. VII Nr. 6115
D-MÜu Hs 377	Münster, Universitäts- und Landesbibliothek, Hs 377
D-MÜu Hs 378	Münster, Universitäts- und Landesbibliothek, Hs 378
D-MÜu Hs 379	Münster, Universitäts- und Landesbibliothek, Hs 379
D-MÜu Hs 382	Münster, Universitäts- und Landesbibliothek, Hs 382
D-Nst Inc. 304. 2°	Nürnberg, Stadtbibliothek, Inc. 304. 2°
D-SO Cod. 25/3	Soest, Wissenschaftliche Stadtbibliothek, Cod. 25/3
D-SO Fragm. 119	Soest, Wissenschaftliche Stadtbibliothek, Fragm. 119
D-W Cod. Guelf. 628 Helmst. (677)	Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 628 Helmst. (677)
D-W Cod. Guelf. 1099 Helmst. (1206)	Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 1099 Helmst. (1206)
GB-Cssc 117*	Cambridge, Sidney Sussex College, Ms 117*
I-Fl Plut. 29.1	Florence, Biblioteca Medicea Laurenziana, Pluteo 29.1
S-Sr Fr 535	Stockholm, Riksarkivet, Fr 535
S-Sr Fr 813 and S-Sr Fr 5786	Stockholm, Riksarkivet, Fr 813 and Fr 5786
US-NHub Beinecke MS 516	New Haven, Yale University, Beinecke Rare Book and Manuscript Library, MS 516
US-NHub Beinecke MS 712.59	New Haven, Yale University, Beinecke Rare Book and Manuscript Library, MS 712.59
US-NHub Beinecke MS 712.60	New Haven, Yale University, Beinecke Rare Book and Manuscript Library, MS 712.60
US-NYcub N-66	New York, Columbia University, Rare Book and Manuscript Library, N-66

[45] The RISM Sigla are found at: Société Internationale de Musicologie et l'Association Internationale des Bibliothèques, Archives et Centres de Documentation Musicaux (ed.) (1999), *RISM-Bibliothekssigel: Gesamtverzeichnis,* München.

APPENDIX B

Fig. 1: Through-composed two-part *conductus O crux ave spes unica* (H4), beginning (D-MÜu Hs 378, fol. *2r).

Fig. 2: *O crux ave spes unica* (H4), continuation (D-MÜu Hs 378, fol. *2ᵛ).

Fig. 3: Through-composed two-part *conductus Puer nobis est natus* (H25), end of second and beginning of third stanza (D-MÜu Hs 378, fol. *2^{r}).

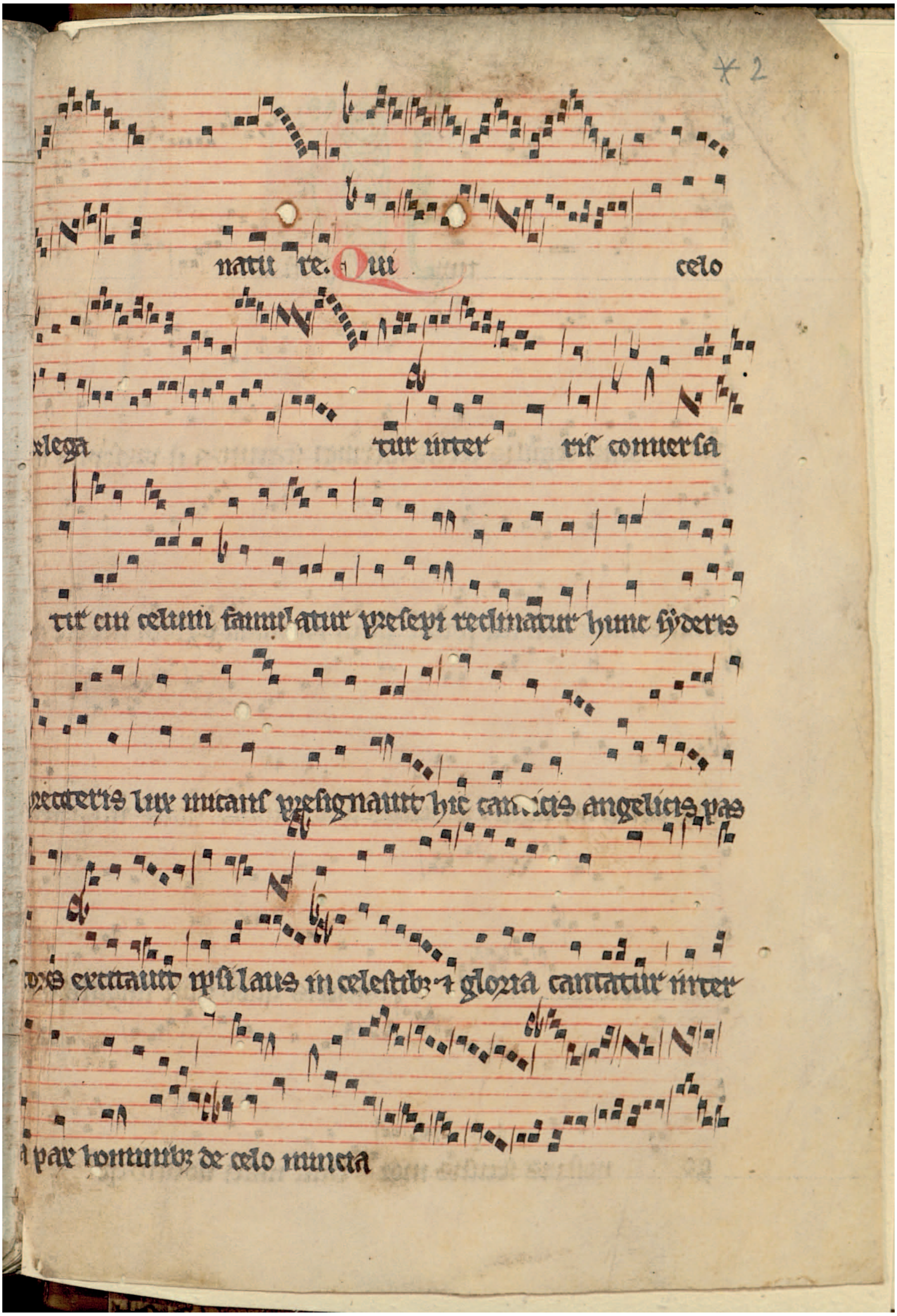


Fig. 4: End of two-part conductus *Puer nobis est natus* (H25), and beginning of through-composed *conductus Naturas Deus regulis* (C7), here in a two-part version (D-MÜu Hs 378, fol. *2v).

Fig. 5: Mirror-image of a removed pastedown on the wooden board of D-MÜsa Mscr. VII Nr. 6115, containing the end of the two-part *conductus Genitus divinitus* (I25) and the beginning of the two-part *conductus Dei sapientia* (J06). The removed pastedown is now in Cambridge (see figs. 6 and 7).

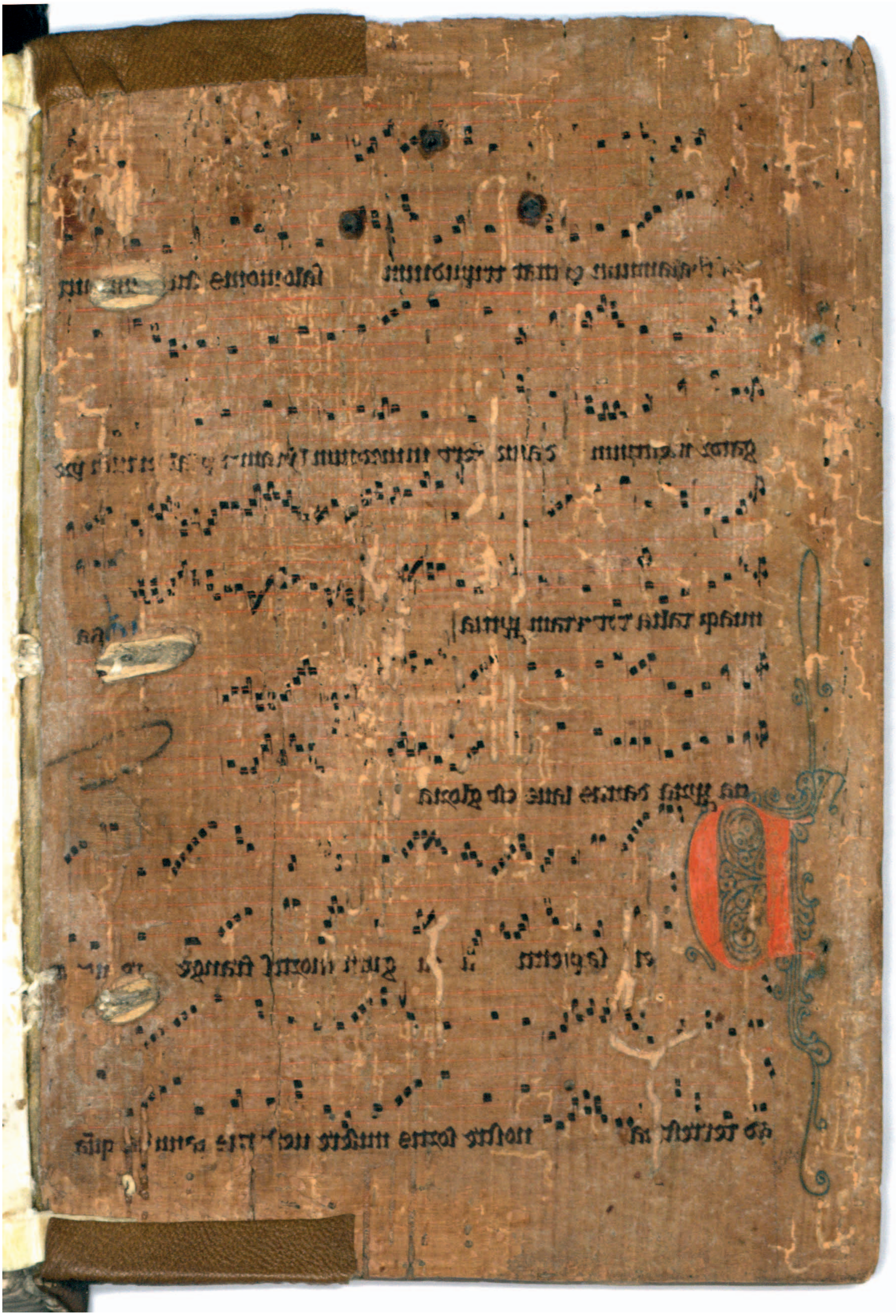


Fig. 6: Through-composed two-part *conductus Genitus divinitus* (I25), end of first and beginning of second stanza (GB-Cssc 117*, fol.2r).

Fig. 7: End of two-part *conductus Genitus divinitus* (I25) and beginning of *Dei sapientia* (J06), GB-Cssc 117*, fol.2v. The undermost stave of *Dei sapientia* is superimposed by the mirror-image offset of the uppermost available stave of *Iam vetus littera* (H24) (GB-Cssc 117*, fol. 1r., see fig. 8). This leaf once formed the pastedown that was removed from D-MÜsa Mscr. VII Nr. 6115 (see fig. 5) during the nineteenth century. Before its use in a low-cost wrapper, it was trimmed; the upper part is lost.

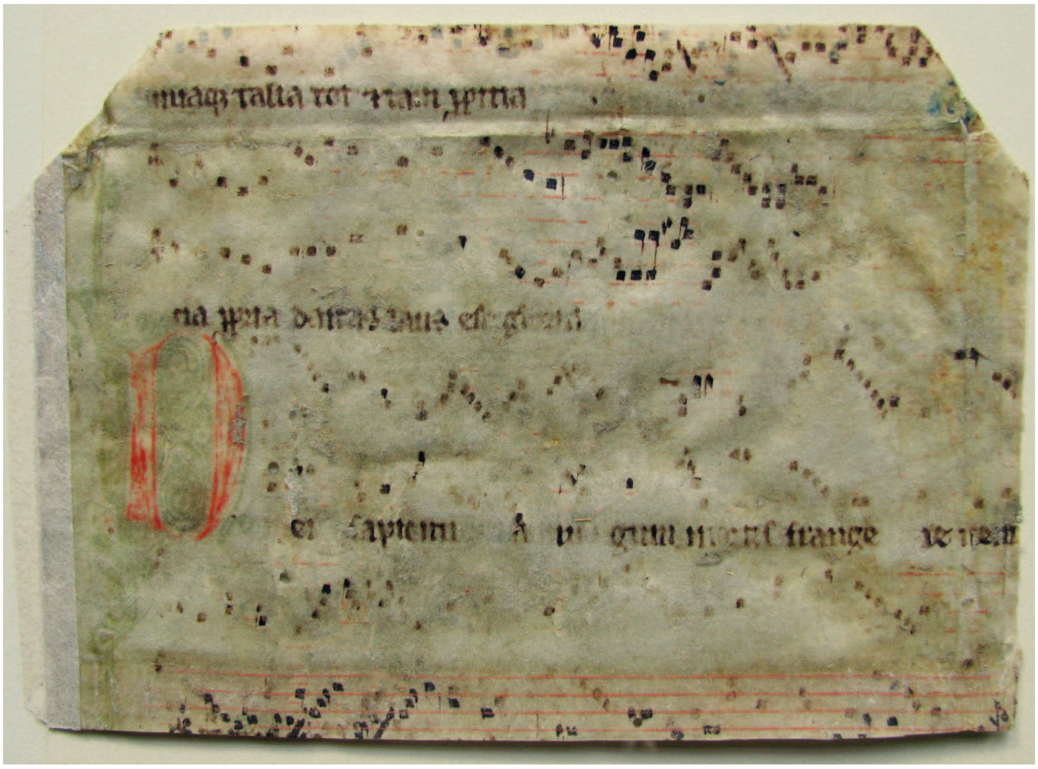


Fig. 8: End of through-composed two-part *conductus Iam vetus littera* (H24); beginning of two-part conductus *Fulget in propatulo* (H17) (GB-Cssc 117*, fol. 1r).

Fig. 9: Through-composed two-part *conductus Fulget in propatulo* (H17), end of the second and beginning of the third stanza (GB-Cssc 117*, fol. 1v).

Fig. 10: Strophic two-part *conductus Regnum Dei vim patitur* (H33) and two-part *conductus Omni pene curie* (I34). Notation was not inserted (US-NHub Beinecke MS 712.59, recto).

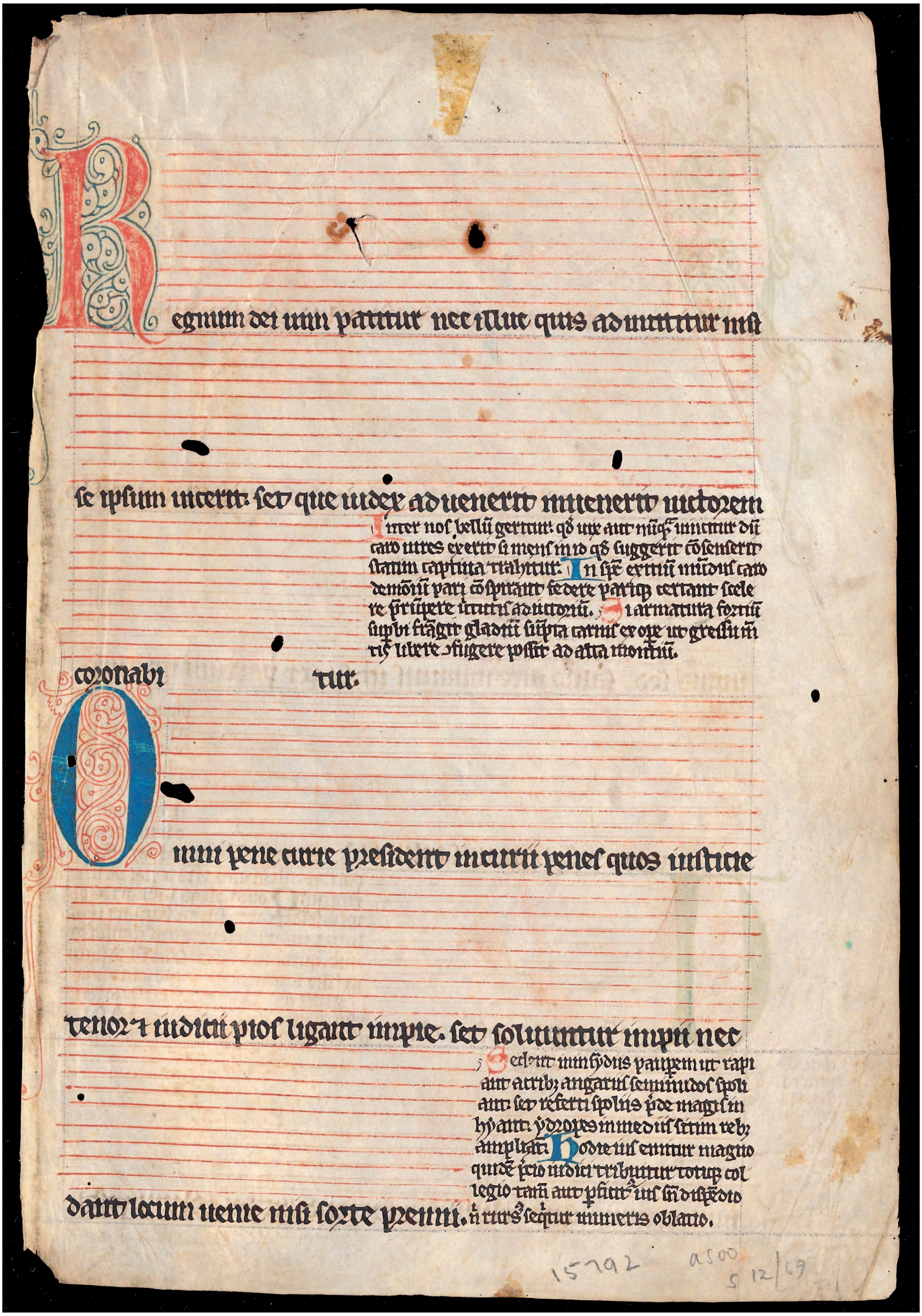
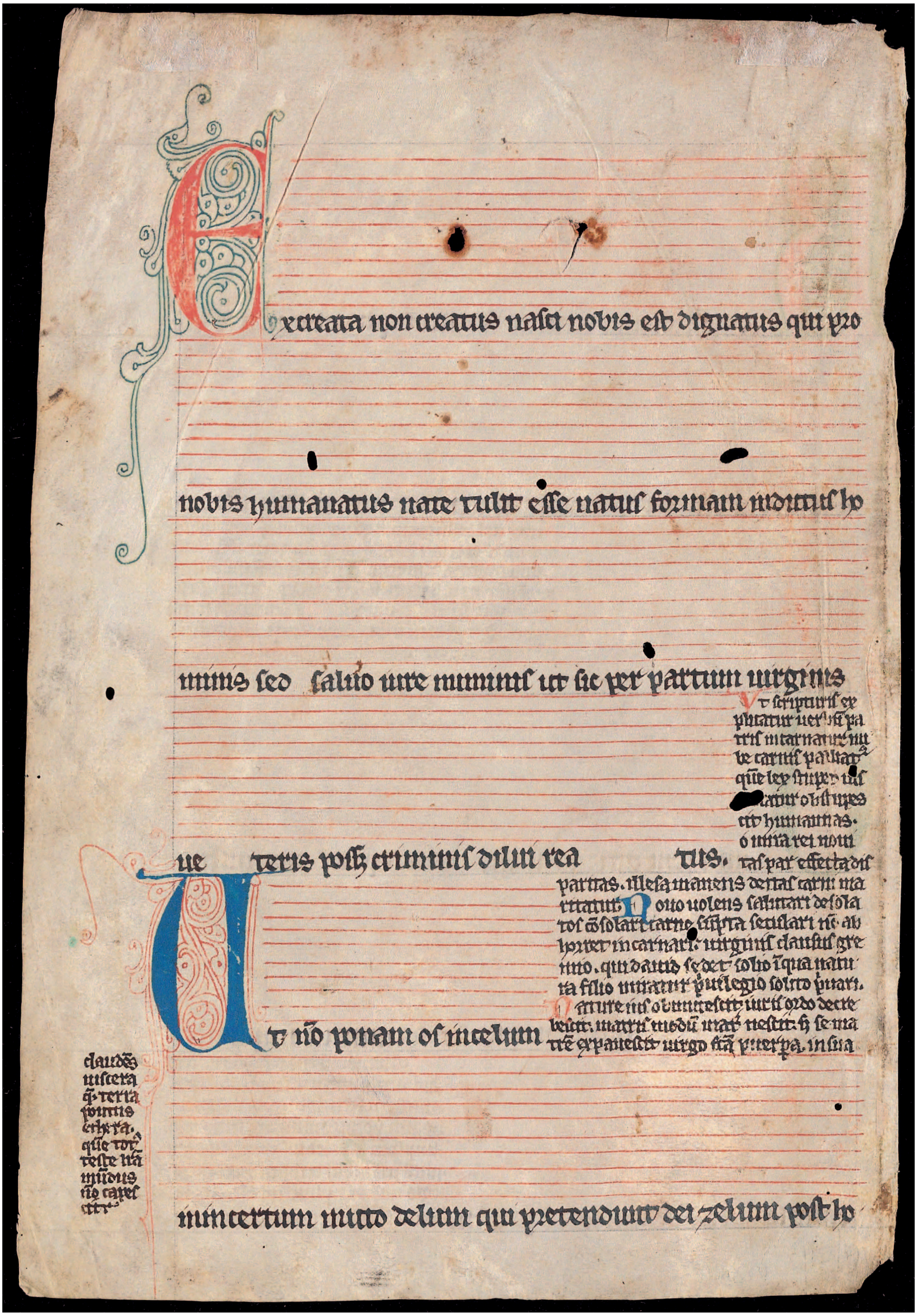


Fig. 11: Strophic two-part *conductus Ex creata non creatus* (I14) and two-part *conductus Ut non ponam os in celum* (I5). Notation was not inserted (US-NHub Beinecke MS 712.59, verso).



REFERENCES

Anderson, Gordon A. (1972), 'Notre-Dame and Related Conductus: A Catalogue Raisonné', *Miscellanea musicologica*, 6: 153–229.

—— (1975), 'Notre-Dame and Related Conductus: A Catalogue Raisonné', *Miscellanea musicologica*, 7: 1–81.

Arlt, Wulf, Haas, Max (1975), 'Pariser modale Mehrstimmigkeit in einem Fragment der Basler Universitätsbibliothek', *Forum musicologicum*, 1: 223–272.

Austenfeld, Anne Marie (2010), 'Virtual Reunification as the Future of "codices dispersi": Practices and Standards Developed by e-codices – Virtual Manuscript Library of Switzerland', *IFLA Journal*, 36.2: 145–154.

Baltzer, Rebecca (1987), 'Notre Dame Manuscripts and Their Owners: Lost and Found', *Journal of Musicology*, 5: 380–399.

—— (2008), 'The Manuscript Makers of W1: Further Evidence for an Early Date', in: David Butler Cannata, Gabriela Ilnitchi Currie, Rena Charnin Mueller, John Louis Nádas (eds.), *Quomodo cantabimus canticum? Studies in Honor of Edward H. Roesner* (Milton, Wis.), 103–120.

Becker, Heinz, Gerlach, Reinhard (eds.) (1970), *Speculum musicae artis. Festgabe für Heinrich Husmann zum 60. Geburtstag am 16. Dezember 1968, dargebracht von seinen Freunden und Schülern* (München).

Björkvall, Gunilla, Brunius, Jan, Wolodarski, Anna (1996), 'Flerstämmig musik från medeltiden: två nya fragmentfynd i Riksarkivet', *Nordisk Tidskrift för Bok- och Biblioteksväsen*, 83: 129–155.

Brunius, Jan (2013), *From Manuscripts to Wrappers. Medieval Book Fragments in the Swedish National Archives* (Stockholm; Skrifter utgivna av Riksarkivet 35).

Butler Cannata, David, Ilnitchi Currie, Gabriela, Charnin Mueller, Rena, Nádas, John Louis (eds.) (2008), *Quomodo cantabimus canticum? Studies in Honor of Edward H. Roesner* (Milton, Wis.).

Deutsche Forschungsgemeinschaft, Unterausschuß für Handschriftenkatalogisierung (ed.) (1992), *Richtlinien Handschriftenkatalogisierung*, 5th revised and extended edition (Bonn – Bad Godesberg).

Dillon, Emma (2011), 'Music manuscripts', in: Mark Everist (ed.), *The Cambridge Companion to Medieval Music* (Cambridge), 291–319 (notes 408–409).

Dolbeau, François (2011a), 'La bibliothèque des Dominicains de Bâle au XVe siècle: Fragment inédit d'un catalogue alphabétique', in: Henry Ansgar Kelly (ed.), *Medieval Manuscripts, Their Makers and Users. A Special Issue of Viator in Honor of Richard and Mary Rouse* (Turnhout), 113–132.

—— (2011b), 'La bibliothèque des Dominicains de Bâle au XVe siècle: Fragment inédit d'un catalogue topographique', *Archivum fratrum praedicatorum*, 81: 121–163.

Dreves, Guido Maria (ed.) (1895), *Lieder und Motetten des Mittelalters* (Leipzig; Analecta hymnica medii aevi), 20–21).

Edwards, Warwick (2000), 'Polyphony in thirteenth-century Scotland', in: Sally Harper (ed.), *Our awin Scottis use: Music in the Scottish Church up to 1603* (Glasgow), 225–271.

Eickermann, Norbert (1974), 'Auf den Spuren einer großen Notre-Dame-Handschrift des 13. Jahrhunderts', *Westfalen. Hefte für Geschichte, Kunst und Volkskunde,* 52: 149–152.

Everist, Mark (1990), 'From Paris to St. Andrews: The Origins of W1', *Journal of the American Musicological Society*, 43: 1–42.

—— (1994), 'A New Source for the Polyphonic Conductus: MS 117 in Sidney Sussex College Cambridge', *Plainsong and Medieval Music*, 3: 149–168.

Flotzinger, Rudolf (1970), 'Zur Herkunft der "Wimpfener Fragmente"', in: Heinz Becker, Reinhard Gerlach (eds.), *Speculum musicae artis. Festgabe für Heinrich Husmann zum 60. Geburtstag am 16. Dezember 1968, dargebracht von seinen Freunden und Schülern* (München), 147–151.

Flotzinger, Rudolf (2007), 'Zum neu aufgefundenen Nürnberger Fragment des Magnus liber', *Die Musikforschung*, 60.3: 244–247.

Gennrich, Friedrich (ed.) (1958), *Die Wimpfener Fragmente der Hessischen Landesbibliothek Darmstadt: Faksimile-Ausgabe der HS 3471* (Darmstadt; Summa musicae medii aevi), 5.

Haggh, Barbara, Huglo, Michel (2004), 'Magnus Liber – Maius munus. Origine et destinée du manuscrit F', *Revue de Musicologie*, 90: 193–230.

Harper, Sally (ed.) (2000), *Our awin Scottis use: Music in the Scottish Church up to 1603*, (Glasgow).

Heikkilä, Tuomas (2013), 'Tracing a Parisian Lectionary in Medieval Finland', in: Marie Lennersand, Åsa Karlsson / Henrik Klackenberg (eds.), *Fragment ur arkiven. Festskrift till Jan Brunius* (Stockholm; Skrifter utgivna av Riksarkivet, 37), 162–176.

Hewlett, Walter B., Selfridge-Field, Eleanor (eds.) (2001), *The Virtual Score: Representation, Retrieval, Restoration* (Computing in Musicology 12), (Cambridge, Mass. – London – Stanford.)

Jacobsen, Peter Christian (2006), 'Kleinüberlieferung mehrstimmiger Musik vor 1550 in deutschem Sprachgebiet. VII: Ein neues Fragment zum Magnus Liber Organi', in: *Nachrichten der Akademie der Wissenschaften zu Göttingen*. 1. philologisch-historische Klasse, 2006/3 (Göttingen), 153–166.

Kelly, Henry Ansgar (ed.) (2011), *Medieval Manuscripts, Their Makers and Users. A Special Issue of Viator in Honor of Richard and Mary Rouse* (Turnhout).

Kennedy Steiner, Katherine (2013), *Notre Dame in Scotland: W1 and Liturgical Reform at St Andrews*, (Princeton University, Ph.D. Dissertation).

Krämer, Sigrid (1989), *Handschriftenerbe des deutschen Mittelalters*, II: *Köln-Zyfflich* (Mittelalterliche Bibliothekskataloge Deutschlands und der Schweiz, Ergänzungsband 1), (München).

Lennersand, Marie, Karlsson, Åsa, Klackenberg, Henrik (eds.) (2013), *Fragment ur arkiven. Festskrift till Jan Brunius* (Skrifter utgivna av Riksarkivet 37), (Stockholm).

Lerner, Heidi, Jerchower, Seth (2006), 'The Penn/Cambridge Genizah Fragment Project: Issues in Description, Access, and Reunification', *Cataloging & Classification Quarterly*, 42.1: 21-39.

Lievois, Daniel, Wolinski, Mary E. (2002), 'Mout sont vallant cil de Gant – Een Motet ter ere van de Gentse erfachtige Lieden in het midden van de 13de eeuw' ['Mout sont vallant cil de Gant: A Motet from the Era of the Patricians of Ghent in the Mid-Thirteenth Century'], *Handelingen der Maatschappij voor Geschiedenis en Oudheidkunde van Gent,* 56: 35–51.

Ludwig, Friedrich (1910), *Repertorium organorum recentioris et motetorum vetustissimi stili*, I: *Catalogue raisonné der Quellen, i: Handschriften in Quadrat-Notation* (Halle).

—— (1923), 'Die Quellen der Motetten ältesten Stils', *Archiv für Musikwissenschaft*, 5: 185–222 and 273–315.

Lutz, Cora E. (1973), 'A Manuscript Fragment from Bede's Monastery', *Yale University Gazette*, 48: 135–138.

Maschke, Eva M. (2010), 'Neue Conductus-Fragmente aus dem ehemaligen Dominikanerkloster, in Frankfurt am Main', *Studi Musicali* (Nuova serie), 1/2: 295–312.

—— (2013), 'Neue Fragmentfunde in der Universitäts- und Landesbibliothek Münster. Zur Rekonstruktion einer Notre-Dame-Handschrift aus dem Soester Dominikanerkonvent', *Die Musikforschung*, 66.3: 277–280.

Maschke, Eva M. (2015), *Notre Dame Manuscripts and Their History: Case Studies on Reception and Reuse* (PhD Dissertation, University of Southampton/University of Hamburg).

Michael, Bernd (1990a), 'Die Bibliothek der Soester Dominikaner. Ein Verzeichnis ihrer erhaltenen Handschriften', *Soester Zeitschrift*, 102: 8–30.

—— (1990b), *Die mittelalterlichen Handschriften der Wissenschaftlichen Stadtbibliothek Soest. Mit einem kurzen Verzeichnis der mittelalterlichen Handschriftenfragmente von Tilo Brandis* (Wiesbaden).

Overgaauw, Eef (2006), 'Die Autographen des Dominikanertheologen Jakob von Soest (c. 1360-c. 1440)', *Scriptorium*, 60: 60–79.

—— (1996), *Die mittelalterlichen Handschriften der Universitäts- und Landesbibliothek Münster* (Wiesbaden).

Powitz, Gerhardt (1968), *Die Handschriften des Dominikanerklosters und des Leonhardstiftes in Frankfurt am Main* (Kataloge der Stadt- und Universitätsbibliothek Frankfurt am Main, 2), (Frankfurt am Main).

—— (1994), *Mittelalterliche Handschriftenfragmente der Stadt- und Universitätsbibliothek Frankfurt am Main* (Kataloge der Stadt- und Universitätsbibliothek Frankfurt am Main, 10), (Frankfurt am Main).

Roesner, Edward H. (1976), 'The Origins of W1', *Journal of the American Musicological Society*, 29: 337–380.

Schüling, Hermann (1966), *Die Inkunabeln der Universitätsbibliothek Gießen* (Gießen).

Société Internationale de Musicologie et l'Association Internationale des Bibliothèques, Archives et Centres de Documentation Musicaux (ed.) (1999), *RISM-Bibliothekssigel: Gesamtverzeichnis* (München).

Staehelin, Martin (1987), 'Conductus-Fragmente aus einer Notre Dame-Handschrift in Frankfurt a. M.', in: *Nachrichten der Akademie der Wissenschaften in Göttingen*, 1. Philologisch-historische Klasse, 1987/8, (Göttingen), 179–192.

—— (ed.) (1995), *Die mittelalterliche Musikhandschrift W1. Vollständige Reproduktion des 'Notre Dame'-Manuskripts der Herzog August Bibliothek Wolfenbüttel Cod. Guelf. 628 Helmst.* Mit einem Vorwort (deutsch und englisch) von Martin Staehelin (Wiesbaden; Wolfenbütteler Mittelalter-Studien 9).

—— (1997), 'Die Erforschung mittelalterlicher Musikfragmente. Ein Beitrag zur Revision unserer musikgeschichtlichen Vorstellungen', *Bibliothek und Wissenschaft*, 30: 26–40.

Staehelin, Martin (2012), *Kleinüberlieferung mehrstimmiger Musik vor 1550 in deutschem Sprachgebiet*. Lieferung IX, Band 15: Neue Quellen des Spätmittelalters aus Deutschland und der Schweiz (Berlin – Boston).

Staub, Kurt Hans (1967), 'Die Bibliothek der Dominikaner zu Wimpfen am Neckar und ihre Handschriften', in: Erich Zimmermann (ed.), *Durch der Jahrhunderte Strom. Beiträge zur Geschichte der Hessischen Landes- und Hochschulbibliothek Darmstadt* (Frankfurt am Main), 179–195.

—— (1980), *Geschichte der Dominikanerbibliothek in Wimpfen am Neckar (ca. 1460-1803). Untersuchungen an Hand der in der Hessischen Landes- und Hochschulbibliothek Darmstadt erhaltenen Bestände* (Graz; Studien zur Bibliotheksgeschichte, 3).

Steiner, Katherine Hope Kennedy (2013), *Notre Dame in Scotland: W1 and Liturgical Reform at St Andrews* (PhD dissertation, Princeton University).

Wathey, Andrew, Bent, Margaret, Craig-McFeely, Julia (2001), 'The Art of Virtual Restoration: Creating the Digital Image Archive of Medieval Music (DIAMM)', in: Walter B. Hewlett, Eleanor Selfridge-Field (eds.), *The Virtual Score: Representation, Retrieval, Restoration* (Cambridge, Mass. – London – Stanford; Computing in Musicology, 12), 227–240.

Wolinski, Mary E. (2008), 'Drinking Motets in Medieval Artois and Flanders', *Yearbook of the Alamire Foundation*, 6: 9–20.

Zimmermann, Erich (ed.) (1967), *Durch der Jahrhunderte Strom. Beiträge zur Geschichte der Hessischen Landes- und Hochschulbibliothek Darmstadt* (Frankfurt am Main).

PICTURE CREDITS

Figs. 1, 2 , 3, 4: © Universitäts- und Landesbibliothek Münster.

Fig. 5: © Münster, Landesarchiv Nordrhein-Westfalen, Abteilung Westfalen.

Figs. 6, 7, 8, 9: © Cambridge, Sidney Sussex College.

Figs. 10, 11: © New Haven, Yale University, Beinecke Rare Book and Manuscript Library.

Article

Identifying Codicological Sub-units in Bamboo Manuscripts: Verso Lines Revisited*

Thies Staack | Heidelberg

The year 2010 witnessed two important publications of early Chinese bamboo manuscripts, which in addition to photographs of the recto of all slips for the first time also included photographs of their verso.[1] One year later Sun Peiyang 孫沛陽 published the first study on the verso line phenomenon, mainly as it is reflected in a part of the manuscripts contained in these two volumes.[2] As the material basis for a discussion of the verso lines has grown significantly over the past few years and seven more publications that included photographs of the slips' verso[3] have been issued, the phenomenon has also gained further attention in the scholarly community[4] and the evaluation and improvement of the first preliminary research results and hypotheses by Sun Peiyang are now possible and necessary. Following Sun Peiyang, several others have argued that the verso lines are obviously related to the original sequence of the slips inside a manuscript, meaning that the 'line sections'[5] on the verso of individual slips can – by and large – be linked and appear to form continuous lines, if the slips are arranged according to the text written on the recto.[6] At least with regard to this point, which underlines the importance of this phenomenon for the reconstruction of bamboo manuscripts, a consensus appears to have been reached in the scholarly community. Other aspects, however, are still disputed. This particularly concerns the issue at which point during the production process of a manuscript and by the use of which method the verso lines were applied to the verso of the slips. The following will show that these questions are not only important for a further improvement of our understanding of how bamboo manuscripts were actually produced in pre-imperial and early imperial China. They are likewise necessary to clarify

* The present paper is an outcome of the research project 'The Legal Manuscripts of the Qin (3rd century BCE) held in the Collection of Yuelu Academy' (FR 702/8-1), which was conducted at the University of Hamburg and funded by the DFG (German Research Foundation). I would like to thank Professor Michael Friedrich (University of Hamburg) for his insightful comments on an earlier draft. Professor Hsing I-tien 邢義田 (Academia Sinica) kindly provided some useful notes on the Chinese version of this paper, which was presented at the *Qin jiandu yanjiu guoji xueshu yantaohui* 秦簡牘研究國際學術研討會 conference in Changsha on 6 December 2014. I am also indebted to Professor Chen Songchang 陳松長 (Yuelu Academy) for supplying the digital photographs of some of the material under discussion. Helge Meissner (Norwegian Forest and Landscape Institute) recommended some very useful works on botany to me.

[1] These are the first volumes of the manuscripts in possession of Tsinghua University and Yuelu Academy, see Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010 as well as Zhu Hanmin and Chen Songchang 2010.

[2] Sun Peiyang 2011. Note that the verso line phenomenon was first mentioned by the editors of the bamboo slips excavated from tomb no. 2 at Baoshan 包山, see Hubei sheng Jing Sha tielu kaogudui 1991, 4. Subsequently, however, it was completely neglected for nearly 20 years.

[3] See volumes two to five of the Tsinghua University manuscripts (Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2011, 2012, 2013 and 2015), volumes two and three of the Yuelu Academy manuscripts (Zhu Hanmin and Chen Songchang 2011 and 2013), as well as the first volume of the Peking University Han manuscripts (Beijing daxue chutu wenxian yanjiu suo 2012c). Among the other Peking University manuscripts still awaiting publication, there are reportedly further manuscripts containing verso lines, see Beijing daxue chutu wenxian yanjiu suo 2011, 49, 53; Beijing daxue chutu wenxian yanjiu suo 2012b, 66.

[4] The verso lines are discussed in Li Tianhong 2011, Jia Lianxiang 2012, Han Wei 2012, Li Junming and Zhao Guifang 2012, Shi Da 2013, Yuelu shuyuan cang Qin jian zhengli xiaozu 2013, He Jin 2013 as well as Takeda 2013a and 2013b.

[5] 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. A generally accepted set of terms for this in Chinese secondary literature does not yet appear to have been evolved, cf. the use of *huahen* 劃痕 vs. *huaxian* 劃綫 for the same distinction in Han Wei 2012, 228, footnote 4 as well as the ambiguous use of *bei huaxian* 背劃綫 for both in He Jin 2013.

[6] This relation was first claimed by Sun Peiyang with regard to some bamboo manuscripts from the first volumes of the Yuelu Academy and Tsinghua University collections, see Sun Peiyang 2011, 449. It was later confirmed for other manuscripts from these two collections as well as the Peking University collection in Beijing daxue chutu wenxian yanjiu suo 2011, 53; Li Junming and Zhao Guifang 2012, 67; Beijing daxue chutu wenxian yanjiu suo 2012b, 66; Yuelu shuyuan cang Qin jian zhengli xiaozu 2013, 81.

in which ways the verso lines relate to the slips of a certain manuscript and in which ways they can or cannot be utilized for the purpose of manuscript reconstruction. Finally, the basic function of the verso lines will also have to be reconsidered.

1. Knife-cut vs. ink-drawn, position and inclination

Sun Peiyang observed in 2011 that of all the verso lines (or individual line sections) discovered so far the majority had apparently been cut with a sharp knife (*ke huaxian* 刻劃綫) – obvious from frequent breakage of slips at the position of the line sections[7] – whereas there were comparatively few examples of lines that seemed to have been drawn with ink (*mo huaxian* 墨劃綫).[8] From the examples of ink-drawn lines that Sun cited, it can be gathered that he only included into this category comparatively thick lines, which were most probably drawn with a brush (see fig. 1).

It has later been proposed that some of the fainter knife-cut lines might have been filled with ink in a second step, or that ink had been applied to the knife before cutting to enhance the visibility of the lines.[10] This could explain cases like that of the Yuelu Academy calendar (*Zhiri* 質日) of the 34th year (of King Zheng of Qin), where the lines are much thinner than usual brush-strokes, but it appears that some ink has run down from them (see fig. 2). Another possibility would be that this kind of thin ink-drawn line was not applied with a brush but with a different tool, e.g. some kind of stylus. However, to the author's knowledge there is no archaeological evidence for the existence of such a writing implement in early China.

Fig. 1: Knife-cut line (left) vs. thick ink-drawn line (right).[9]

Fig. 2: Verso line in Yuelu Academy *Zhiri* 34.[11]

[7] Han Wei 2012, 227 with footnote 3; He Jin 2013, 459. For the case of the Peking University *Laozi* 老子 Han Wei observed that the knife-cuts appear to be deeper near the top edge of the slips than near the middle, which suggests that the cuts were applied from the top edge towards the middle through a downward movement with a sharp knife, see Han Wei 2012, 233 with footnote 12.

[8] Sun Peiyang 2011, 455. Sun mentioned slips 17^{v} and 119^{v} from Baoshan tomb no. 2 (Hubei sheng Jing Sha tielu kaogudui 1991, plates 9, 52), slip 1^{v} of *Zhuang wang ji cheng* 莊王既成 from the Shanghai Museum collection (Ma Chengyuan 2007, 64) as well as slip 403^{v} of the *Sun Bin bingfa* 孫臏兵法 from Yinqueshan 銀雀山 tomb no. 1 (Yinqueshan Han mu zhujian zhengli xiaozu 1985, 40) as examples for ink-drawn lines (Sun Peiyang 2011, 454).

[9] Both slips are from the Shanghai Museum collection. The photograph on the left shows *Fan wu liu xing A* 凡物流形（甲）, 3^{v} (Ma Chengyuan 2008, 80); the photograph on the right shows *Ming* 命, 11^{v} (Ma Chengyuan 2011, 68). The line sections are indicated by black arrows.

[10] He Jin 2013, 460.

[11] The Yuelu Academy calendars of the 27th, 34th and 35th year of King Zheng of Qin are for simplicity's sake named *Zhiri* 27, *Zhiri* 34 and *Zhiri* 35 here and in the following. For photographs of the two slips see Zhu Hanmin and Chen Songchang 2010, 80. As it is quite impossible that ink actually ran up – which appears to have been the case with the current orientation of the slips – it can be gathered that the slips were turned upside down at the time the lines were applied or shortly afterwards.

Although additional examples for what Sun Peiyang calls ink-drawn lines have been found in the meantime, the observation that the lines are more often cut with a knife (or at least as thin as knife-cuts and therefore sometimes barely visible) remains generally valid.[12] Furthermore, there are to date no examples of manuscripts in which several ink-drawn line sections on neighbouring slips form a continuous line.[13]

Sun's earlier observations also appear to hold true as far as the position and inclination of the lines in the new material are concerned. Inside a certain manuscript, they usually only occur either in the lower or in the upper half of the slips, and in almost all cases their general inclination is from the top left towards the bottom right (i.e. somewhere between 90° and 180°). This means that the lines 'fall' in a left to right direction, either from the top end of the slips towards their middle (see Yuelu Academy *Zhiri* 34), or from somewhere below their middle towards the bottom end (see Yuelu Academy *Zhiri* 27 and 35), if the individual line sections on adjacent slips are connected (see fig. 11, 12 and 13 in appendix A).[14]

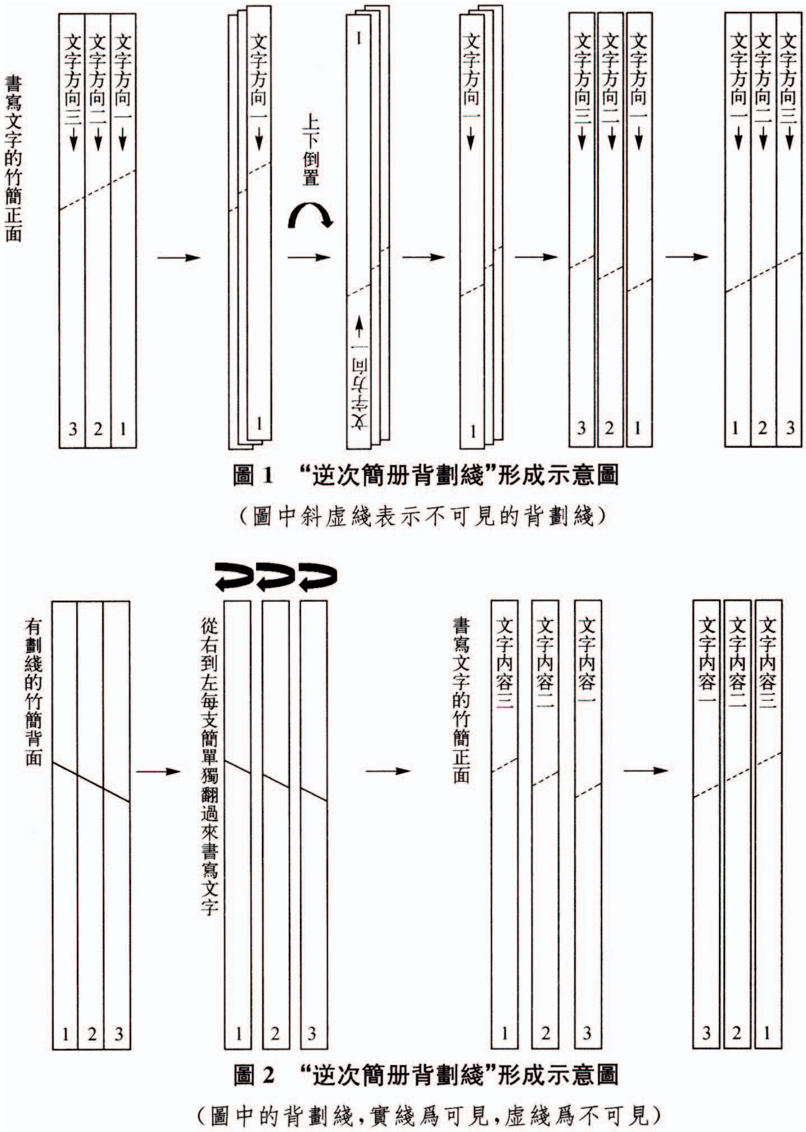


Fig. 3: Two possible reasons for 'reversed verso lines' according to He Jin.[15]

In the meantime, a good explanation for special cases called 'reversed verso lines' (*nici jiance bei huaxian* 逆次簡冊背劃綫),[16] where the text on the recto would have to be read from left to right instead of the usual direction from right to left, if the slips were arranged according to the verso lines, has been proposed.[17] Sun Peiyang originally assumed that there might

[12] For additional examples of ink-drawn lines see the yet unpublished Jingmen Yancang 荊門嚴倉 slips as well as Tsinghua University *Chuju* 楚居 slip 6^{v} (Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010, 26), Shanghai Museum *Ming* 命 slip 11^{v} (Ma Chengyuan 2011, 68), *Wang ju* 王居 slip 1^{v} (Ma Chengyuan 2011, 72) and the Qin slips of roll A (*Bainang* 白囊) from the Peking University collection (Beijing daxue chutu wenxian yanjiu suo 2012b, 66); cf. Li Tianhong 2011, 103 and He Jin 2013, 459. Ink-drawn lines were also found on two additional slips from Baoshan tomb no. 2, *viz.* 155^{v} and 202^{v}, see Takeda 2013a, 70. Apart from the Peking University Qin slips of roll A, which are made of wood, all other examples mentioned here are bamboo slips.

[13] However, Takeda cites a statement by Ge Liang 葛亮 of Shanghai Museum according to which there are such examples on the verso of the manuscript *Ming*. This means that in some cases the ink-drawn lines – just like the knife-cut lines – appear to be related to the sequence of the slips. See Takeda 2013a, 71 with footnote 8.

[14] The only other example to date is the ink-drawn line section on *Chuju* slip 6v, the inclination of which is from bottom left to top right. Cf. also 'verso stripes' in footnote 112. With regard to the most common application technique for verso lines (see below), it is in fact possible – if not probable – that the lines were usually applied with a knife from the top end of the slips towards their middle. Whether the lines are eventually located on the lower or upper half of the slips in a certain manuscript is merely due to differences in the orientation of the slips at the time the writing was applied.

[15] This figure was taken from He Jin 2013, 464.

[16] Sun Peiyang 2011, 453.

[17] More complex situations, where verso lines in different directions might form 'v'- or 'w'-shaped patterns as exemplified by the Tsinghua University *Qiye* 耆夜 (Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010, 12–13, cf. Sun Peiyang 2011, 455 and Li Tianhong 2011, 104), appear to be scarce. However, a '<'-shaped pattern can be found in the Tsinghua University *Liangchen* 良臣 and *Zhuci* 祝辭 (Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2012, 17–19, cf.

have been a small number of manuscripts, in which the slips were bound in a way that necessitated changing the normal reading direction and read the text from left to right.[18] He Jin 何晉 suspected 'mistakes' that might easily have occurred when slips that had previously been completely prepared (and furnished with verso lines) were used for writing or bound together. It is conceivable that the person involved in the latter activities (most probably the scribe) either turned the slips upside down before using them or used them in an order different from the one prescribed by the verso lines, whether on purpose or by mistake (see fig. 3).[19]

This explanation appears more reasonable than the hypothesis forwarded by Sun Peiyang, especially if one accepts He Jin's assumption that the one who prepared the slips (and also applied the verso lines) and the one who wrote the text on them were most probably different persons.[20] It can also better explain examples where there is a reversed verso line only on some slips of a certain manuscript, while on the other slips of the same manuscript a verso line appears in the usual direction.[21]

2. 'Pinched off head and removed tail'

As already stated above, verso lines apparently either begin at the top edge or end at the bottom edge of certain slips – depending on whether the lines are generally situated on the upper or lower half of the slips in a bamboo manuscript. Moreover, as far as the vertical position of the respective line sections is concerned, there is usually at least one quarter of the length of a complete slip between this beginning/end on the edge of a certain slip and the respective end/beginning located near the middle of a certain other slip. The amount of slips that is crossed by one verso line is usually quite stable inside the same manuscript but varies considerably when comparing different manuscripts.[22] In a significant number of cases, however, not every verso line that can be found on the slips of a certain manuscript appears to be 'complete', which means that it either does not begin at one of the edges, and/or does not run as far towards the middle of the slips as usual (when comparing other verso lines in the same manuscript and other manuscripts). Although such cases also occur in the manuscripts that Sun Peiyang analysed (see e.g. the last verso line of each of the three Yuelu Academy *Zhiri*),[23] he did not discuss them. He Jin offered an explanation for these phenomena, which he calls 'pinched off head and removed tail' (*qia tou qu wei* 掐頭去尾). There must have been many cases where a manuscript had already been completed, but some slips from the last group which had been used for its production and which carried a certain verso line had remained unused. In such cases, they were surely not discarded but rather used on another occasion, so that a group of slips (or more precisely a verso line) with a 'pinched off head' would occur somewhere in another manuscript. At the end of the first manuscript this would at the same time result in a 'removed tail' – exactly as it is the case in the mentioned Yuelu Academy *Zhiri*.[24]

3. The application of verso lines as part of the overall production of a manuscript

Sun Peiyang was the first to discuss the application of verso lines as part of the whole process of producing a manuscript. Basically dividing this process into the steps 'application of verso lines', 'writing' and 'binding', he argued that, as there was no evidence indicating anything else, the application of verso lines most probably had always taken place before binding. On the contrary, there are many examples where line sections are visible at the position of one of the binding strings or even partly covered by remains of a binding string, which proves that the bindings were fixed after the lines had been applied.[25] According to the distinction into the abovementioned

Takeda 2013b, 144, footnote 12). The two groups of slips possibly belong to the same manuscript, at least the verso lines on them were apparently produced at the same time. See fig. 16 in appendix B.

18 Sun Peiyang 2011, 458.

19 He Jin 2013, 463. That slips were sometimes mistakenly turned upside down during the production of manuscripts (in the process of writing, before binding) can also be gathered from some cases, where the notches marking the position of the binding strings on a certain slip suddenly appear on the left side, whereas on other slips of the same manuscript they appear on the right, see Cheng Pengwan 2006, 25, cf. Li Tianhong 2011, 104.

20 He Jin 2013, 455.

21 In the *Huangmen* 皇門 from the Tsinghua University collection for example, it could hardly be the case that one part of the coherent text on the recto had to be read from left to right, while another part had to be read from right to left. That the slips were in fact tied together in the sequence reconstructed by the editors is moreover suggested by sequence numbers (see footnote 123) on the verso of the slips, see Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010, 163. On the *Huangmen* slips there appears to be a 'reversed' verso line on slips 1 to 6, but a 'normal' verso line on slips 10 to 13 (Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010, 20–21, cf. Sun Peiyang 2011, 453).

22 He Jin 2013, 460–462.

23 See fig. 1 to 3 in Sun Peiyang 2011, 459–460.

24 He Jin 2013, 462–463.

25 Sun Peiyang 2011, 456, cf. Shi Da 2013, 23.

three steps of production, this premise leads to three possible sequences of production:[26]

1. Application of lines → binding → writing
2. Writing → application of lines → binding
3. Application of lines → writing → binding

In sum, this means that verso lines were either applied to blank slips (sequences 1 and 3) or slips that already carried writing (sequence 2). But in any case this was done before they were tied together. According to He Jin the application of verso lines was always the first step because he assumes that this belonged to the 'production of the slips'. He Jin generally suggests that this production was carried out by others than the professional scribes who applied the writing.[27] Although this is not unlikely at all, it remains a mere assumption. In fact, judgements about the order in which the verso lines and the writing were applied to slips are closely related to the interpretation of 'gaps' of different sizes, which often occur in the verso lines between slips that carry consecutive passages of text on their recto.[28] He Jin assumes that application of lines must have come before writing because otherwise such gaps in the lines would be difficult to explain.[29] Sun Peiyang had earlier suggested three possible reasons for the gaps:

1. The slips were not carefully aligned side-by-side when the lines were applied.
2. After the lines had been applied, some slips were discarded before/during the writing process (e.g. due to writing mistakes or some kind of material defect).
3. The lines were applied to complete bamboo culm segments before these were cut into slips, and the slips became slightly narrower during processing (e.g. through abrasion).[30]

Apart from the first possibility, in which the lines could at least theoretically be applied to slips that already carry writing, the other two would definitely require the lines to be applied before the writing. Sun Peiyang himself already considered the first possibility the least likely. In most cases of wider gaps in the verso lines, the part of a certain verso line that appears to be missing would correspond to one or several line sections. Therefore the possibility that one or several slips had been discarded for some reason or used in another (part of the same) manuscript is comparatively high.[31] Further evidence for the practice of discarding and replacing individual slips after application of verso lines but before writing can be drawn from examples where slips without any visible line section occur among slips with a continuous verso line.[32] On the whole, one might therefore say that the probability of the production sequences 'application of lines → binding → writing' and 'application of lines → writing → binding' is much higher than that of the sequence 'writing → application of lines → binding'.[33] This means that the verso lines were probably applied to blank slips as the first of the three steps that were mentioned above.

4. The spiral line theory

The third of the possible reasons proposed by Sun Peiyang to explain gaps in the verso lines (see above) is directly connected to a key hypothesis that has been forwarded with regard to the application process of the verso lines. It shall be referred to as the 'spiral line theory' in the following. Sun had suggested that in some cases (e.g. the Tsinghua University *Qiye* 耆夜 and *Jinteng* 金縢), the verso lines might actually have been applied to complete bamboo culm segments before these were cut into slips, and that this could have entailed the occurrence of small gaps because the slips probably became slightly narrower during further processing.[34] This hypothesis

[26] Sun Peiyang 2011, 456.

[27] He Jin stresses this division of labour several times in his paper, see He Jin 2013, 463–465.

[28] This phenomenon is usually named *cuowei* 錯位 in Chinese scholarship. For examples in the three *Zhiri* contained in Yuelu Academy volume one see Sun Peiyang 2011, 450–451.

[29] He Jin 2013, 463–464.

[30] Sun Peiyang 2011, 456–457.

[31] Sun Peiyang 2011, 451, 456–457, cf. Han Wei 2012, 233 and He Jin 2013, 464–466.

[32] See e.g. slips 84 and 178 of the Peking University *Laozi*. Han Wei proposed a second explanation for this, namely that the application of the respective verso line might for some reason not have left a line section on these slips, see Han Wei 2012, 233. However, this appears quite unlikely, as the line sections on the neighbouring slips were apparently clearly and completely visible; see tracings in Beijing daxue chutu wenxian yanjiu suo 2012c, 113, 116.

[33] The same view is shared by Takeda (2013a, 78–79). He Jin (2013, 466) argues that there are no convincing examples yet for the production sequence 'writing→application of lines→binding'.

[34] Sun Peiyang 2011, 457.

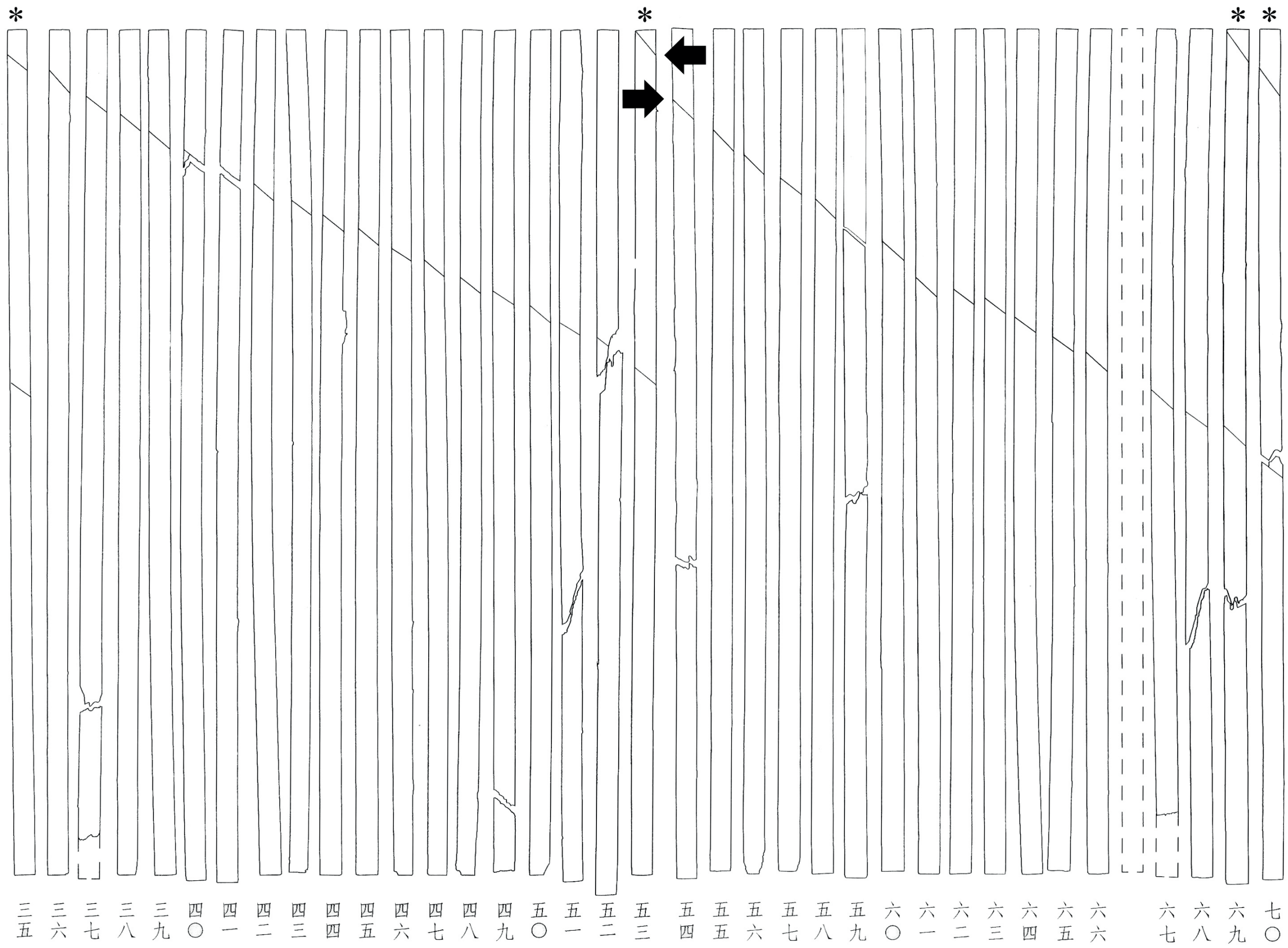


Fig. 4: Example for gap in verso lines between Peking University *Laozi* slips 53 and 54.[35]

shifts the application of the verso lines even further towards the beginning of the production of a manuscript – to a stage where the individual slips have not even been produced. At the same time it draws a connection between slips that belong to the same verso line and a certain bamboo culm segment.

Li Tianhong 李天虹 was the first to point out the correlation between verso lines and slips that were apparently made from the same segment of a bamboo culm. She observed in the Tsinghua University *Qiye* 耆夜 that the line sections on slips that were most probably made from the same such segment (based on the number and position of bamboo nodes) show a very similar slant and can sometimes be joined to form a continuous line. Therefore they appear to have been made at the same time or rather during the same production step. However, the slips were not necessarily used in the respective order in the manuscript, which is why a continuous line is not visible in every case. Li Tianhong concluded that the verso lines were probably made during 'the processing of a segment' of a bamboo culm (*xiuzhi huanjie* 修治環節).[36]

[35] The two arrows indicate the position of the line sections on slips 53 and 54, between which there is an obvious gap. The asterisks on the top were used by the editors to indicate slips with two line sections. For this figure the two reduced-size tracings of *Laozi* slips 35 to 53 and 54 to 70 in Beijing daxue chutu wenxian yanjiu suo 2012c, 112 have been combined. Cf. the discussion of these slips as groups 3 and 4 in Han Wei 2012, 230. Note that the position of the lower line section on slip 35 differs significantly when comparing the full-scale tracing included as a supplement in the same volume and the reduced-size tracing of the respective group. Only the latter seems to be in accordance with the description in text-form provided by Han Wei, which is the reason why a combination of two reduced-size tracings was used for the above figure.

[36] Li Tianhong 2011, 103–104. A similar view is expressed in Jia Lianxiang 2012. According to traditional sources, the production of bamboo slips for manuscripts included several steps. First, a bamboo culm segment had to be cut to the right length and, in a second step, was split lengthwise into parts of the right width (usually somewhere between 0.5 and 1 cm). To produce the writing slips, which were often as thin as 0.1 cm, most of the softer material on the inside of these parts was scraped away. To make the slips more durable and suitable for writing they were also dried (*shaqing* 殺青 or 'to kill the green') and polished. Most of the writing was applied to the recto side of the slips which originally faced towards the middle of the culm segment (*zhuhuang* 竹黃) although it was also common to write titles or sequence numbers on the verso (*zhuqing* 竹青) after the very smooth outer surface had been prepared for this, e.g. by scraping. For more details on the production process see e.g. Zhang Xiancheng 2004, 114–117.

Following up on the possibility already hinted at by Sun Peiyang, Li Shoukui 李守奎 elaborated on this hypothesis claiming – likewise with regard to the Tsinghua University slips – that 'to some bamboo culm segments a line that surrounded the whole culm segment was applied, before it was further processed into slips.'[37] However, he did not supply any further details or explanations. This desideratum was later met by Han Wei 韓巍, who finally provided the proper basis for a spiral line theory through an analysis of the verso lines on the slips of the Peking University *Laozi* 老子. As he pointed out, the *Laozi* is a favourable source to investigate the verso line phenomenon because its slips are comparatively well preserved, and the text has several textual counterparts in both received literature as well as manuscripts, which means that the reconstruction of the original sequence of the slips is largely unproblematic.[38] Han Wei noticed that especially near the end of a certain verso line and the beginning of the next, where some of the respective slips usually show two line sections instead of only one, obvious gaps in the verso lines often occur (see fig. 4).

After repeated inspection of the verso lines, Han Wei arrived at the following conclusion that can actually explain the distributional pattern of the line sections on the *Laozi* slips: The person in charge of producing the bamboo slips must have applied a 'spiral-shaped line' (*luoxuan zhuang de huaxian* 螺旋狀的劃綫) to a bamboo culm segment that had already been cut to the right length (in this case about 32 cm)[39] before it was split into individual bamboo slips.[40] Therefore, if a slip shows two line sections, these line sections belong to the same verso line rather than to two different ones. In fact, the line section(s) on the last slip of a certain group of slips that all belong to the same verso line can in many cases be directly connected with the line section(s) on the first slip of the respective group. At the same time, no such connection is possible with the line section(s) on the first slip of the following group of slips.[41] If both, the first as well as the last slip of a group, show two line sections, then the upper line section on the last slip can be connected with the upper line section on the first, whereas the lower line section on the last slip can be connected with the lower line section on the first (see fig. 5).[42]

Han Wei identified overall 14 groups of slips that can each be assigned to the same verso line and therefore the same bamboo culm segment.[43] Such a fixed group of slips shall be named a 'set' in the following.[44] Han Wei further stated that this practice of applying the verso lines to complete bamboo culm segments had probably not only been used for the slips of the Peking University *Laozi* from the late second or early first century BCE.[45] Rather, it apparently had a long tradition that dated back at least 200 years because Shen Jianhua 沈建華 of Tsinghua University supposed that the same practice could be observed on the slips of the Tsinghua University *Xinian* 繫年, which have been dated to around 300 BCE.[46] He Jin however voiced some scepticism with regard to a general validity of the spiral line theory. He argued that this hypothesis might be true for the case of the Peking University *Laozi*, but that this rather appears to be a special case that is not necessarily representative. His arguments against the theory were the following:[47]

1. In the *Laozi* a complete verso line is applied on 16 to 19 slips.[48] If this number of slips is assumed to constitute the complete circumference of a bamboo culm segment, then the spiral line theory could hardly explain other cases where slips have about the same width but a complete verso line is applied on as few as 9 (e.g. Peking University *Wangji* 妄稽)[49], as many as 25 (e.g. Tsinghua University

[37] 有的竹筒在製成竹簡前，沿圓周作一道劃痕, see Li Shoukui 2012, 4.

[38] Han Wei 2012, 227.

[39] Beijing daxue chutu wenxian yanjiu suo 2012c, 121.

[40] Han Wei 2012, 228.

[41] Han Wei 2012, 228–232.

[42] Cf. Takeda 2013b, 127–128.

[43] See tables in Han Wei 2012, 228.

[44] Takeda calls these 'bamboo slip groups' (*chikkan gun* 竹簡群), see Takeda 2013b, 128.

[45] Cf. Beijing daxue chutu wenxian yanjiu suo 2012c, preface, 2.

[46] Han Wei 2012, 228, footnote 6 as well as 232, footnote 10. Cf. Li Shoukui 2012, 4. By use of the C14-method the slips of the Tsinghua University collection were dated to 305 BCE +/- 30 years, see Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010, preface, 3. Sun Peiyang (2011, 455) observed that the practice of applying verso lines in general (not particularly the application of spiral lines) appears to have been common from Warring States until Western Han times.

[47] For these arguments see He Jin 2013, 467.

[48] Cf. Han Wei 2012, 233.

[49] On this manuscript see He Jin 2011.

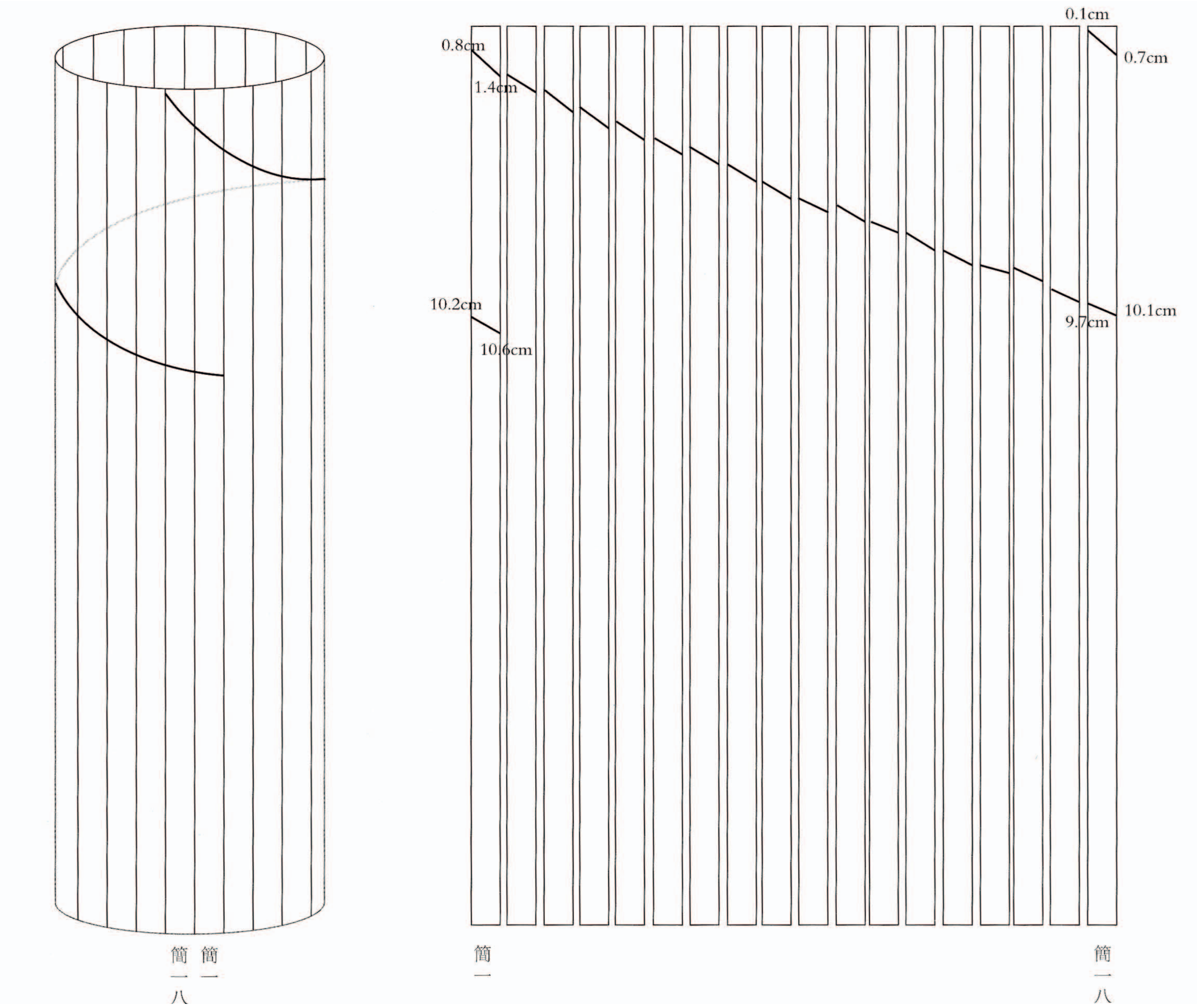


Fig. 5: Spiral-shaped verso line on Peking University *Laozi* slips 1 to 18.[50]

Xinian) or even more than 30 slips (e.g. Yuelu Academy *Zhiri*).

2. In the Tsinghua University *Qiye* there appears to be a continuous verso line on slips 10, 11 and 12, although the bamboo node visible on slip 10 is in a completely different position than those on slips 11 and 12. Therefore, the three slips could not possibly have been part of the same bamboo culm segment, which means that the verso line cannot have been applied in the way suggested by Han Wei. Rather, this line was applied to slips that had been produced from different culm segments.

3. Verso lines were also discovered on wood slips.[51] In those cases the lines could hardly have been applied that way.

In fact the above three arguments do not withstand closer investigation. First, Han Wei calculated that according to the width of the *Laozi* slips and the average number of slips that can be assigned to the same verso line/bamboo culm segment, the culm segments that were used to produce the slips must have had a diameter of 5 to 6 cm.[52] He further argued that

[50] This figure was taken from Han Wei 2012, 229.

[51] See the Qin slips of roll A (*Bainang*) from the Peking University collection (Beijing daxue chutu wenxian yanjiu suo 2012b, 66).

[52] For this calculation Han Wei probably applied: a number of slips between 16 and 19, a width of 0.8 to 0.9 cm and an assumed loss of material during production of 0.1 cm in width per slip, see Han Wei 2012, 233. Using the above numbers, the circumference of one culm segment must have been between a minimum of 14.4 cm (=16*[0.8cm+0.1cm]) and a

these diameters correspond with the natural growth of the type of bamboo that was used for the Peking University Han bamboo slips.[53] According to material analysis, the slips were made of bamboo belonging to the *Phyllostachys* (*gangzhu* 剛竹) genus.[54] However, no matter which type of bamboo was used to produce slips, the diameter can even vary significantly for culms of the same bamboo species. In the case of *Phyllostachys sulphurea viridis*, culms can have a diameter of between 4 and 10 cm.[55] A culm segment with a diameter of 10 cm could easily produce more than 30 slips.[56] Takeda Kenji 竹田健二 further gathered from He Jin's description of the Peking University *Wangji* – with only 9 slips per verso line, but at the same time no slips with more than one line section[57] – that the respective sets of slips are likely to be incomplete and do not necessarily contain a complete line.[58] Possible reasons for the existence of such incomplete sets had been forwarded by He Jin himself (see above).[59]

Second, as has already been pointed out by Takeda, He Jin's analysis of slips 10 to 12 of the Tsinghua University *Qiye* is untenable. There is in fact no line section visible on slip 10, which is why He Jin inferred – with reference to an allegedly similar situation on the following slip 11 – that there had originally been a line section at the position where the slip had broken. This assumption, however, is questionable because on slip 11 the line section is still clearly visible, which means that this slip did in fact not break at exactly this position but slightly above the line section.[60] Also, even if there was a line section on slip 10 at the position proposed by He Jin, it still would not be possible to directly connect it with the line section on the following slip 11. Takeda stated that, according to his investigation of the Tsinghua University slips (up to volume three), there is in fact not a single example for a continuous verso line on slips with bamboo nodes at different positions which could prove that the lines were applied after the slips had been manufactured.[61] The author of this paper could also not find such an example in volume four.[62]

Third, the fact alone that verso lines also occur on wood slips, where the application of spiral lines seems unlikely, does not prove in any way that the lines might not have been applied to bamboo slips in exactly that way. These different materials certainly required different techniques for processing – not only concerning the application of verso lines. It is furthermore noteworthy that the lines on the Qin wood slips of roll A (*Bainang* 白囊) from the Peking

maximum of 19 cm (=19*[0.9cm+0.1cm]). The corresponding diameters (=circumference/π) are nearly 4.6 and slightly more than 6 cm, respectively.

53 Han Wei 2012, 233.

54 Hu Dongbo et al. 2011, 90, cf. Wang Zhengping and Stapleton 2006, 163–180. The Qin bamboo slips in possession of Peking University and the Tsinghua University slips were in fact made from the same type of bamboo (Beijing daxue chutu wenxian yanjiu suo 2012a, 41–42; Li Junming 2012, 39). For the Yuelu Academy slips there is unfortunately no information on this in the respective material analysis report, see Zhu Hanmin and Chen Songchang 2010, 197–201.

55 Wang Zhengping and Stapleton 2006, 167.

56 A culm segment with a diameter of 10 cm would have a circumference of around 31 cm (=diameter*π). Following Han Wei's calculations (see footnote 52), one could produce at least 34 slips (=31cm/[0.8cm+0.1cm]) in the same width as those of the Peking University *Laozi* from such a culm segment. In the case of the Yuelu Academy *Zhiri*, which were cited by He Jin as examples for verso lines that are applied to up to 35 slips (He Jin 2013, 467), the slips only have a width of 0.5 to 0.6 cm (Zhu Hanmin and Chen Songchang 2010, preface). A culm segment that could produce 35 slips with a width of 0.6 cm (+0.1 cm assumed loss of material) would have to have a circumference of 24.5 cm (=35*0.7cm), which is equal to a diameter of around 7.8 cm (=circumference/π). Although it is unclear exactly which type of bamboo was used for the production of the Yuelu Academy slips, the existence of bamboo culms with a diameter of nearly 8 cm is easily conceivable. They definitely exist for the *Phyllostachys* genus, see Wang Zhengping and Stapleton 2006. It might be interesting in this respect that the *Suanshushu* 算數書 manuscript excavated from Zhangjiashan 張家山 tomb no. 247 contains a passage titled *chengzhu* 程竹, which appears to refer to frequent dimensions of bamboo culm segments that were used to produce slips. The text mentions 'bamboo of eight inches (*cun* 寸)' and 'bamboo of nine inches' (*Suanshushu* 70–71, see Zhangjiashan er si qi hao Han mu zhujian zhengli xiaozu 2006, 141, cf. translation in Cullen 2004, 60). In Han times, one inch was equal to about 2.31 cm, which would mean that these measurements correspond to around 18.5 cm and 20.8 cm, respectively. With regard to the usual diameter of culms for the frequently used *Phyllostachys* genus it seems in fact unlikely that the numbers here refer to a diameter, as proposed in Zhangjiashan er si qi hao Han mu zhujian zhengli xiaozu 2006, 141, footnote 2. Of 40 species listed for this genus, only one (*maozhu* 毛竹) can reach culm diameters of 15 to 20 cm (Wang Zhengping and Stapleton 2006, 172). Rather, these are circumferences that would correspond to diameters of nearly 6 and slightly more than 6.5 cm, respectively. The very large number of slips (i.e. 183) with a length of three feet (*san chi* 三尺, ca. 70 cm) that according to the *Suanshushu* can be produced from a 'bamboo of eight inches' must be due to the fact that the length of the bamboo culm – which in fact does not enter the calculation (Cullen 2004, 61) – was much more than three feet, probably a multiple of this length (e.g. 18 feet or about 4 m).

57 He Jin 2013, 460.

58 Takeda 2013b, 140.

59 He Jin 2013, 462–463.

60 Takeda 2013a, 80, footnote 12, cf. Takeda 2013b, 131.

61 Takeda 2013a, 80, footnote 12, cf. Takeda 2013b, 141.

62 See Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2013, 6–9, 14–15. Unfortunately, the recently published volume five was not available before the submission of this paper.

University collection cited as an example by He Jin are ink-drawn and furthermore described as 'intersecting' (*jiaocha* 交叉).[63] This in fact points towards a different application technique. A closer investigation of these lines will have to wait until photographs of the material are published.

5. Further examples of manuscripts with spiral lines

5.1 The Tsinghua University manuscripts

As has been shown there is to date no convincing evidence to disprove a possibly more general validity of Han Wei's spiral line theory. On the contrary, Takeda provided further evidence to verify Shen Jianhua's statement that the situation concerning the verso lines in the Tsinghua University *Xinian* is similar to that in the Peking University *Laozi*,[64] which had been doubted by He Jin.[65] The most important factors that enabled the identification of spiral lines in the *Laozi* were the exceptionally well preserved state of the two respective manuscripts (with only two missing slips)[66] and the occurrence of two line sections (from the beginning and the end of the same verso line) on 19 slips.[67] This often made it possible to trace complete verso lines from beginning to end and thereby identify sets of slips that can be assigned to the same verso line as well as to the same bamboo culm segment.

A very similar situation can in fact be found in the Tsinghua University *Xinian*. Only three of the total of 138 slips appear to be seriously fragmented, whereas no slips are completely missing.[68] Although the description of the verso lines on the *Xinian* slips by two members of the editorial team suggests that none of the slips show more than one line section,[69] Takeda has pointed out that there are in fact six slips that have two line sections.[70] Although there are less slips with two line sections in the *Xinian* than in the *Laozi*, it is easily possible to identify slips that probably belong to the same set because the comparatively long slips of the *Xinian* (44.6 to 45 cm)[71] consistently show one bamboo node, and differences in the position of these nodes are usually quite obvious. He Jin had thereby already identified seven groups of slips (see table 1) although he did not think that the verso line on each of these groups was in fact a spiral line (which is why they are as yet not called 'sets' here):

Table 1: Groups of slips in the Tsinghua University *Xinian* according to He Jin.[72]

Group	Slips	Number of slips
1	1 to 25	25
2	26 to 44	19
3	45 to 69	25
4	70 to 95	26
5	96 to 120	25
6	121 to 134	14
7	135 to 138	4

After analysis of the verso lines on the *Xinian* slips, Takeda observed that the continuity of the lines is extremely regular, meaning that the slips inside a certain group were usually placed in accordance with the respective verso line.[73] In

[63] Beijing daxue chutu wenxian yanjiu suo 2012b, 66.

[64] Takeda 2013b. Cf. Han Wei 2012, 228, footnote 6.

[65] He Jin 2013, 467.

[66] Having pieced together 105 fragments in addition to the 176 completely extant slips, the editors arrived at 211 complete or nearly complete slips and 10 fragments. As the editors assume that the overall number of slips in the two *Laozi* manuscripts was 223, this means that only two slips are completely missing. See Beijing daxue chutu wenxian yanjiu suo 2012c, 121.

[67] Han Wei 2012, 227.

[68] This can be gathered from the sequence numbers that were written on the verso of the slips. The numbers range from 1 to 137, because the last slip does not have a sequence number written on it. Also, there are two mistakes in the numbering: the sequence number '52' was used twice (on slip 52 and by mistake again on the following slip 53), whereas the sequence number '88' was apparently left out, because there appears to be no text missing. See Li Junming and Zhao Guifang 2012, 66–67, cf. photographs in Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2011, 18–33.

[69] Li Junming and Zhao Guifang 2012, 67 and 69, fig. 1.

[70] These are slips 1, 45, 70, 71, 96 and 97, see Takeda 2013b, 133. He Jin had earlier identified three of these slips (45, 96, 97), see He Jin 2013, 461, footnotes 3, 4 and 5. Takeda further argued that the slightly fragmented slip 135 probably originally had a second line section at the very top, which could be linked with that on the following slip 136, see Takeda 2013b, 134. This appears to make more sense than He Jin's proposal that slip 135 was, just as slip 44, misplaced, see He Jin 2013, 465–466.

[71] Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2011, 135.

[72] He Jin 2013, 461. Cf. the erroneous description of groups 1 to 4 in Li Junming and Zhao Guifang 2012, 67.

[73] Apart from four slips that do not show any line sections, which is apparently either due to their fragmented state (slips 63 and 64) or the fact that they might be later replacements for the original slips (slips 8 and 60), only the last slip of the second group (slip 44) does not fit into the sequence as far as its line section is concerned, see He Jin 2013, 465. Judging from the position of the line section this slip should have been placed between slips

contrast to He Jin, he further proposed that the lower line sections of all six slips that show two line sections (1, 45, 70, 71, 96 and 97) and which are actually all situated at the beginning of a certain group of slips, can be connected with the line section on the last slip of the respective group.[74] In fact, a direct link is possible between 70-71 and 95 for group 4 (see fig. 9 in appendix A) in the same way as in 10 of overall 14 sets of the two manuscripts constituting the Peking University *Laozi*.[75] For slips 1, 45 and 96 (groups 1, 3 and 5) one would have to assume one or two missing slips, respectively, to connect them with the last slip of the respective group (see e.g. group 5, fig. 10 in appendix A), as it is also the case in one set of the *Laozi*.[76] In the *Laozi* as well as in the *Xinian*, these slips must have been discarded for some unknown reason, before the writing was applied because there is obviously no part of the text missing. Just as in the *Laozi* there are also groups of slips in the *Xinian*, which do not contain any slip with two line sections or which are very clearly incomplete (groups 2, 6 and 7).[77] However, with regard to the evidence provided by groups 1 and 3 to 5 it seems likely that the verso lines in these three groups were applied in exactly the same way.[78] Therefore, it is justified to call the seven groups of slips in the *Xinian* 'sets' in the same way as those in the *Laozi*. As supporting evidence one can calculate the approximate diameter a bamboo culm segment would require to produce enough slips. The largest group of the *Xinian* is group 4 (slips 70 to 95) with 26 slips, which actually appears to contain a complete verso line (see fig. 9 in appendix A). This suggests that, following Han Wei's assumption of a loss of width of about 0.1 cm per slip during processing,[79] the circumference of the original culm segment from which these 26 slips with a width of 0.5 to 0.6 cm[80] were probably produced must have been around 17 cm. The respective diameter would be circa 5.5 cm, which is a typical culm diameter for the type of bamboo from which the Tsinghua University bamboo slips were produced (*Phyllostachys* or *gangzhu* 剛竹).[81]

But the *Xinian* is not the only manuscript from the Tsinghua University collection which supports the spiral line theory. Takeda argued that the *Jinteng* is another example.[82] Of the overall 14 slips, the first three show two line sections.[83] Apart from the fact that the lower line sections on slips 1 to 3 appear to form a continuous line that is parallel to the one formed by the upper line sections on slips 1 to 3 and those on slips 4 to 14,[84] the number and position of the bamboo nodes on all 14 slips are identical. Takeda further suggested that – provided that there were originally two more slips between them – the line section on slip 14 and the lower line section on slip 1 may be linked. Pointing to similar circumstances in the Peking University *Laozi* and the Tsinghua University *Xinian*, where a certain set of slips manufactured from the same bamboo culm segment had apparently not been completely used up, Takeda proposed that the *Jinteng* is probably another example for Han Wei's spiral line theory.[85]

37 and 38 of the same group, but was probably mistakenly placed at the end, see Takeda 2013b, 133–134.

74 Takeda 2013b, 135–136.

75 These are sets 1, 2, 3, 4, 5 and 7 of *Laozi shangjing* 老子上經 and sets 1, 2, 4 and 6 of *Laozi xiajing* 老子下經, see Han Wei 2012, 229–232. Cf. the tracings in Beijing daxue chutu wenxian yanjiu suo 2012c, 111–117.

76 In set 5 of *Laozi xiajing* one slip appears to be missing between the first and the last slip of the set according to the verso lines, see Han Wei 2012, 229–232. Cf. the tracings in Beijing daxue chutu wenxian yanjiu suo 2012c, 111–117.

77 Set 6 of *Laozi shangjing* and set 3 of *Laozi xiajing* do not contain slips with two line sections, whereas set 8 of *Laozi shangjing* with only 6 slips is obviously incomplete, see Han Wei 2012, 229–232. Cf. the tracings in Beijing daxue chutu wenxian yanjiu suo 2012c, 111–117. Note that both *Xinian* group 7 and *Laozi shangjing* set 8 are positioned at the very end of the respective manuscript, which means that their incomplete state is in no way surprising. Cf. Takeda 2013b, 134.

78 Takeda 2013b, 136.

79 See footnote 52.

80 The width was measured with the help of the full-scale photographs in Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2011, 2–17.

81 See footnote 54.

82 Takeda 2013b, 138–139.

83 Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010, 16–17, cf. Takeda 2013b, 138, fig. 2.

84 Sun Peiyang 2011, 453.

85 Takeda 2013b, 139. He further suggested that, although there are no slips with two line sections visible in these cases, the Tsinghua University *Chengwu* 程寤 (Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010, 6–7) and *Chi Hu zhi Ji Tang zhi wu* 赤鵠之集湯之屋 (Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2012, 20–23) are possibly further examples, see Takeda 2013b, 143, footnote 11. For the 15 slips of *Chi Hu zhi Ji Tang zhi wu*, it has recently been proposed that the respective verso line continues on slips 1 to 3 of the *Yinzhi* 尹至 (Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2010, 2–3), see Xiao Yunxiao 2013. This would mean that this set consisted of overall 18 slips.

5.2 The Yuelu Academy manuscripts

Han Wei pointed out with regard to the Yuelu Academy *Zhiri* that in manuscripts where according to Sun Peiyang the verso lines had definitely been applied after the slips had been produced, two line sections likewise occur on the same slip in certain cases. He stated that the reason for an 'overlap of verso lines' in these cases is unclear.[86] This deserves closer investigation. Sun Peiyang thought that, if there are two line sections visible on certain slips of the Yuelu Academy *Zhiri*, these belong to two *different* verso lines. His analysis of *Zhiri* 27 can serve as an example. Sun assumed that there are three continuous verso lines on the slips of *Zhiri* 27: the first starting on slip 1 and ending on slip 23, the second starting on slip 21 and ending on slip 43, the third starting on slip 41 and ending on slip 54. Due to an 'overlap' of the first and second lines on slips 21, 22 and 23 as well as of the second and third lines on slips 41, 42 and 43, these six slips each show two line sections.[87]

With regard to Sun Peiyang's analysis, there are some things that warrant revision. First, there is in fact only one line section visible on slip 23. The lower line section, as postulated by Sun, is not observable on the photograph of this slip.[88] Second, the upper line sections on the preceding slips 21 and 22, which according to Sun belong to the second verso line, cannot be connected with the line section on slip 23. This means that there is no direct connection possible between slips 22 and 23 as far as the verso lines are concerned. Instead, however, the upper line section on slip 22 can be directly connected with the line section on slip 1 in the same way as in some sets of slips in the Peking University *Laozi* and the Tsinghua University *Xinian* (see fig. 11 in appendix A). As pointed out by Sun, there is a gap in the first verso line between slips 9 and 10, which probably means that one slip was discarded after application of the line and that furthermore slip 17 from *Zhiri* 35 should be placed between slips 6 and 7 of *Zhiri* 27.[89] Overall, this means that slips 1 to 22 of *Zhiri* 27 (plus the additional slip) constitute a set of 23 slips (originally very likely 24) that were probably produced from the same bamboo culm segment.

Bearing this discovery in mind, it is necessary to re-examine the second verso line, which according to the above analysis starts on slip 23. It appears from Sun Peiyang's reconstruction of *Zhiri* 27 that the upper line section on slip 43 and the line section on slip 44 can be directly connected.[90] In fact this is not the case, as slip 44 would have to be placed slightly lower than the preceding slip 43 according to its state of fragmentation.[91] In Sun's reconstruction, however, the top ends of the two slips appear at exactly the same height.[92] Therefore, the upper line section on slip 43 can probably not be directly connected with the line section on the following slip 44. Instead it can be directly connected with the line section on slip 23 (see fig. 12 in appendix A). As observed by Sun, there is a gap in the second verso line between slips 38 and 39, which probably means that one slip was discarded after application of the line. Furthermore, there are apparently two slips missing between slips 32 and 33 (according to both, verso line as well as recto text) whereas slip 25 should be removed from *Zhiri* 27 because it actually belongs to *Zhiri* 34.[93] In sum, this means that slips 23 to 43 of *Zhiri* 27 (subtracting slip 25) constitute a set of 20 slips (originally very likely 24) that were probably produced from the same bamboo culm segment. The remaining slips 44 to 54 do not contain any slip with two line sections, which is why it is not possible to find a link between the last and the first of these 11 slips for the third verso line. However, even with regard to the fact that there are three slips missing between slips 50 and 51 and the original number of slips belonging to this verso line was therefore at least 14, this is obviously an incomplete set. A comparison with the other two nearly complete sets, where the assumed original number of slip is 24, supports this assumption. In *Zhiri* 27 the number of slips in a complete set is accordingly slightly lower than in the case of the Tsinghua University *Xinian* (see table 2, cf. table 1). For the slips of *Zhiri* 27, which have a width of

[86] Han Wei 2012, 232, footnote 10, cf. Sun Peiyang 2011, 457. Takeda also pointed out that further investigation would be necessary to clarify the relation between the verso lines on the Yuelu Academy *Zhiri* and those on the *Laozi*, the *Xinian* and the *Jinteng*, see Takeda 2013b, 141.

[87] Sun Peiyang 2011, 450–451 and fig. 1.

[88] Zhu Hanmin and Chen Songchang 2010, 54.

[89] Sun Peiyang 2011, 450–451. A gap between slips 10 and 11, which was proposed by Sun, is not really supported by the evidence of the line sections on these slips, see fig. 11 in appendix A.

[90] Sun Peiyang 2011, fig. 1.

[91] See photographs in Zhu Hanmin and Chen Songchang 2010, 61–62.

[92] Sun Peiyang 2011, fig. 1.

[93] Sun Peiyang 2011, 450–451 and fig. 1.

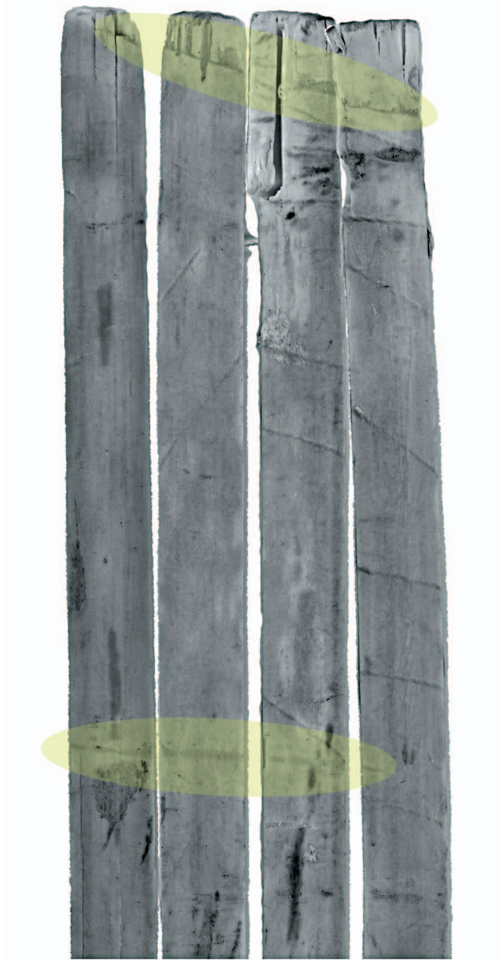
0.6 cm,[94] this would suggest a reasonable diameter of around 5 to 5.5 cm for a complete bamboo culm segment.[95]

Table 2: Sets of slips in Yuelu Academy *Zhiri* 27.

Set	Slips	Number of slips[96]
1	1 to 22 (+ *Zhiri* 35, slip 17)	23 (24)
2	23 to 43 (– slip 25)	20 (24)
3	44 to 54	11 (more than 14)

Although it is less obvious in the other two calendars from the Yuelu Academy collection, there is a hint in favour of the spiral line theory to be found in *Zhiri* 34 as well. In contrast to Sun Peiyang's findings, there actually are slips in *Zhiri* 34 which each carry two line sections that appear to be part of continuous lines, *viz.* slips 26 to 29 (see fig. 6).

While the upper line sections on these four slips were described by Sun as the beginning of the second verso line that ends on slip 58, he did not mention the respective lower line sections.[97] In fact, these lower line sections can be directly linked with the last line section of the second verso line on slip 58 (see fig. 13 in appendix A). From this it can be gathered that slips 26 to 58 of *Zhiri* 34 probably constitute a nearly complete set of 33 slips – due to a slip that was apparently discarded after application of the line,[98] the original number of slips was most likely 34. For the slips of *Zhiri* 34, which just as those of *Zhiri* 27 have a width of 0.6 cm,[99] a bamboo culm segment would have to have a diameter of around 7.5 cm to produce 34 slips, which is



26 27 28 29

Fig. 6: Continuous lines on slips 26 to 29 of Yuelu Academy *Zhiri* 34.[101]

easily possible.[100] As there are no slips with two line sections in *Zhiri* 35, it is in this case difficult to argue for fixed sets of slips that might have been produced from the same bamboo culm segment to which a spiral line had been applied. However, it can be gathered from the analysis of *Zhiri* 27 and 34 that Sun Peiyang is probably wrong to assume that for all the Yuelu Academy *Zhiri* the verso lines were applied after the slips had been produced.

As a last example, manuscript 1 of the so-called *Wei yu deng zhuang si zhong* 爲獄等狀四種 (hereafter *Zhuang si zhong* MS 1) from the Yuelu Academy collection shall be

[94] Zhu Hanmin and Chen Songchang 2010, preface.

[95] Cf. calculations for Peking University *Laozi* and Tsinghua University *Xinian* above.

[96] The first number refers to the number of extant slips of a certain set, the number in brackets refers to the assumed original number of slips in this set according to the verso lines. The latter number therefore includes both, slips that were apparently discarded after application of the respective verso line but before the writing was applied as well as slips that were lost later. In the second case, this not only caused an obvious gap in the verso line but at the same time a gap in the text on the recto of the slips.

[97] Sun Peiyang 2011, 451 and fig. 2.

[98] This refers to the gap between slips 36 and 37, see Sun Peiyang 2011, 451 and fig. 2. Also, slips 52 and 53 appear to have switched places, see fig. 13 in appendix A.

[99] Zhu Hanmin and Chen Songchang 2010, preface.

[100] Cf. calculations for Peking University *Laozi* and Tsinghua University *Xinian* above.

[101] For photographs of these slips see Zhu Hanmin and Chen Songchang 2010, 76–77. Note that fig. 6 only shows the top part of the four slips. The continuous lines have been marked in yellow. On the additional line sections that appear not to be part of continuous lines see below and footnote 112.

examined.[102] *Zhuang si zhong* MS 1 consists of 137 bamboo slips with a length of 27.5 cm and a width of 0.6 to 0.7 cm.[103] According to the editors, almost all slips of this manuscript show line sections on their verso, which mainly correspond to the sequence of the text on the recto. However, frequently gaps occur in the verso lines and while slips that belong to the same of overall seven textual units contained in *Zhuang si zhong* MS 1 show continuous lines, there is obviously no connection between slips that belong to different textual units, as far as the verso lines are concerned.[104] The editors therefore suppose that the seven parts might have been used separately before they were tied together in the same manuscript.[105]

The amount of slips that can be assigned to a certain textual unit in *Zhuang si zhong* MS 1 varies significantly between as few as seven and up to 30 slips. As has already been shown, slips with two line sections are an important means to identify possible sets of slips that might be assigned to a certain spiral line and therefore the same bamboo culm segment. In *Zhuang si zhong* MS 1 ten slips show two line sections (see table 3).[106]

The findings from the previously discussed manuscripts suggest that slips with two line sections normally occur at the beginning and/or end of a distinct set of slips. The distribution of such slips in *Zhuang si zhong* MS 1 in fact nicely fits the previously noted observation that in this manuscript there is no connection between slips that belong to different textual units as far as the verso lines are concerned. Indeed there are four slips with two line sections that are situated at the very beginning or end of a certain textual unit, *viz.* slips 1, 31, 62 and 94 (2) at the beginning of textual units 1, 2, 4 and 6, respectively, as well as slip 30 at the end of textual unit 1. However, there are further slips with two line sections in the middle of the seven textual units, *viz.* slips 18, 19, 50, 51 and 84. These point to the possibility that the respective textual units (1, 3 and 4) contain slips from more than one set, and in fact neither the line sections on slips 18 and 19, nor those on 50 and 51 can be directly connected. Accordingly, they seem to mark the end and beginning of two separate sets of slips (see fig. 7). Slip 84 actually appears to constitute the second slip of a set because its lower line section can be directly linked with the preceding slip 83, but in turn slip 83 cannot be linked with the preceding slip 82 (see fig. 8). Apart from these three changes of sets inside textual units, there is

Table 3: Textual units and slips with two line sections in *Zhuang si zhong* MS 1.

Textual unit	Slips	Number of slips	Slips with two line sections
1	1 to 30	30	1, 18, 19, 30
2	31 to 43	13	31
3	44 to 61	18	50, 51
4	62 to 87	26	62, 84
5	88 to 94	7	-
6	94 (2)[107] to 107	14	94 (2)
7	108 to 136	29	-

Table 4: Sets of slips in Yuelu Academy *Zhuang si zhong* MS 1.

Textual unit	Set	Slips	Number of slips	Slips with two line sections
1	1	1 to 18	18	1, 18
	2	19 to 30	12	19, 30
2	3	31 to 43	13	31
3	4	44 to 50	7	50
	5	51 to 61	11	51
4	6	62 to 82	21	62
	7	83 to 87	5	84
5	8	88 to 94	7	-
6	9	94 (2) to 107	14	94 (2)
7	10	108 to 117	10	-
	11	118 to 136	19	-

[102] The corresponding slips are titled 'first category' (*di yi lei* 第一類) in the edition, see Zhu Hanmin and Chen Songchang 2013.

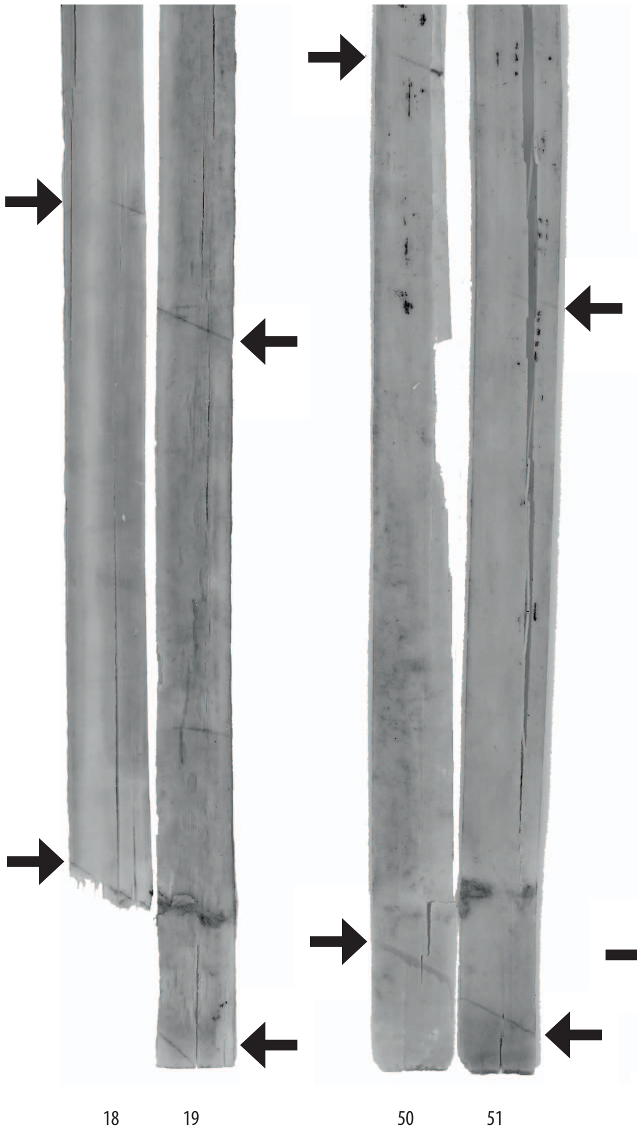
[103] Zhu Hanmin and Chen Songchang 2013, preface. One slip was discovered later (see footnote 107) and has been added to the original count of 136 slips.

[104] Shi Da 2013, 23–24. Cf. Zhu Hanmin and Chen Songchang 2013, 317.

[105] Zhu Hanmin and Chen Songchang 2013, 317.

[106] For *Zhuang si zhong* MS 1 see Zhu Hanmin and Chen Songchang 2013, 81–165.

[107] Slip 94 (2) was discovered after the publication of Zhu Hanmin and Chen Songchang 2013 and needs to be inserted at the beginning of textual unit 6, see Tao An 2014 and Shi Da 2014.



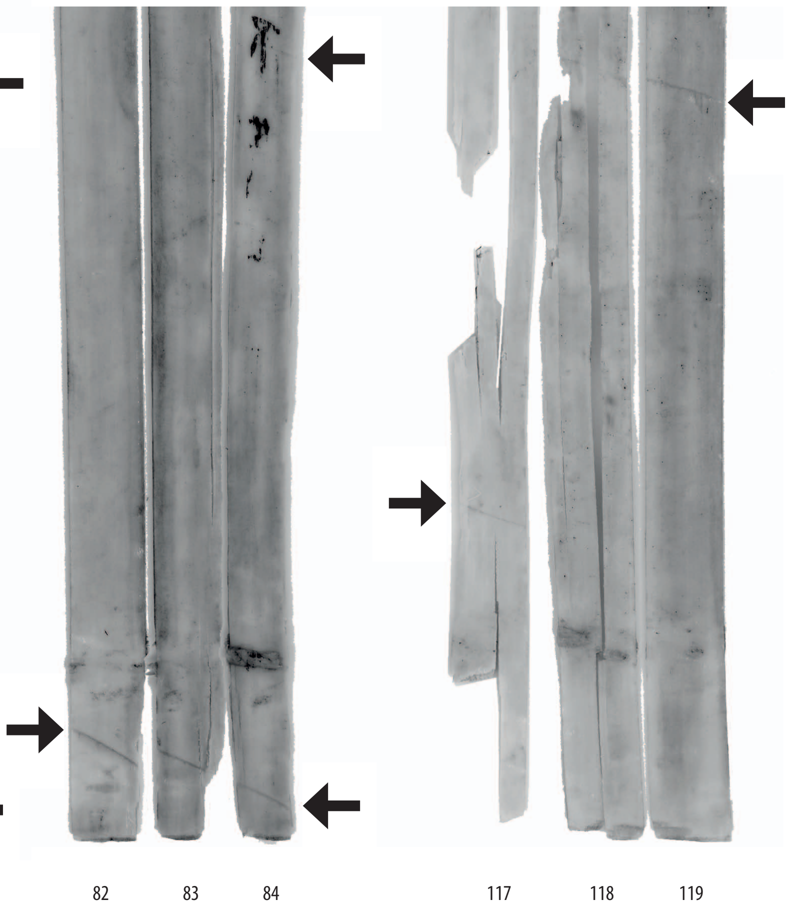


Fig. 7: End and beginning of separate sets in Yuelu Academy *Zhuang si zhong* MS 1 (I).[108]

Fig. 8: End and beginning of separate sets in Yuelu Academy *Zhuang si zhong* MS 1 (II).[109]

one additional, very obvious change between slips 117 and 118. The line sections on 118 and the following slips are at a significantly higher position than those on slips 108 to 117 (see fig. 8). This cannot be explained as one of the usual gaps within the same verso line, which is why slips 118 to 136 cannot possibly belong to the same set as slips 108 to 117.

Hence, it is possible to subdivide the groups of slips that belong to textual units 1, 3, 4 and 7 and thereby identify eleven distinct sets of slips in *Zhuang si zhong* MS 1 (see table 4).

When examining the verso lines on the slips of each set, it becomes clear that actually none of these sets appear to be complete. There are only two instances where at least the beginning and end are complete so that line sections on the first and last slip of a certain set can be directly connected (see fig. 14 and 15 in appendix A):

1. The two line sections on slip 18 can be directly connected with the two line sections on slip 1.
2. The line section on slip 82 can be directly connected with the lower line section on slip 62.

Judging from the evidence of the verso lines alone, it is very likely that the set of slips 1 to 18 was originally comprised of one more slip between slips 6 and 7. This would mean that the complete set consisted of 19 slips. The set of slips 62 to

[108] For photographs of the slips see Zhu Hanmin and Chen Songchang 2013, 90, 92. The line sections are indicated by black arrows.

[109] For photographs of the slips see Zhu Hanmin and Chen Songchang 2013, 87, 89.

82 very likely once consisted of at least ten more slips – three between 77 and 78; two between 62 and 63; one between 67 and 68, 70 and 71, 71 and 72, 74 and 75, 79 and 80. This would mean that the complete set probably consisted of 31 slips. As all slips of *Zhuang si zhong* MS 1 have roughly the same width, the bamboo culm segments that served as raw material for the production of these two sets must have differed in diameter. Although this is a significant difference from the other manuscripts discussed before, where the number of slips in the sets was comparatively stable inside the same manuscript, it corresponds suitably with the fact that the *Zhuang si zhong* MS 1 was probably not produced as a whole in one step.

To sum up, the described examples of spiral lines suggest that the lines were at least in many cases applied to the culm segments before they were cut into slips. Although it is certain that not every line section occurring on a certain bamboo slip was produced this way – as pointed out by Takeda it is reasonable to assume different standards and techniques for manuscript production, e.g. at different times or in different regions[110] – it is apparent from the material available to date that the application of spiral lines to complete bamboo culm segments was a very commonly used technique from Warring States until Han times. There are exceptions that deserve further investigation, which is however beyond the scope of this study: First, ‘<’-shaped lines such as those on the verso of the Tsinghua University *Liangchen* 良臣 and *Zhuci* 祝辭 slips.[111] Second, cases where several line sections occur on certain bamboo slips, but not all of them could possibly have been applied as part of a spiral line.[112] Third, verso lines on wood slips, to which the spiral line theory is probably not applicable. At least the latter two phenomena suggest that the application of verso lines did not always precede the production of individual slips. But for all examples discussed above, where the spiral line theory appears to be valid, this can be ruled out. In these cases slips that belong to the same verso line form a materially self-contained set, which also has implications for codicological analysis and reconstruction.

6. The ‘set’ of slips as a new codicological category

The materially self-contained sets that are constituted by the slips belonging to the same spiral line and the same bamboo culm segment can be regarded as a new analytical category, which can be applied for the codicological description of bamboo manuscripts. Generally, a bamboo manuscript or ‘codicological unit’[113] might consist of any number of complete and/or incomplete sets of slips. In this respect, the sets of slips in bamboo manuscripts are roughly comparable to the quires of codex manuscripts, which Gumbert has called ‘the essential building blocks of a manuscript’.[114] The change from one set of slips to the next inside the same codicological unit can be seen as a boundary between two codicological sub-units and shall be called a ‘set boundary’ in the following.[115] For ‘textual units’ similar statements as for sets of slips can be made: a codicological unit might consist of one (single-text manuscript, STM) or several textual units (multiple-text manuscript, MTM). The change from one textual unit to the next inside the same codicological unit can likewise be seen as a boundary. This will be called ‘text boundary’ in the following. Both, sets of slips as well as textual units are useful categories to describe a certain manuscript, but until now the former have been largely neglected. The sets of slips were only considered insofar as they each contained a verso line that was of use in reconstructing the original sequence of slips in a manuscript. However, set boundaries can likewise be significant for

---

[110] Takeda 2013b, 139 with footnote 12.

[111] Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2012, 17–19, cf. fig. 16 in appendix B.

[112] There is a similar phenomenon that shall be called ‘verso stripes’ here: Some slips show multiple lines that look exactly like the usual line sections but are often inclined bottom left to top right and occur in more or less regular intervals over the whole length of a slip, see fig. 17 in appendix B for some examples. Origin and significance of this phenomenon are as yet unknown.

[113] For the technical terms ‘codicological unit’ (unité codicologique) and ‘textual unit’ (unité textuelle) in the context of early Chinese manuscripts see Kalinowski 2005. The concept codicological unit was borrowed from European codicology, where it was originally invented for the study of codex manuscripts. According to Gumbert (2004, 23) a codicological unit is ‘a discrete number of quires, worked in a single operation and containing a complete text or set of texts’. A codicological unit as a material object has to be distinguished from a textual unit, which has been defined either with regard to content (cf. Roth 1993, 227 on ‘text’) or from a purely formal point of view, independent from the content (Kalinowski 2005, 145).

[114] Gumbert 2004, 22

[115] Following the set–quire analogy a ‘set boundary’ would correspond to a ‘quire boundary’ (Gumbert 2004, 22). In his definition of the term ‘boundary’ as ‘a place where there is a change in any feature of the manuscript (for instance watermark, layout, hand, decoration, text), except quire boundaries’, Gumbert (2004, 40) explicitly excluded quire boundaries to be able to distinguish between ‘quire boundaries’ and ‘boundaries’ (of any other kind). The ‘set boundary’ in the present paper, however, is meant to be a sub-category of the more general ‘boundary’, instead of the two being mutually exclusive categories.

reconstruction, especially if a set boundary coincides with a text boundary. Gumbert coined the term 'caesura' for similar circumstances in codex manuscripts.[116] In bamboo manuscripts, caesuras would be boundaries between materially *and* textually self-contained groups of slips, which can in fact cause problems for reconstruction. The sequence of several such twofold self-contained groups in a multiple-text manuscript cannot be determined without additional evidence. In fact, this problem is not confined to multiple-text manuscripts but also pertains to manuscripts with a single text that is separated into self-contained textual sub-units such as 'chapters' (*zhang* 章). The four comparatively long bamboo manuscripts with nearly 100 or even more slips discussed above, *viz.* the Peking University *Laozi* (overall 221 slips, *Laozi shangjing* 老子上經 123 slips, *Laozi xiajing* 老子下經 98 slips), the Tsinghua University *Xinian* (138 slips), as well as Yuelu Academy *Zhuang si zhong* MS 1 (137 slips), provide a good basis to illustrate this problem with a few examples. In both manuscripts of the Peking University *Laozi* the text is sub-divided into units that are referred to as *zhang* by the editors. These chapters of text are marked by black dots on the top end of the first slip belonging to a certain chapter and by blank space after the end of the text on the last slip belonging to the same chapter.[117] On the 98 slips of *Laozi xiajing*, none of the text boundaries between two of the chapters coincides with a set boundary. On the 123 slips of *Laozi shangjing*, however, there are five instances where exactly this is the case (see table 5).[118]

According to these coinciding boundaries the *Laozi shangjing* manuscript can be divided into six parts:

- Slips 1 to 18 (chapters 1 to 5)
- Slips 19 to 53 (chapters 6 to 19)
- Slips 54 to 70 (chapters 20 to 25)
- Slips 71 to 100 (chapters 26 to 37)
- Slips 101 to 117 (chapters 38 to 42)
- Slips 118 to 123 (chapters 43 to 44)

Table 5: Coinciding set and text boundaries in Peking University *Laozi shangjing*.

Set boundaries (slip/slip)	Text boundaries (chapter/chapter)
18/19	5/6
53/54	19/20
70/71	25/26
100/101	37/38
117/118	42/43

This means that the current reconstruction of *Laozi shangjing*, in which the sequence of the chapters completely accords with the received version of the text and which is also not contradicted by the verso lines,[119] does not necessarily reflect the original arrangement of the slips. Although Han Wei pointed out that the verso lines had a key function in determining the sequence of the chapters inside the Peking University *Laozi*,[120] the six parts described above could in fact be freely moved within the manuscript.[121] The sequence of the chapters in *Laozi xiajing* on the other hand appears to be beyond dispute and in fact accords with the received version of that part of the text. This actually hints towards the possibility that the same was the case in *Laozi shangjing*. However, the verso lines alone are not a suitable means to support such a claim. As can be seen, even with evidence from the verso lines, it is not possible to safely reconstruct the original sequence of the slips in *Laozi shangjing*.

The situation is slightly different in the Tsinghua University *Xinian*. The text on the 138 slips of this manuscript is likewise divided into chapters, which are usually indicated by a hook-shaped mark directly following the text of a certain chapter. If the respective slip is not completely filled with writing,

[116] According to Gumbert (2004, 40), a caesura is 'a boundary which coincides with a quire boundary'. Note the already mentioned opposition between 'boundary' and 'quire boundary' in his definition.

[117] Beijing daxue chutu wenxian yanjiu suo 2012c, 121.

[118] See the photographs of the recto of the slips (Beijing daxue chutu wenxian yanjiu suo 2012c, 3–31) and the respective transcriptions (Beijing daxue chutu wenxian yanjiu suo 2012c, 123–162) as well as the tracings of the sets (Beijing daxue chutu wenxian yanjiu suo 2012c, 111–117). Han Wei in fact claimed that there is no obvious correspondence between the sets of slips and the text (Han Wei 2012, 233). As can be seen this is not entirely correct.

[119] Han Wei 2012, 233–234.

[120] Han Wei 2012, 235.

[121] This can at least be said for the first five of these parts. For the last part it is comparatively safe to assume that it was really positioned at the end of the manuscript. This is suggested by the fact that the last set with only six slips (118 to 123) is the only set with more than its second half clearly missing, see Beijing daxue chutu wenxian yanjiu suo 2012c, 114.

then the space below the mark is left blank.[122] On the *Xinian* slips there are two instances where a text boundary between two of the chapters coincides with a set boundary (see table 6, cf. table 1 above).

Table 6: Coinciding set and text boundaries in the Tsinghua University *Xinian*.

Set boundaries (slip/slip)	Text boundaries (chapter/chapter)
44/45	7/8
95/96	17/18

According to these coinciding boundaries the *Xinian* manuscript can be divided into three parts:

- Slips 1 to 44 (chapters 1 to 7)
- Slips 45 to 95 (chapters 8 to 17)
- Slips 96 to 138 (chapters 18 to 23)

As in the case of *Laozi shangjing* there are several materially and textually self-contained parts in the *Xinian*, which could theoretically be freely moved inside the manuscript. However, the original sequence of the slips is in this case unambiguously determined by the sequence numbers on the verso of the slips.[123] Furthermore, the whole manuscript text contains historical records in chronological order.

The situation in Yuelu Academy *Zhuang si zhong* MS 1 is significantly different from both the *Laozi* and the *Xinian*. As has already been noted, there is obviously no connection between slips that belong to different textual units, as far as the verso lines are concerned.[124] In other words, in *Zhuang si zhong* MS 1 text boundaries *always* coincide with set boundaries – although set boundaries do not in every case coincide with text boundaries (see table 4 above). Although for *Zhuang si zhong* MS 1 there is, in contrast to the *Laozi*, no textual counterpart available for comparison, the sequence of the seven parts (textual units) could be determined by an analysis of mirror-inverted imprints of writing that had been found on the verso of some slips and which reflected the original structure of the manuscript roll.[125] Unfortunately, the editors of the Peking University Han slips decided not to publish photographs of the verso of all slips. Because the verso lines are barely visible with the naked eye, they instead supply tracings of the verso that show the position of line sections, but do not contain any information on possible imprints.[126] This regrettably prevents an analysis as conducted for *Zhuang si zhong* MS 1, which might also have supplied additional evidence for the reconstruction of the Peking University *Laozi*.

Obviously, closer attention needs to be paid to the self-contained sets of slips marked by each spiral line. The analysis has shown that the verso lines alone would in many cases not provide a reliable basis with which to determine the original sequence for all slips of a certain manuscript as they only indicate the sequence of slips inside a certain set. In single-text manuscripts with one continuous text, the set boundaries are usually without further implications, but in manuscripts with multiple texts or a single text consisting of several self-contained sub-units, they are potentially significant. If set boundaries coincide with text boundaries, the sequence of the slips in such manuscripts can only be determined by additional evidence provided, for example, by sequence numbers[127] or mirror-inverted imprints of writing.

7. Conclusions – The function of verso lines

Now that some more light has been shed on the way the verso lines were probably applied on many bamboo manuscripts and how they in these cases relate to sets of slips, the

[122] Cf. photographs of the recto in Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2011, 2–17. Note that the bottom of slip 65, which supposedly contained the end of chapter 13, is fragmented and therefore the part where such a mark would be expected is missing. Furthermore, there was apparently no mark added at the end of chapters 15 and 22 (slips 84 and 125). See Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2011, 10–11, 16.

[123] Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2011, 135. It is often unclear exactly at which point of the production process of a manuscript the sequence numbers were written on the slips. Furthermore, they could be applied by the scribe, who also wrote the main text, or another person. However, the numbering usually corresponds to the sequence of the main text in a similar way as modern page numbers do, and was probably applied to indicate the sequence of the text (either before binding or in case the manuscript falls apart). The numbers therefore provide information that is extremely valuable for reconstruction. On sequence numbers see in detail He Jin 2013, 452–458.

[124] Shi Da 2013, 23–24. Cf. Zhu Hanmin and Chen Songchang 2013, 317.

[125] Shi Da 2013. Cf. Zhu Hanmin and Chen Songchang 2013, 317–319.

[126] Beijing daxue chutu wenxian yanjiu suo 2011, 55, footnote 2. See e.g. the tracings for the *Laozi* slips in *Beijing daxue chutu wenxian yanjiu suo* 2012c, 111–117.

[127] Sun Peiyang proposed with regard to the slips contained in volume one of the Tsinghua University manuscripts that sequence numbers might only have been added in cases, where the sequence of the slips could no longer be determined with the help of the verso lines, e.g. due to too many discarded slips, see Sun Peiyang 2011, 457. With regard to the results of the analysis above, which suggest that the verso lines are generally only of limited use to determine the sequence of slips for the complete manuscript, this appears doubtful.

question of their function needs to be discussed anew. Many scholars share the view that the verso lines were applied as an indicator for the correct sequence of the slips inside a certain manuscript. This assumption is of course based on the observation that the line sections on individual slips in many cases form largely continuous lines, if the slips are put in a sequence which is in accordance with the text on the recto. Regardless of whether this indication was the original function, the lines are certainly useful to a certain degree even today for the reconstruction of the original sequence of the slips.

Li Shoukui observed in the Tsinghua University manuscripts that the persons who produced bamboo manuscripts did not randomly use slips that merely had a consistent format, but that they usually used slips that had been made from the same bamboo culm segment for this purpose. If the manuscript exceeded a certain length, then the slips of several culm segments were subsequently used, but slips from different culm segments appear to normally not have been mixed with each other. If verso lines were applied to the culm segments, it is easily possible to use them in the exact same sequence the slips had been positioned in as part of a culm segment.[128] Apparently, this was a usual procedure. So rather than – together with other verso lines and in a rather ambiguous way – hinting towards the correct sequence of the slips inside a *whole manuscript*, the function of a certain verso line was probably first and foremost to indicate the original sequence of a certain *set* of bamboo slips. This enabled the scribe to adopt the sequence the slips originally had as part of a bamboo culm segment for the production of a manuscript. That this was considered necessary or at least favourable is strongly suggested by the fact that the lines were applied even before the culm segments were cut into individual slips. If the main function of the lines really were to indicate the sequence of slips in the whole manuscript, it would be more practical to apply as few lines as possible – ideally only one continuous line – on all slips of a complete manuscript, either before or after binding.

The motive behind the application of spiral lines to the culm segments might have been something different, namely to indicate the most practical way to put the slips together side by side. If the sides of certain slips are not completely vertical after cutting, then this will probably lead to a certain deviation of slips in their horizontal alignment, when tying together several slips to form a manuscript. The higher the number of slips contained in a manuscript, the more this effect would normally be aggravated. If, however, the slips cut from a certain bamboo culm segment are put in this manuscript in exactly the same sequence they had as part of the bamboo culm segment, then this effect will be automatically balanced: a slip with a right side that is not at an angle of exactly 180° – meaning exactly vertical – but instead 175° will certainly be followed by a slip with a left side at the exact same angle.[129] This, however, is merely a hypothesis. What is certain is that the reference unit of the verso lines are sets of slips, not complete manuscripts. Furthermore, the connection between the verso lines and the sequence of the text is secondary (and therefore not always reliable),[130] whereas the primary connection is between the lines and the original sequence of a set of bamboo slips, which do not yet carry any writing. That the original function of the verso lines was to indicate the correct sequence of the slips in a certain manuscript may therefore be doubted.

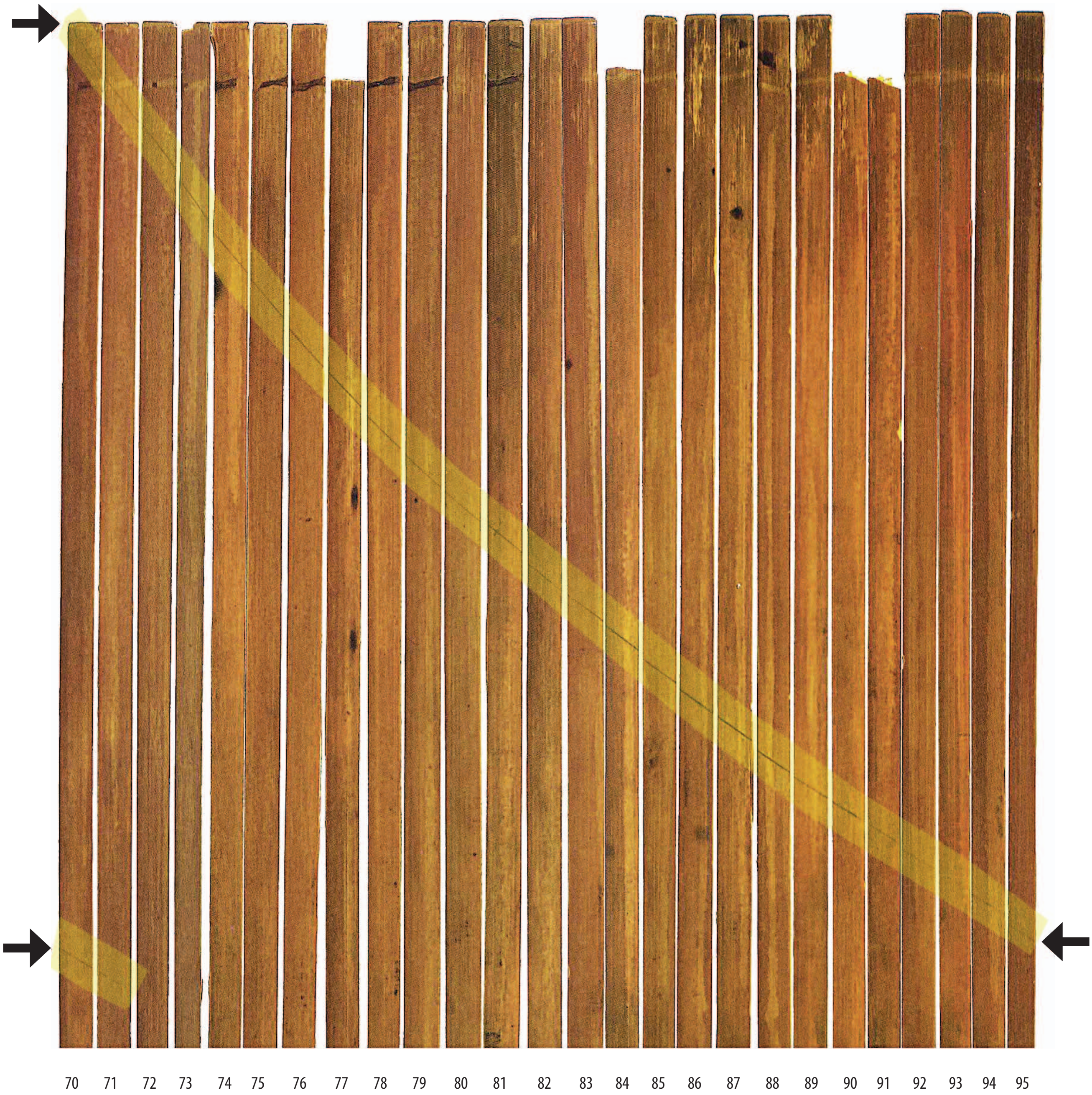
[128] Li Shoukui 2012, 3–5.

[129] After presenting this paper at the *Qin jiandu yanjiu guoji xueshu yantaohui* 秦簡牘研究國際學術研討會 conference in Changsha on 6 December 2014, I was informed by a conference participant that a scholar from Tsinghua University forwards the same hypothesis regarding the main function of the verso lines in a yet unpublished paper on the Tsinghua University bamboo manuscripts. I thank the author for kindly sending me a copy of this work, which will be published in *Jiang Han kaogu* 江漢考古, see Jia Lianxiang (forthcoming). Further evidence to support this hypothesis can be drawn from the M.A. thesis of Xiao Yunxiao (2015, 75–79) who observed that, in the case of the Tsinghua University *Xinian*, the slips of a certain set were first tied together, before these sets were in a second step combined to form the complete manuscript.

[130] That the verso lines should not be followed blindly when trying to reconstruct the original sequence of the slips in a certain manuscript due to their limited reliability was already stressed by Sun Peiyang (2011, 457–458) and Han Wei (2012, 235). Takeda noted that although there are manuscripts with quite 'regular' verso line circumstances like the Peking University *Laozi* or the Tsinghua University *Xinian*, these only make up a certain part of all manuscripts. In other manuscripts, verso lines can be completely absent or the circumstances can be more complex (Takeda 2013b, 139).

Appendix A: Examples of sets [131]

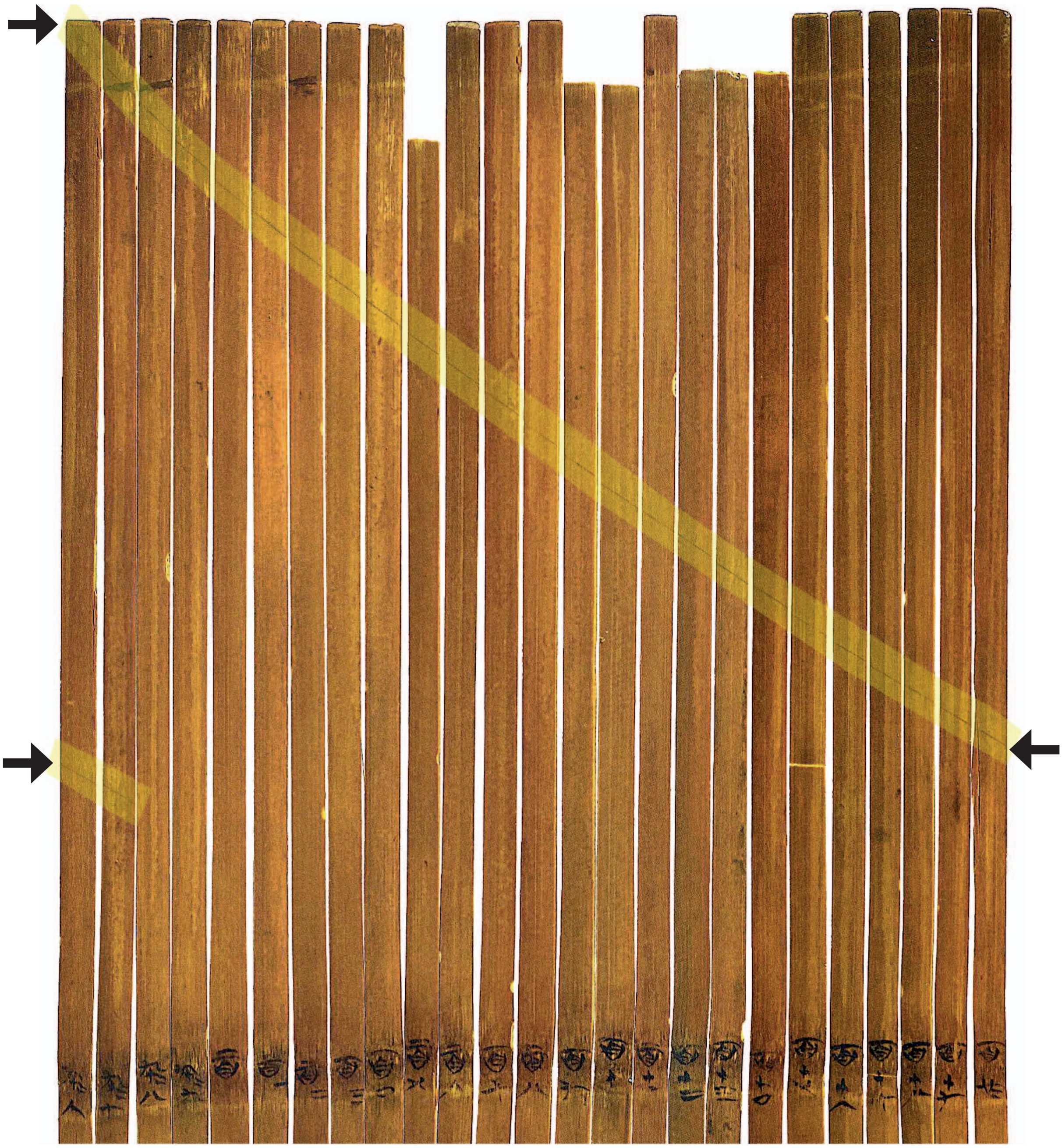
Fig. 9: Tsinghua University *Xinian* group/set 4 (slips 70 to 95). [132]



[131] For all the following examples of sets (fig. 9 to 15) the photographs of individual slips were assembled using Adobe Photoshop CS5. In each case arrows indicate the positions where the verso line arrives on the left side of the first or the right side of the last slip of the respective set. The line itself is highlighted in yellow. Note that the figures with examples of sets do not display complete slips but only their upper or lower half – depending on where the verso line is situated. Missing slips (according to both verso lines as well as recto text) are marked with '???'.

[132] For photographs of the slips see Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2011, 23–25.

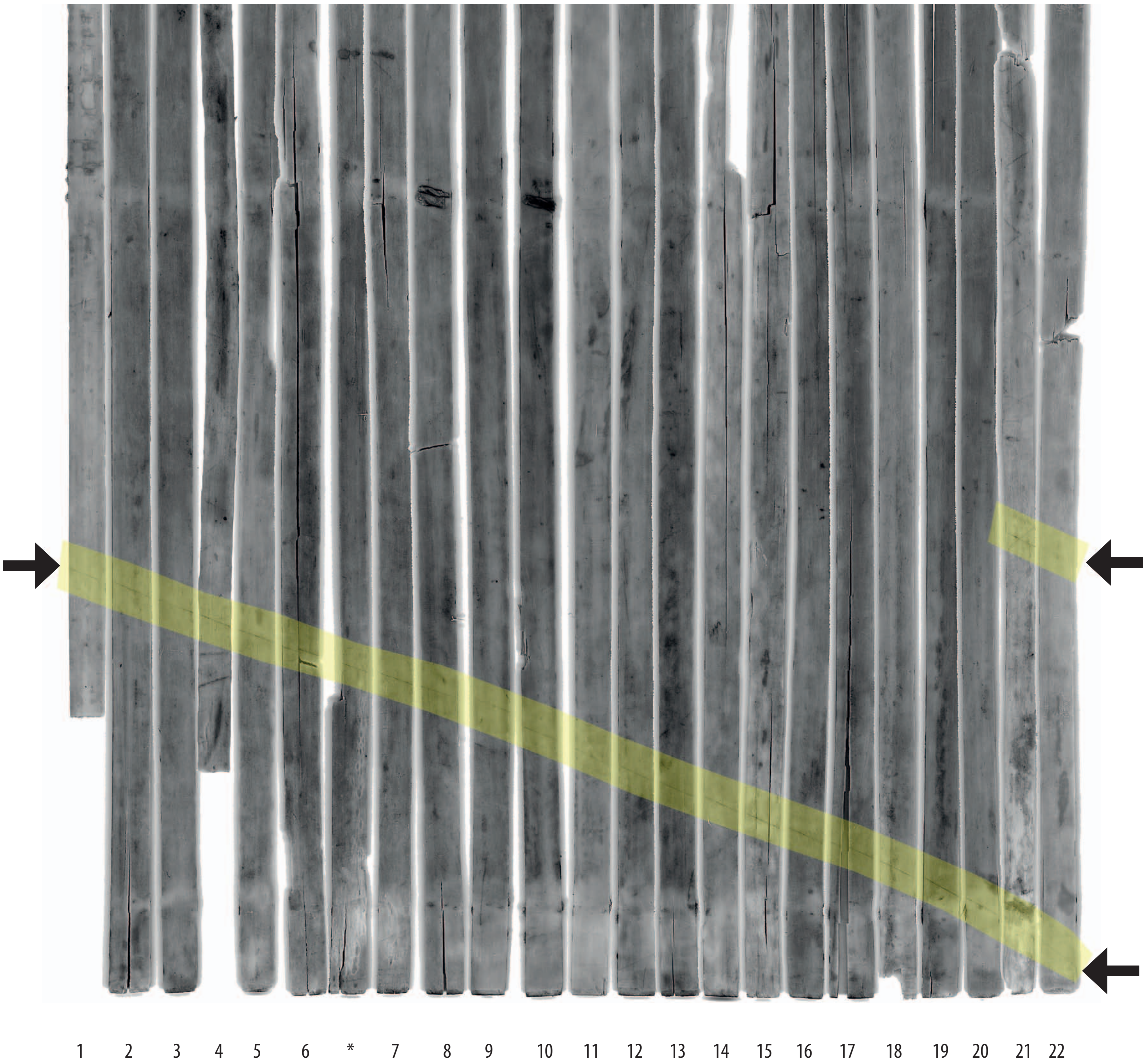
Fig. 10: Tsinghua University *Xinian* group/set 5 (slips 96 to 120).[133]



96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120

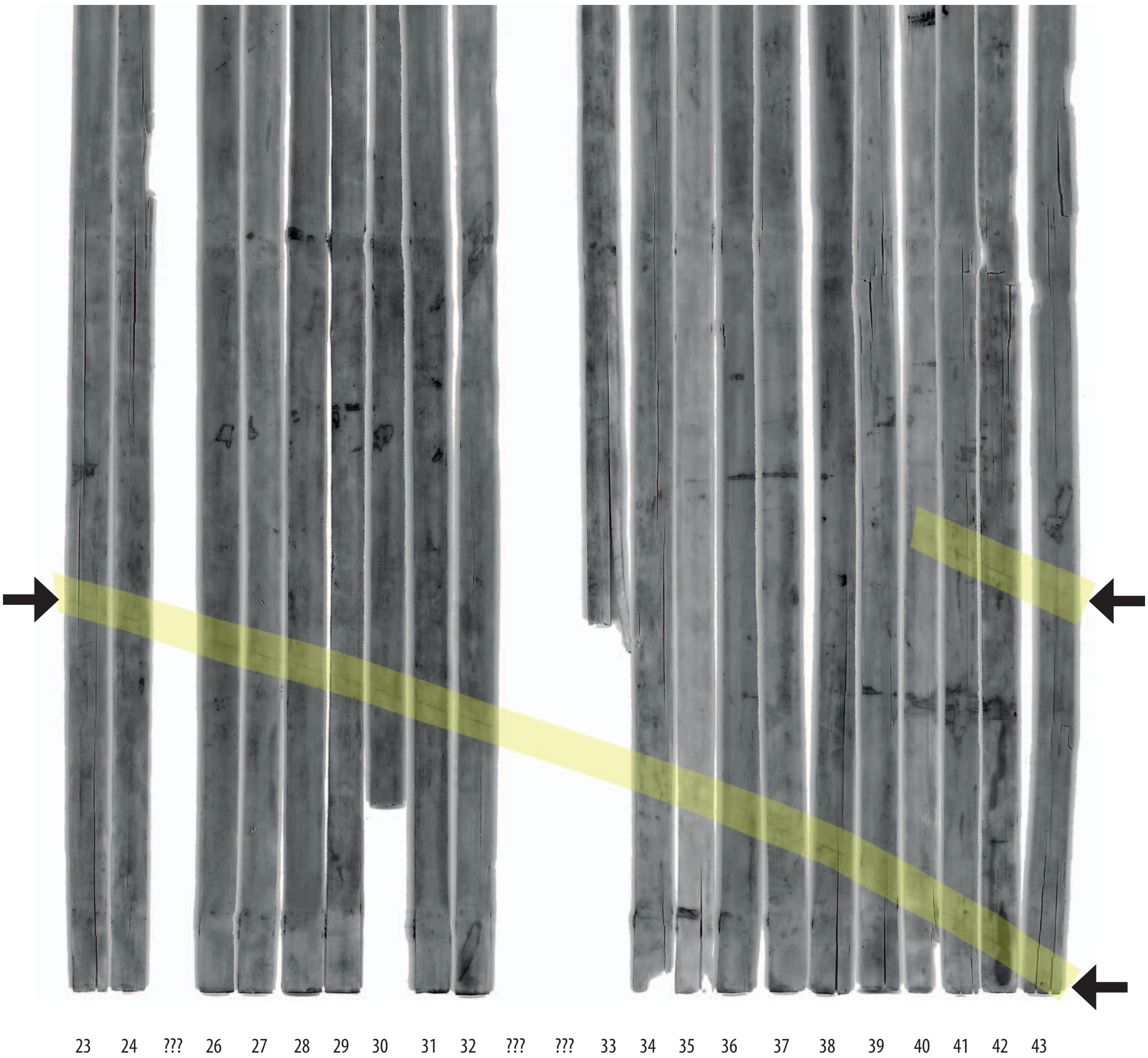
[133] For photographs of the slips see Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2011, 19–22.

Fig. 11: Yuelu Academy *Zhiri* 27 set 1 (slips 1 to 22).[134]



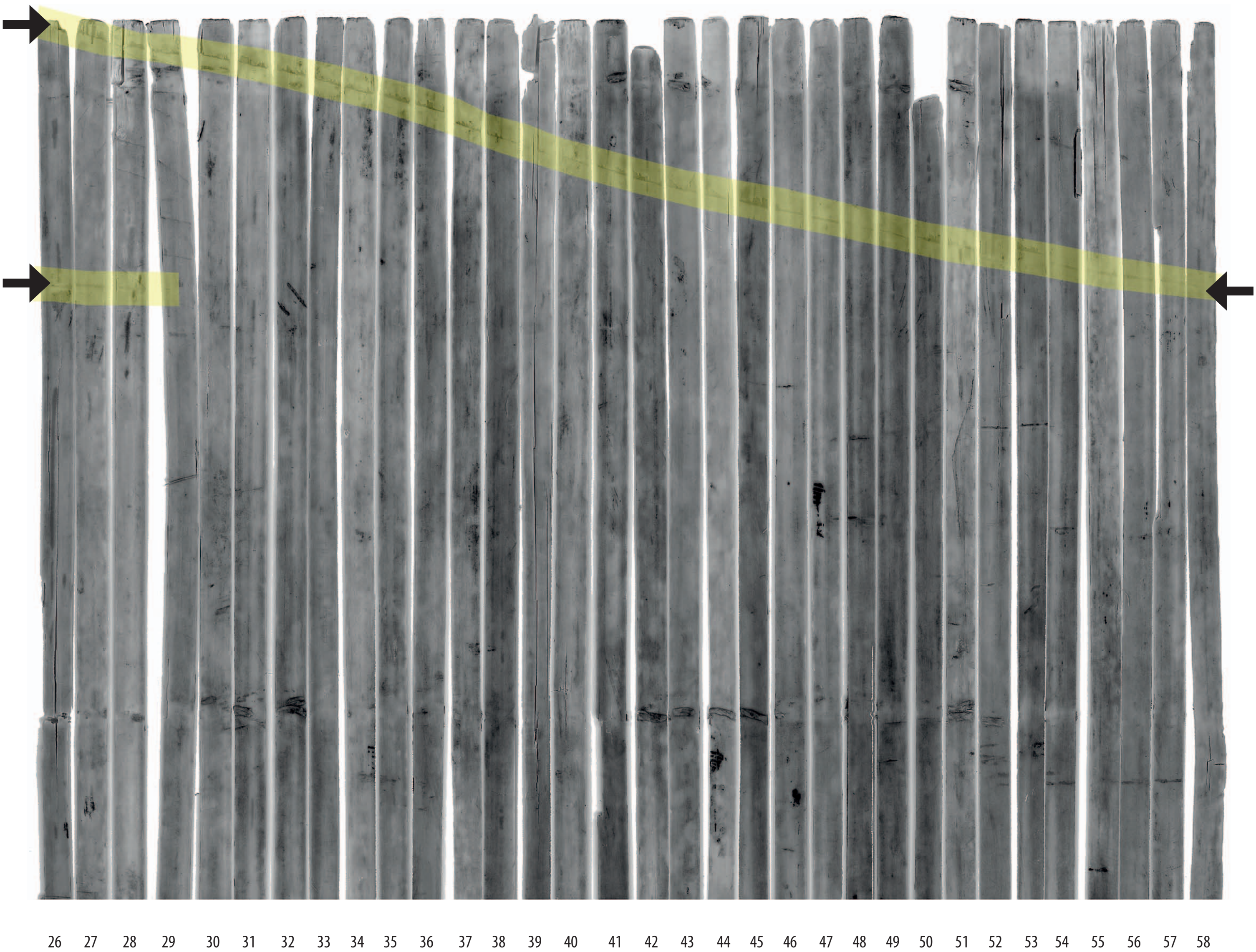
[134] For photographs of the slips see Zhu Hanmin and Chen Songchang 2010, 47–54. The asterisk on the bottom indicates the slip that was originally assigned to *Zhiri* 35, see Sun Peiyang 2011, 450.

Fig. 12: Yuelu Academy *Zhiri* 27 set 2 (slips 23 to 43).[135]



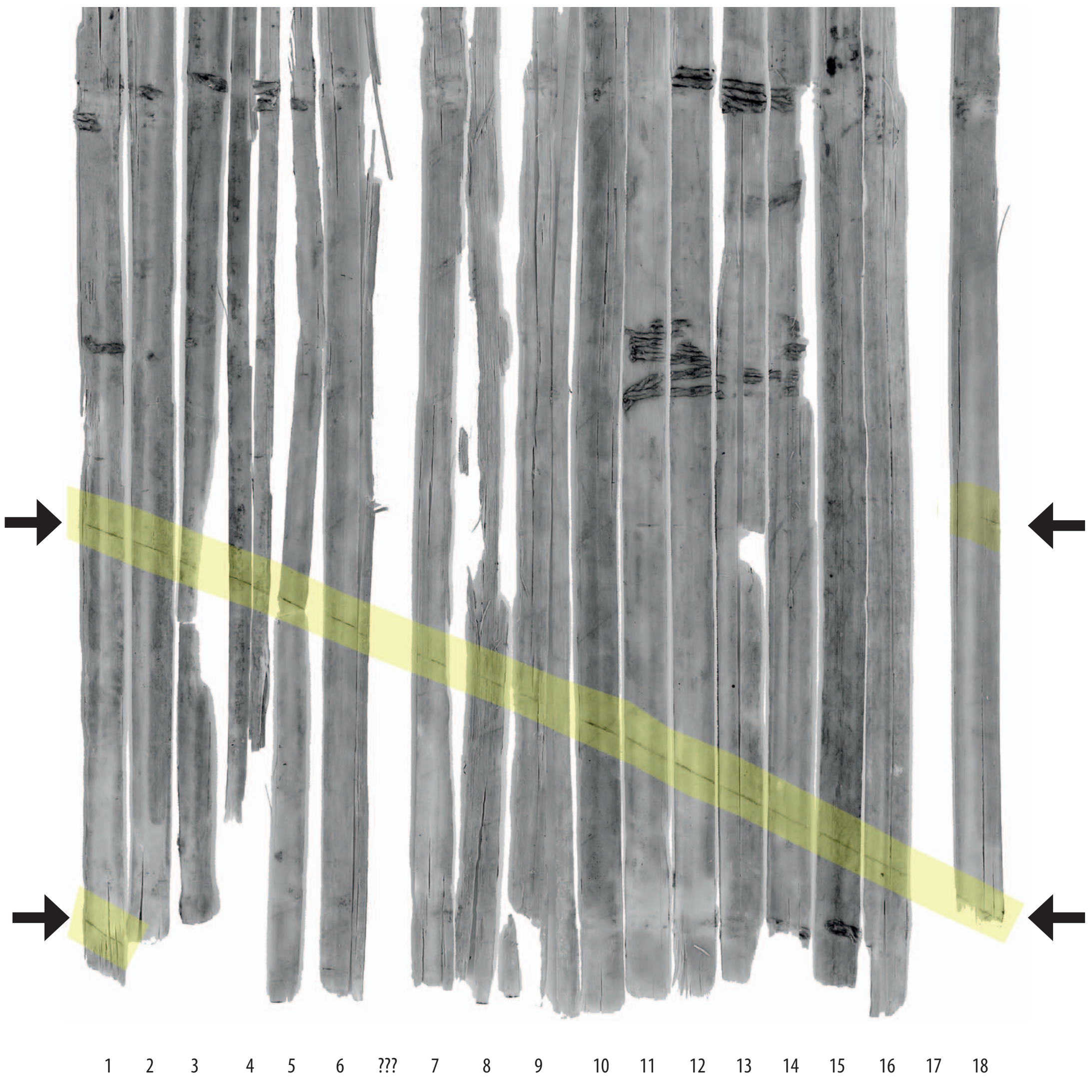
[135] For photographs of the slips see Zhu Hanmin and Chen Songchang 2010, 54–61.

Fig. 13: Yuelu Academy *Zhiri* 34 set 2 (slips 26 to 58).[136]



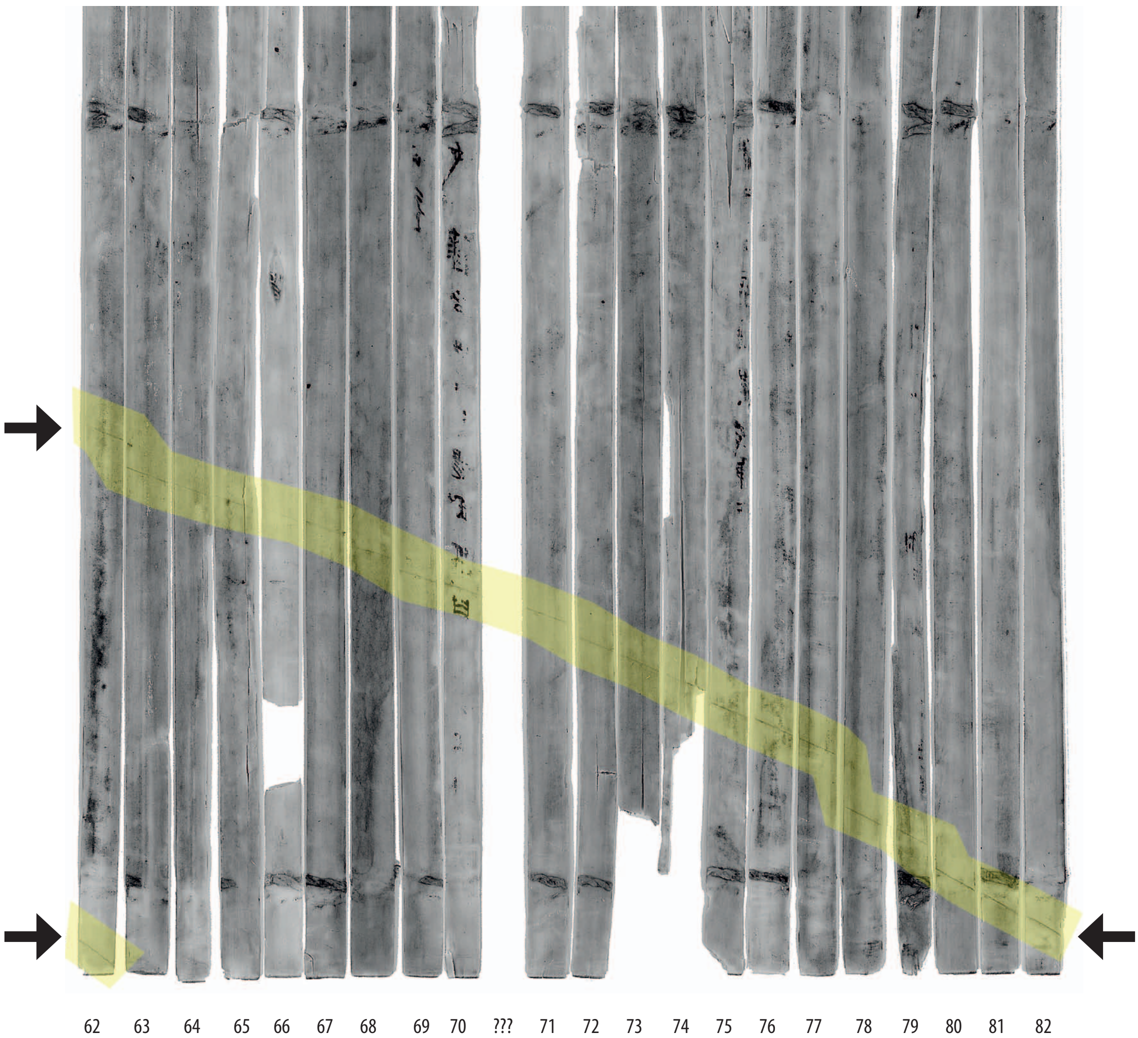
[136] For photographs of the slips see Zhu Hanmin and Chen Songchang 2010, 76–87.

Fig. 14: Yuelu Academy *Zhuang si zhong* MS 1 set 1 (slips 1 to 18).[137]



[137] For photographs of the slips see Zhu Hanmin and Chen Songchang 2013, 92.

Fig. 15: Yuelu Academy *Zhuang si zhong* MS 1 set 6 (slips 62 to 82).[138]



[138] For photographs of the slips see Zhu Hanmin and Chen Songchang 2013, 89–90.

Appendix B: Complex verso line situations[139]

Fig. 16: Verso lines on Tsinghua University *Liangchen* and *Zhuci*.[140]

[139] For fig. 16 and 17 the photographs of individual slips were assembled using Adobe Photoshop CS5.

[140] The figure shows (from left to right) *Liangchen* slips 1 to 11 and *Zhuci* slips 1 to 5. For photographs of the slips see Li Xueqin and Qinghua daxue chutu wenxian yanjiu yu baohu zhongxin 2012, 17, 19. Verso lines are marked in red, because they are barely visible with the naked eye on this scale.

Fig. 17: Examples of 'verso stripes'.[141]

[141] The figure shows (from left to right) *Zhuang si zhong* MS 1 slips 106, 116 and 125 as well as *Zhiri* 35 slips 12 and 33. For photographs of the slips see Zhu Hanmin and Chen Songchang 2013, 87–88 and Zhu Hanmin and Chen Songchang 2010, 95, 102. For further examples of 'verso stripes' see slips 11, 12, 15 and 28 of the *Zun de yi* 尊德義 from Guodian 郭店 tomb no. 1 (Wuhan daxue jianbo yanjiu zhongxin and Jingmen shi bowuguan 2011, plate 72, cf. Huang Jie 2013) as well as slips 2, 43, 96, 105, 186, etc. of the Yuelu Academy *Shu* 數 (Zhu Hanmin and Chen Songchang 2011, 33, 54, 84, 88, 134; cf. He Jin 2013, 459 with footnote 3).

REFERENCES

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.

——— (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.) (2012c), *Beijing daxue cang xi Han zhushu (er)* 北京大學藏西漢竹書（貳） (Shanghai: Shanghai guji chubanshe).

Cheng Pengwan 程鵬万 (2006), 'Jiandu boshu geshi yanjiu' 簡牘帛書格式研究, Doctoral thesis (Jilin daxue).

Cullen, Christopher (2004), *The* Suàn shù shū 算數書 *'Writings on Reckoning': A Translation of a Chinese Mathematical Collection of the Second Century BC, with Explanatory Commentary* (Cambridge: Needham Research Institute).

Gumbert, Johann 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 (Shanghai: Shanghai guji chubanshe), 227–235 .

He Jin 何晉 (2011), 'Beida Han jian *Wangji* jianshu' 北大漢簡《妄稽》簡述, *Wenwu* 文物, 2011.6: 75–77.

——— (2013), 'Qianyi jiance zhidu zhong de "xulian" – Yi chutu Zhanguo Qin Han jian wei li' 淺議簡冊制度中的"序連"——以出土戰國秦漢簡爲例', *Jianbo* 簡帛, 8: 451–469.

Hu Dongbo 胡東波, Zhang Qiong 張瓊 and Wang Kai 王愷 (2011), 'Beijing xi Han zhujian de keji fenxi' 北京西漢竹簡的科技分析, *Wenwu* 文物, 2011.6: 90–93.

Huang Jie 黃傑 (2013), 'Xin jian youguan Guodian jian *Zun de yi* deng pian bianlian de zhongyao xinxi' 新見有關郭店簡《尊德義》等篇編聯的重要信息,http://www.bsm.org.cn/show_article.php?id=1857 (accessed January 19, 2015).

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 (2012), 'Qinghua jian jiu pian shufa xianxiang yanjiu' 清華簡九篇書法現象研究, 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 (Shanghai: Zhongxi shuju), 59–65.

——— (forthcoming), 'Shi jiezhu shuzi jianmo fangfa fenxi Qinghua daxue cang Zhanguo zhujian jianbei huahen xianxiang' 試借助數字建模方法分析清華大學藏戰國竹簡簡背劃痕現象, *Jiang Han kaogu* 江漢考古.

Kalinowski, Marc (2005), 'La production des manuscrits dans la Chine ancienne: Une approche codicologique de la bibliothèque funéraire de Mawangdui', *Asiatische Studien/Etudes Asiatiques*, 59.1: 131–168.

Li Junming 李均明 (2012), 'Qinghua jian shouji jiance wenben jiexi' 清華簡首集簡冊文本解析, 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 (Shanghai: Zhongxi shuju), 39–49.

Li Junming and Zhao Guifang 趙桂芳 (2012), 'Qinghua jian wenben fuyuan – Yi *Qinghua daxue cang Zhanguo zhujian* di yi, er ji wei li' 清華簡文本復原——以《清華大學藏戰國竹簡》第一、二輯爲例, *Chutu wenxian* 出土文獻, 3: 61–69.

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 EASCM Conference 5 (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), *Qinghua daxue cang Zhanguo zhujian (yi)* 清華大學藏戰國竹簡（壹）, 2 vols. (Shanghai: Zhongxi shuju).

———, ——— (eds.) (2011), *Qinghua daxue cang Zhanguo zhujian (er)* 清華大學藏戰國竹簡（貳）, 2 vols. (Shanghai: Zhongxi shuju).

———, ——— (eds.) (2012), *Qinghua daxue cang Zhanguo zhujian (san)* 清華大學藏戰國竹簡（叁）, 2 vols. (Shanghai: Zhongxi shuju).

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.) (2013), *Qinghua daxue cang Zhanguo zhujian (si)* 清華大學藏戰國竹簡（肆）, 2 vols. (Shanghai: Zhongxi shuju).

———, ——— (eds.) (2015), *Qinghua daxue cang Zhanguo zhujian (wu)* 清華大學藏戰國竹簡（伍）, 2 vols. (Shanghai: Zhongxi shuju).

Ma Chengyuan 馬承源 (ed.) (2007), *Shanghai bowuguan cang Zhanguo Chu zhushu (liu)* 上海博物館藏戰國楚竹書（六） (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).

Roth, Harold D. (1993), 'Text and Edition in Early Chinese Philosophical Literature', *Journal of the American Oriental Society,* 113.2: 214–227.

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《爲獄等狀四種》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《爲獄等狀四種》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.

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 (2013a), 'Seika kan *Sokyo* no kakusen bokusen to chikukan no hairetsu' 清華簡『楚居』の劃線・墨線と竹簡の配列, *Chûgoku kenkyû shûkan* 中国研究集刊, 56: 66–82.

——— (2013b), '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) (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/SrcShow.asp?Src_ID=2309 (accessed 19 January 2015).

Wang Zhengping and Chris Stapleton (2006), 'Phyllostachys', in *Flora of China, vol. 22: Poaceae*, edited by Wu Zhengyi, Peter H. Raven and Hong Deyuan (Beijing, St. Louis: Science Press and Missouri Botanical Garden), 163–180.

Wuhan daxue jianbo yanjiu zhongxin 武漢大學簡帛研究中心 and Jingmen shi bowuguan 荊門市博物館 (eds.) (2011), *Chu di chutu Zhanguo jiance heji (yi): Guodian Chu mu zhujian* 楚地出土戰國簡冊合集（一）：郭店楚墓竹簡 (Beijing: Wenwu).

Xiao Yunxiao 肖芸曉 (2013), 'Shilun Qinghua zhushu Yiyin san pian de guanlian' 試論清華竹書伊尹三篇的關聯, *Jianbo* 簡帛, 8: 471–476.

——— (2015), 'Qinghua jian jiance zhidu kaocha' 清華簡簡冊制度考察, M.A. thesis (Wuhan daxue).

Yinqueshan Han mu zhujian zhengli xiaozu 銀雀山漢墓竹簡整理小組 (ed.) (1985), *Yinqueshan Han mu zhujian (yi)* 銀雀山漢墓竹簡（壹） (Beijing: Wenwu).

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.

Zhang Xiancheng 張顯成 (2004), *Jianbo wenxian xue tonglun* 簡帛文獻學通論 (Beijing: Zhonghua).

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.) (2006), *Zhangjiashan Han mu zhujian [er si qi hao mu]: shiwen xiuding ben* 張家山漢墓竹簡[二四七號墓]：釋文修訂本 (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（叁） (Shanghai: Shanghai cishu chubanshe).

Article

Material Technology and Science in Manuscripts of Persian Mystical Literature*

Mandana Barkeshli | Kuala Lumpur

Abstract

Mysticism has always been part and parcel of Persian art and literature. So far, however, the scientific aspects of it have been overlooked by art historians and scholars. The aim of this study is to investigate how researchers can uncover the reasons for the choice of substances used to produce such works from the huge amount of information found in historical sources and to present some case studies to show how science should look at this kind of literature. The research presented here focuses on introducing a theoretical and methodological approach and is illustrated by three examples that reveal the reasons behind the use of certain ingredients in the Persian art of book-making, namely saffron, henna and cucumber-seed mucilage to make verdigris pigment and paper dye and influence the sizing process. Examples of poetic treatises from the thirteenth to the nineteenth century are presented that were written by master calligraphers. The scientific laboratory investigation that was carried out on the works will be reported as evidence revealing the premodern scientific knowledge behind their mystic recipes.

Introduction

Traditional Persian arts and crafts are not only considered to be simple works of handicraft but are committed to an aesthetic standard that encompasses pure manual perfection. When the artist strives for a state of perfection his or her striving has a religious meaning as well. Hence perfection is a mystical quality that in its absolute sense refers to the divine sphere.[1]

The following poem by Solṭān ʿAli Mašhadi (841–926 Hijra/1437/1438–1519/1520 CE) found in a chapter about calligraphers included in his treatise *Ṣerāt al-Soṭur* is a fine example that links reaching a state of perfection in calligraphy to self-purification:

در باب خوشنویسان

ای که خواهی که خوشنویس شوی   خلق را مونس وانیس شوی
خطهٔ خط مقام خود سازی   عالمی پر زنام خود سازی
ترک آرام وخواب باید کرد   وین زعهد شباب باید کرد
سر به کاغذ چو خامه فرسودن   زین طلب روز وشب نیاسودن
زآرزوهای خویش بگذشتن   وز ره حرص وآز برگشتن
نیز با نفس بد جدل کردن   نفس بد کیش را زدن گردن
تا بدانی جهاد اصغر چیست   باز گشتن به سوی اکبر چیست
آنچه با خود روا نمی داری   هیچ کس را بدان نیازاری
دل میازار، گفتمت زنهار   کز دلازار حق بود بیزار
همه وقت اجتناب واجب دان   از دروغ وزغیبت وبهتان
ورد خود کن قناعت وطاعت   بی طهارت مباش یک ساعت
حیله ومکر را شعار نکن   صفت ناخوش اختیار مکن
هر که از مکر وحیله و تلبیس   پاک گردید، گشت پاک نویس
داند آنکس که آشنای دلست   که صفای خط از صفای دلست
خط نوشتن شعار پاکانست   هرزه گشتن شعار نادانست

About Calligraphers

If you wish to become a calligrapher and to love and be loved by people,

If you want to be a resident of the land of script and make your name known all over the world,

You must renounce sleep and rest, you should start doing this when you are young.

You should bend your head down at all times like the nib of the reed pen,

You must not let this wish fade at all day or night,

You have to renounce all your desire, and avoid greed and envy,

*I am grateful to Professor Amir Hossein Zekrgoo for his kind assistance in translating some of the Persian poems quoted in this paper into English. I would also like to thank the anonymous reviewers and the editorial team of the Centre for the Study of Manuscript Cultures

[1] See Zekrgoo 2008, 181, Barkeshli 2002, 56.

> You have to constantly fight with your ego until you slaughter it so that you learn what the lesser *jehād* (*jehād-e aṣġar*)[2] is and what it means to set out towards God (*akbar*).
>
> Don't do anything to others that you wouldn't do to yourself.
>
> Never hurt the heart, because God dislikes heart-hurters avoid lying, back-biting and making false accusations at all times.
>
> Always be in a state of contentment and thankfulness [to thy Lord] and observe [ritual] purity and cleanliness constantly.
>
> Avoid tricks and fraud and do not let bad attitudes affect you.
>
> Whoever is able to cleanse himself from machinations, deception and pretence will become a fine writer.
>
> Those who are aware of manners of the heart know that fine handwriting emanates from a pure heart,
>
> Fine handwriting comes from those who are pure, sitting idle is what the ignorant do.

To achieve this task, in bygone days, the Iranian artist always took care not only to purify him- or herself through this journey, but also to try and create a piece of art in a perfect manner, symbolising the balance, harmony and organic relations that rule in the universe by using only the best materials and the most advanced techniques in his work. He or she also took care to ensure the artwork created was not faulty in any way, but was capable of lasting a long time and that the ageing process of the artefact could be minimised. For this very reason, the artists had to equip themselves with the scientific knowledge in order to understand the nature of the materials used and to apply techniques that could reduce any damage due to physical, chemical or biological deterioration over time.

Objectives of the research

This study was conducted on a number of examples of historical poetic treatises written by Iranian master calligraphers in order to reveal the empirical knowledge underlying their work. In these selected exemplars of Persian literature, they discussed the art of book-making and miniature-painting, revealing their expertise in the art of calligraphy, ink-making and the preparation of sizing materials to apply on paper to prepare a suitable basis for calligraphy. Besides finding recipes on the art of calligraphy, one can discover a great amount of knowledge on the art of making dyes and pigments used by artists to create Persian miniatures and illuminate manuscripts. In many cases, the recipes contain elements that the masters advised readers to add or avoid. On account of the research I conducted, I found that this advice was based on reasons that can be identified as underlying stipulations to prevent the works of art from getting damaged or deteriorating. One can discover the reason for the stability of Persian manuscripts and miniature paintings by studying Persian literature. The scientific laboratory investigations that were carried out for the study are presented here as supporting evidence for my claims.

Methodology of the research

The methodology used in the present study is based on historical and scientific analyses. In the first phase, a historical analysis based on 24 treatises belonging to the Timurid (eighth–ninth century Hijra/fourteenth–fifteenth century CE), Safawid (tenth–twelfth century Hijra/sixteenth–eighteenth century CE) and Qajar periods (1193–1344 Hijra/1779–1925 CE) was carried out to identify ingredients that were advised by painters and calligraphers during these eras. In this research, all the identified treatises were examined thoroughly, but only a few examples of them can be presented here (see appendix A).

In the second phase, a number of case studies were undertaken by the author based on laboratory work on original historical samples of illuminated Persian manuscripts and miniature-painting; these complement the objectives of this research. In this scientific analysis, the use of certain ingredients recommended or emphasised by the master calligraphers was studied to discover the reasons for them picking the elements described in the recipes. All the recommended elements were found to be science-based and were used as a preventive measure in historical illuminated Persian manuscripts, miniature-paintings, paintboxes, and palettes.

Scientific analyses have tried to identify the elements in the Persian historical treatises that were particularly recommended – the masters made a point of stressing certain elements to add or avoid.[3] With this in mind, saffron was studied as a

[2] Especially in Shiite tradition 'greater *jehād*' refers to the 'spiritual *jehād*' (the mortification of the self in order to draw closer to God) and 'lesser *jehād*' refers to the 'striving for the cause of Islam'.

[3] These scientific analyses were carried out in several phases by the author and co-authors in order to identify the use of certain ingredients recommended or emphasised by the master calligraphers and collected from historical analysis data. The results of these analyses have been reported in detail in various publications (Barkeshli 1999, 2002, 2003, 2008a, 2008b, 2009, 2011, 2014).

corrosion inhibitor, henna as a fungicide and cucumber-seed mucilage as a suitable sizing material. To this end, original samples taken from fifteen Timurid- to Qajar-period miniature Persian paintings, illuminated manuscripts and paintboxes from museums and private collections were gathered for analysis. The samples were analysed in a laboratory to identify pigments using Spot Test, X-ray Diffraction (XRD), Fourier Transform Infrared Spectroscopy (FTIR) and Polarised Light Microscopy (PLM). In many cases, a number of ingredients were prepared based on the historical recipes found in the Persian literature and they were used as controls for FTIR analysis of their spectra, in order to identify sizing materials and saffron in green verdigris pigment as an inhibitor. To identify the property of some of the elements, analytical procedures were carried out using fungus cultures in the case of henna and standard procedures were followed to identify the buffering property of an element in the case of saffron.

Case study I: the mysterious presence of saffron in Persian green

The first case study was intended to unravel the mystery of why saffron dye was used to prevent the corrosive effect of green verdigris (*zangār*)[4]. Before the rise of the chemical industry at the beginning of the twentieth century, verdigris pigment was commonly used as a green paint in Persian miniature paintings and for colouring the borders (*ḥāšiyeh*) of illuminated manuscripts. Basic verdigris is the only green pigment which appears in the preparation of *zangār* in mediaeval Persian texts, i.e. writings from the Timurid to the Qajar periods. Three different techniques are described in the historical literature:

Persian recipes

The first technique for making *zangār* is described in quite a similar manner by at least four authors, viz. by Solṭān Aḥmad Majnun Rafiqi Heravi, Mir ʿAli Heravi, Hossein Aqili Rostamdari and Alkašfi. In his treatise *Savād al-ḵaṭṭ*, Solṭān Aḥmad Majnun Rafiqi Heravi described the technique as follows:

یک رطل نوشادر ونیم رطل خرده مس در کاسه کن، وآب سرکه انگوری در
وی چکان، وچوبی که سر آن چون سم شتر بوده باشد در آن کاسه صلایه می
کن تا آنگاه که زنگار گردد.

> Mix one *raṭl*[5] of sal-ammoniac *(nošādor)* and half a *raṭl* of copper pieces in a bowl. Add some very strong grape vinegar. Pound the pieces with the help of a camel-hoof-shaped wooden stick. Continue the process until all the copper pieces have turned into green verdigris *(zangār)*.

Various writers described a second technique for making *zangār*: Solṭān Aḥmad Majnun Rafiqi Heravi, Seyrafi, Sadeq Bek Afšar, Ali Hosseini, Alkašfi and two anonymous artists in *Resāleh dar Bayān-e Kāḡaḏ Morakkab va Ḥall-e Alvān* and *Resāleh dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāḡaḏ-e Alvān*. In his book *Morakkab Sāzi va Jeld Sāzi* Ali Hosseini explained the process as follows:

نوع دیگر چنان است که خرده مس وسرکه انگور کهنه برابر به یکدیگر بهم آمیخته
در چاه آویزند تا چهل روز، چون بیرون آرند زنگاری باشد در نهایت خوبی.

> The other type is to mix copper pieces and strong old grape vinegar in equal proportions. Keep this in a vessel and hang it in a well for forty days. When you take it out, the copper will have changed to verdigris of extremely good quality.

Ṣādeq Bek Afšār describes another method in greater detail in *Qānun al-Ṣovar*:

بکن چاهی دو گز در جای نمناک صفایح کن تنک، لیک از مس پاک
بریز از سرکهٔ ناصاف چندان که گردد سرکه ها در خاک پنهان
در آن جایی بنه یک مه کم وبیش بپوشان از کم وبیشش میندیش
پس از یک ماه بنگرکان تمامی شود زنگار خاطرخواه نامی

> Dig a well two *gaz*[6] deep in a moist place, [hang] thin blades made of clean copper into it.
>
> Pour down as much unfiltered vinegar as the soil can absorb, cover [the well].
>
> Leave it there for almost a month – don't worry if it is a couple of days more or less [than that].
>
> After a month, you will see that the entire [copper] has turned into an attractive verdigris.

[4] Verdigris is not a unique chemical substance but is a collective name for various copper acetates. Their colour varies from blue to green. Basic verdigris can contain several forms of copper acetates, the following copper acetate shows green colour: $Cu(CH3COO)2·[Cu(OH)2]3·2\ H2O$; Kühn 1993.

[5] A *raṭl* is half a *mann*, which is equivalent to c. 1.5 kg. A *mann* is another traditional measurement, used for dry goods – its weight varies, in Iran it has a weight of c. 3 kg or 40 *sir* (a *sir* is equivalent to 75 grams), see Hinz 1970, 16–23, 27–33.

[6] *Gaz* is an old Iranian measure for measuring cloth, a Persian ell; see Hinz 1970, 62.

Several writers explained a similar alternative procedure to that mentioned above, except that the use of yoghurt made from sheep's milk was recommended instead of vinegar: Mir ʿAli Heravi did this in *Medād al-Ḵoṭuṭ*, ʿAli Hosseini in *Morakkab Sāzi va Jeld Sāzi*, Alkašfi in *Bayān al-Ṣenāʿat* and an anonymous artist in *Resāleh dar Bayān-e Kāḡaḏ Morakkab va Ḥall-e Alvān*.

> واگر به عوض سرکه آب ماست گوسفند کنند شاید، وچون خواهند که آن
> را حل کنند وبا آن کتابت کنند در کاسه چینی با صمغ وانزروت حل کرده
> بکار برند. وانزروت نام درختی است در پارس پوست بر پوست مانند پیاز،
> هرچه از آن درخت به شب درآید سفیدتر شود وهرچه به روز در آفتاب بماند
> سرخ شود. اما چون مدتی کاغذ را زنگاری که به آب ماست گرفته باشند
> سوراخ کند تدبیر آن است که اندک زعفران به آن ضم کند تا پایدار بماند.

> […] and if sheep-milk yoghurt is used instead of vinegar, that can also work. If you want to dissolve it so that it can be used for calligraphy, place it in a porcelain container and dissolve it with gum arabic and *anzarut*[7] gum. *Anzarut* is the name of a Persian tree that has a number of layers of skin (bark) similar to an onion. What is taken from this tree at night will get whiter and what is taken in sunlight will get redder […]

The introduction of saffron as an inhibitor

It seems artists soon recognised the instability and destructive nature of some pigments. Cennini (1954), for example, mentioned that verdigris is beautiful for painting eyes, but does not last. Theophilus warned against using 'green salt' for book illumination as 'it is not good for books'.[8] This phenomenon was not unknown to Iranian artists. For example, in *Resāleh dar Bayān-e Kāḡaḏ Morakkab va Ḥall-e Alvān* cautious use of verdigris was recommended after describing the techniques of making it: '... *zangār* is not stable and will char the paper'.

What is noteworthy, however, is that some of the old Persian recipes describe the addition of saffron to verdigris as one of the measures to counter its destructive effect. Mir ʿAli Heravi mentioned this in *Medād al-Ḵoṭuṭ*, ʿAli Hosseini in *Morakkab Sāzi va Jeld Sāzi* and Alkašfi in *Bayān al-Ṣenāʿat* mentioned the destructive effect of *zangār* made from yoghurt and recommended saffron to be mixed with *zangār* to prevent its charring effect on paper in the last part of their recipes. According to Mir ʿAli Heravi in *Medād al-Ḵoṭuṭ*:

> اما چون مدتي کاغذ را از زنگاري که به آب ماست گرفته باشند سوراخ کنند
> تدبير آن است که اندك زعفران به آن ضم کند تا پايدار بماند.

> The verdigris, which is made out of yoghurt, chars paper. The answer is to add a small amount of saffron (*zaʿfarān*) so [it] becomes stable.

Besides being used as a preventive measure against the destructive effects of *zangār*, saffron was also recommended for obtaining different shades of green. For example, Ali Seyrafi poetically states in *Golzār-e Ṣafā*:

> ور چو خط لب خود اي جانان فستقي ميل كن بشنو از آن
> زعفران داخل زنگار نما پس بدان رنگ كتابت فرما

> The smiling green pistachio that resembles your beautiful lips whispers tenderly.[9]
>
> Mix saffron with *zangār* and move your pen with it gracefully.

As one can see from mediaeval Persian texts, mixing saffron with verdigris was a common practice among Iranian artists. It was used either as a preventive measure recommended by their masters or for obtaining a popular green pistachio colour, as recommended in old recipes.

Scientific analysis

An examination was carried out in two stages to investigate whether saffron has any chemical properties that prevent the destructive action of verdigris and whether traces of saffron can be found in original samples of mediaeval writing which have prevented the charring effect of verdigris.

The first step was conducted to ascertain the presence of saffron as an inhibitor in verdigris pigment. Original samples were selected from the Iran Bastan Museum as well as from private collections, and their green pigments were analysed in a laboratory.[10]

A second examination was carried out to investigate the possible buffering properties of saffron, since the change of

---

[7] *Anzarut*: sarcocolla, flesh-glue.

[8] Ed. Hawthorne and Smith 1961: Theophilus, *De diversibus artibus*, book I, chap. 31.

[9] Literal translation: 'If like calligraphy your lip, my beloved, wants pistachio, listen to it.' The poet uses a double understanding of *mayl kardan*, 'eat' and 'want'. The lip of the beloved eats pistachio whereas calligraphy needs it. The double understanding is further stressed in the end of the first verse: *bi-shinaw az ān*, listen to it, and 'it' can be the lip (a lip can eat pistachio and want it) and calligraphy as well.

[10] Barkeshli 1999, 2008b, 2013.

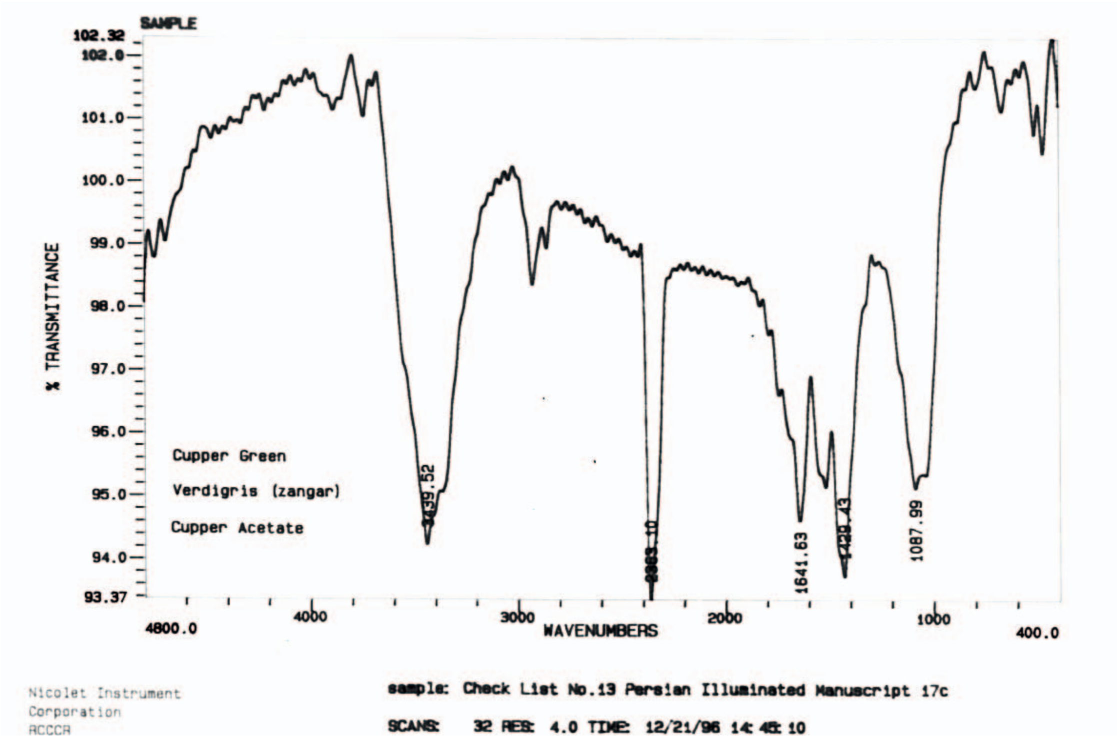


Fig. 1: The spectra of pure green verdigris (copper acetate) used in an illuminated Persian manuscript, Atiqi Collection, Tehran, Iran (appendix B, table 2, checklist no. 13).

pH from a low level to a high one plays an important role in the destructive mechanisms of copper-based pigments.[11]

Materials and techniques

In the first phase, the presence of saffron in verdigris pigment was investigated, as advised by masters in order to prevent the destructive effect of verdigris, and the green pigments of twelve miniature Persian and Indian paintings, illuminated manuscripts and paintboxes from the Safawid to Qajar periods were analysed along with the paint palettes of two traditional Persian artists of the time. To identify the chemical composition of green pigments used in the sample collection, different techniques were employed, including microscopic analysis, micro-chemical analysis, FTIR and XRD methods.

The optical appearance of the pigment mounted in Canada balsam (N = 1.53) on a microscopic slide was observed in reflected and then in transmitted plain polarised light. The identification of some pigments was confirmed by determining the presence of copper in the case of copper green pigment and iron in the case of green *terre-verte* by a positive test for copper or iron with potassium ferrocyanide using chemical microscopy. The different copper-based pigments such as verdigris, malachite, atachamite and langite were identified using FTIR by confirming the presence of acetate, carbonate, chloride and sulphate. Sample preparation was done by mixing potassium bromide (KBr) with the unprepared sample (100:1). The materials present in the samples were identified by comparing the infrared spectrum with the reference spectra via recognition of specific bands. X-ray powder diffraction supplied evidence of specific minerals when a large enough sample was available. Green pigments collected from original samples were present in extremely small amounts except in one case, which belonged to a paint palette collected from traditional artists.[12]

A complete record of the pigments found in samples from private collections and selected paintings from Iran Bastan Museum is shown in table 2 (appendix B) along with an indication of the corresponding identification methods. Of the twenty green pigments analysed, nine were identified as being green, copper-based pigments and the rest were found to be mixtures of yellow and blue, whereas no *terre-verte* was identified. Of the nine green, copper-based pigments examined, five were identified as green copper acetate, whereas two were found to be pure verdigris and three were identified as verdigris mixed with saffron.

Figure 1 shows the spectra of pure verdigris used in illuminated Persian manuscripts (appendix B, table 2,

[11] Barkeshli and Ataie 2002.

[12] Paintboxes collected from A. Tavoosi belonging to the sixteenth century and from M. Bekhradi belonging to the nineteenth century from Isfahan, Iran.

Fig. 2a: A seventeenth-century illuminated Persian manuscript with green verdigris in its pure form, Atiqi Collection, Tehran, Iran (appendix B, table 2, checklist no. 13).

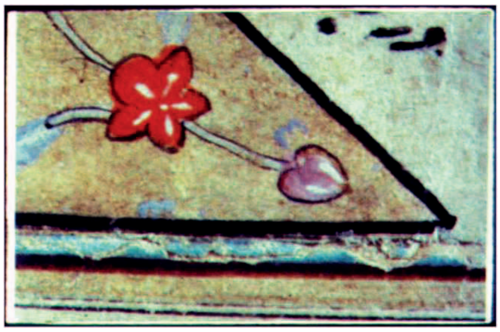
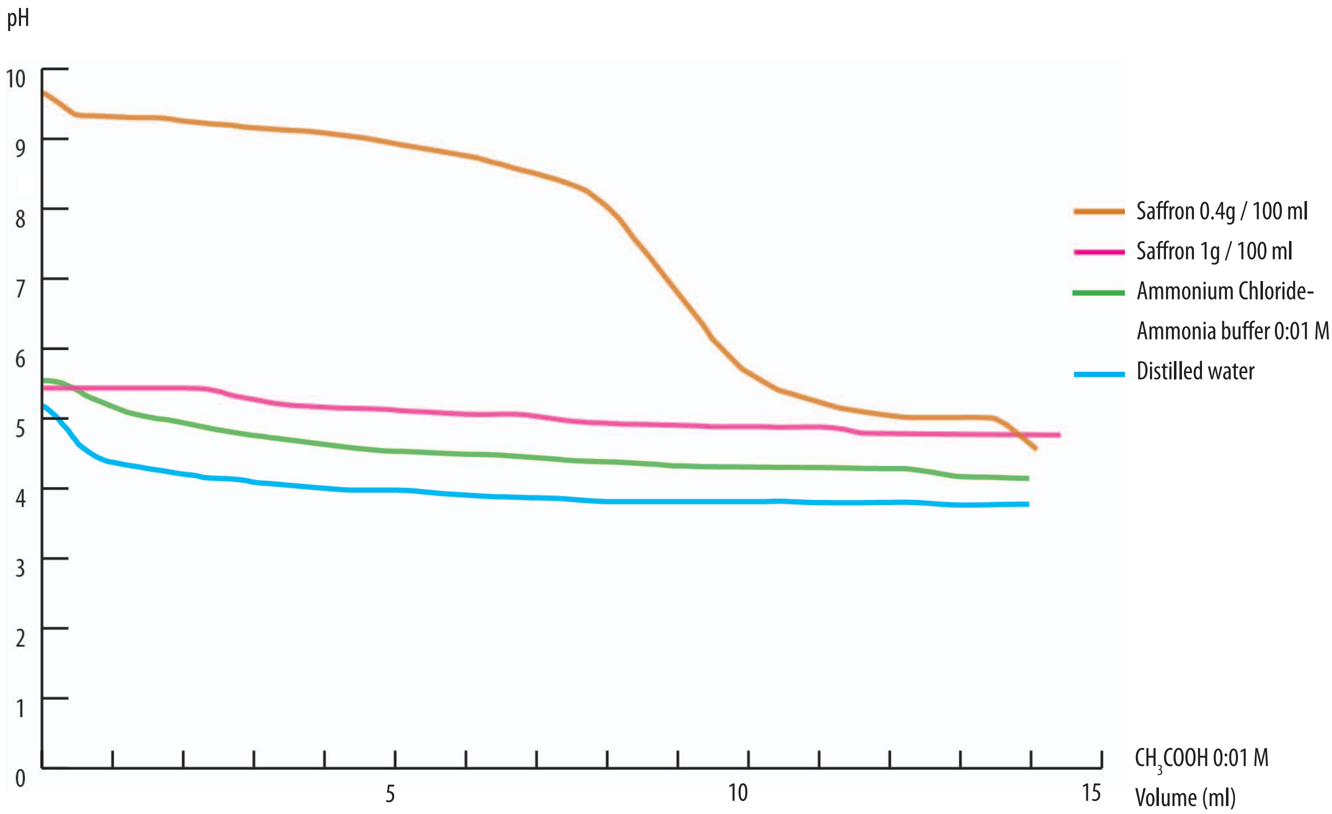


Fig. 2b: Microscopic examination of the destructive effects of green verdigris (fig. 1), detail, Atiqi Collection, Tehran, Iran (appendix B, table 2, checklist no. 13).

checklist no. 13, fig. 2a and fig. 2b); bands 1400, 1500 and 1600 indicate the presence of acetate. Confirmation was provided by determining the presence of copper by microchemical analysis and by its microscopical appearance. Fig. 3 shows the presence of saffron mixed with verdigris found in a sixteenth century miniature Persian painting (appendix B, table 2, checklist no. 18; fig. 4); bands 1400, 1500 and 1600 show the presence of acetate. In this sample, it can also be clearly seen that the spectra exactly matched the fingerprints of saffron spectra which were used as a reference. The noticeable distinction when comparing the bands on 3439 is related to the possible effect of the local formation of alkali hydroxide on the trend of the destruction of the verdigris in pure form and verdigris mixed with saffron.

In the second stage for comparing the pH resistance of saffron with buffers and water, the pH profiles were



Graph 1 : pH variation of different solutions due to incremental addition of acetic acid 0:01 M.

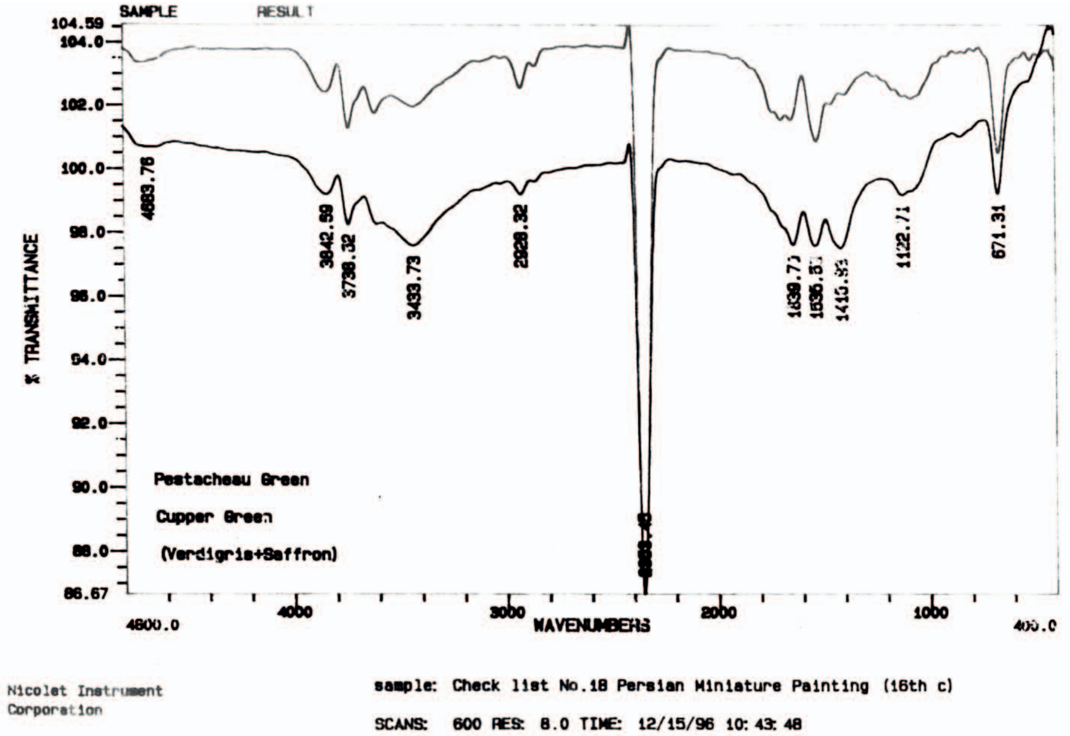


Fig. 3: The spectra of green verdigris mixed with saffron in a Persian miniature painting (appendix B, table 2, checklist no. 18). The red line is the reference and the blue line is the green verdigris sample from the manuscript.

determined over a range of pH 0–14. Five solutions were prepared: 20 ml of distilled water, two different saffron solutions of different concentrations; 20 ml of a 0.4% saffron solution (0.4 grams of saffron in 100 ml of distilled water) and 20 ml of a 1% saffron solution (1 gram of saffron in 100 ml of distilled water), 20 ml sodium acetate-acetic acid (acidic) buffer 0.01 M and 20 ml ammonium chloride-ammonium (basic) buffer 0.01 M. Distilled water and saffron solutions were divided into two portions. 0.01 M of acid (CH_3COOH) was gradually added to one portion and a 0.01 M base (NaOH) to the other. As for the buffers, acetic acid was added to the basic buffer and sodium hydroxide to the acidic buffer. Then the pH of all the solutions was measured and compared. The pH variations of different solutions due to the incremental addition of acetic acid are summarised in graph 1: One can see that the pH of 1% solution of saffron is maintained at 5.5 when gradually adding up to 2 ml of acetic acid to the solution, while the acetic acid solution alone indicated a gradual decrease of pH; 2 ml resulted in pH 4.3. Experimentation with a 0.4% saffron solution also showed a similar though less significant trend. In this case, the pH starting from 5.6 was lowered to 5 on the addition of 2 m of acetic acid, which was almost equivalent to the solution without acetic acid. It is evident that the pH variations in the saffron solutions are lower than the variations in water and that the buffering property of saffron is strengthened by increasing the concentration. The graph shows the behaviour of saffron solutions in comparison with a basic buffer, i.e. ammonium chloride-ammonium acidic solution.

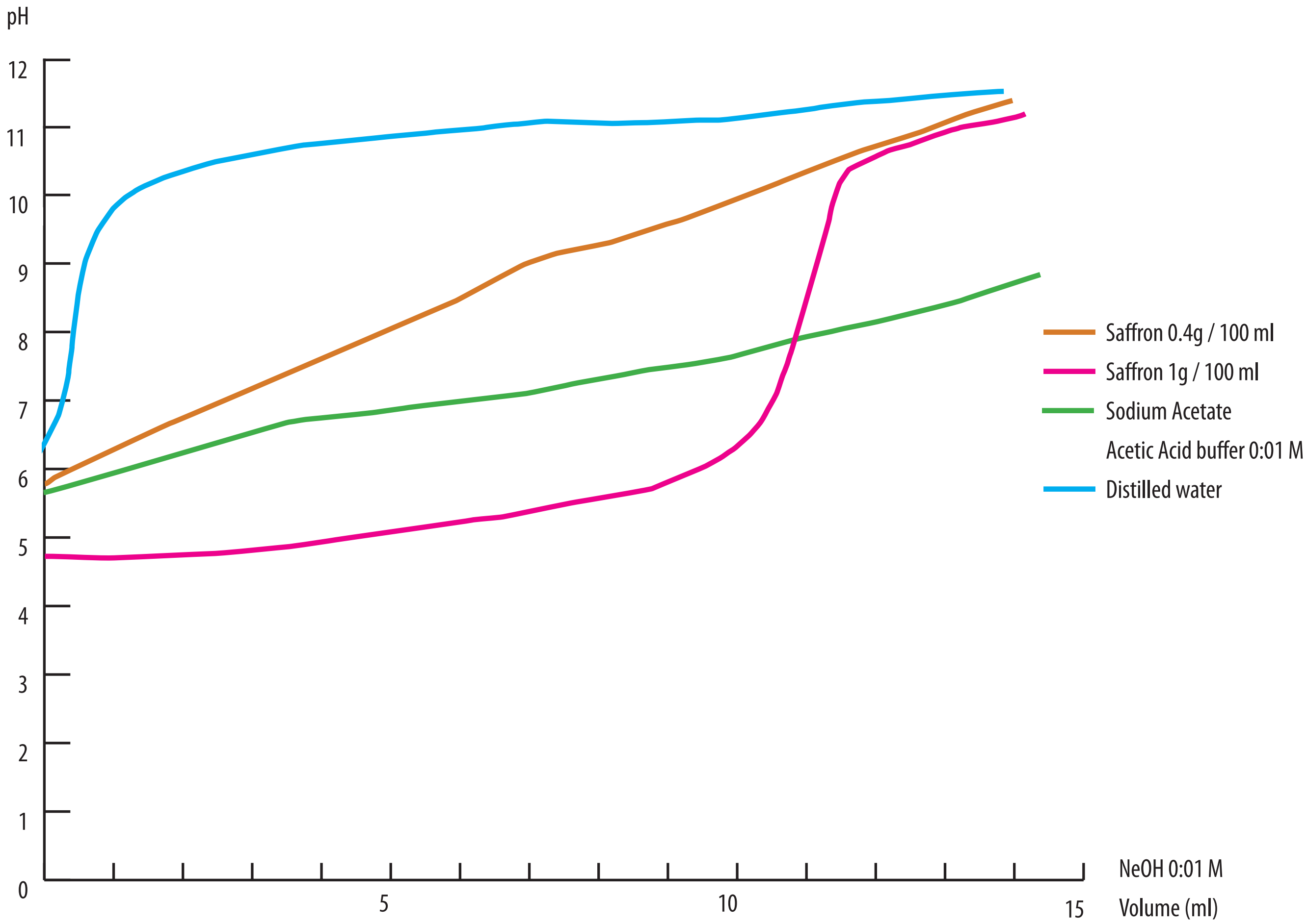
Fig. 4: A sixteenth-century Persian miniature painting with its green verdigris mixed with saffron, Atiqi Collection, Tehran, Iran (appendix B, table 2, checklist no. 18).

Graph 2 shows the buffering behaviour of the saffron solutions in a basic medium. The corresponding behaviour of distilled water and sodium acetate-acetic acid, which is an acidic buffer, is also shown as a reference. It is clear that the saffron solution is a stronger buffer than the acidic buffer under study and its buffering effect increases with an increase in the concentration. As the concentration of NaOH was gradually increased from 0.2 ml to 2 ml, the pH only increased to 6.3, while the pH of the NaOH solution with a 2 ml concentration was 10.4. Even the 0.4% solution of saffron had a sufficiently strong buffering characteristic. In this case, the addition of 2 ml of NaOH resulted in a pH of 6.8, which is higher than that obtained by a 1% solution of saffron and 2 ml of NaOH.

Results and summary

Right from the very first phase of the investigation, the study lent support to the idea of saffron having a preventive quality: the research showed verdigris which was mixed with saffron did not char the paper, whereas the verdigris which was used in pure form charred the paper extensively. Figures 2a and 2b and figure 4 show the condition of green pigment in miniature Persian paintings and illuminated Persian manuscripts when verdigris was used in its pure form and mixed with saffron. During the investigation, saffron mixed with green verdigris was found in a sixteenth century paintbox from the Safawid period (see fig. 5). This proves the use of saffron mixed with verdigris in Persian paint palettes to obtain pistachio green, as recommended by the masters.

By comparing graphs 1 and 2 from the second stage, it can be observed that the pH variations of the 1% saffron solution, ranging from 5.5 to 8.5, are quite minimal compared with the variation of pH in the acidic buffer, which ranges from 5 to 11, and that of the basic buffer ranging from 4.8 to 9.2 in an identical condition. The results of a previous[13] investigation show that saffron can resist a wide range of pH variations and that the existence of unsaturated dicarboxylic acid and its esters (crocin, carotenoid esters and crocetin) and nitrogen compounds in the chemical composition of saffron could be responsible for its high resistance. It therefore proves that the saffron solution,



Graph 2 : pH variation of different solutions due to incremental addition of sodium hydroxide 0:01 M.

[13] Barkeshli and Ataie 2002

Fig. 5: A sixteenth-century paintbox from Bekhradi Collection, Isfahan, Iran.

when added to the verdigris pigments, acts as a powerful buffering agent which prevents the charring of paper by maintaining a constant pH. This prevents the destructive mechanism of verdigris from unfolding by increasing the pH and the local formation of alkaline hydroxide, which is active in the final stage of the degradation process due to a Fehling reaction.

Case study II: the mystery of the henna dye recommended in Persian literature

The art of calligraphy and illumination which emerged during the Islamic period has great relevance for the history of the arts. Paper was first produced in Khorasan in the eastern part of the Islamic world by Chinese captives in the second century Hijra (around 750).[14] It spread to other Islamic territories and soon became a significant commodity in the Islamic world. Persia actually developed into one of the most important centres for papermaking and was a bridge that connected East and West in this art, which became so popular in Iran that there were some cities where the entire population engaged in it. During the period of Yāqut, for instance (sixth and seventh centuries Hijra), there was a city called 'Kāḡaz konān' (the 'city of paper producers'), located between Marāḡeh and Zanjān, which was famous for producing quality paper; almost everyone in that city engaged in paper production.[15] The growing demand for paper on the part of scribes and men of letters prompted papermakers in the Islamic Middle Ages and subsequently those in the Timurid and the Safawid eras to focus upon the aesthetic aspects of paper production and to produce a wide-ranging variety of paper.[16]

Persian recipes

A number of treatises relating to methods used in paper-dyeing during the periods under study have survived and are accessible to us today. Historical evidence from the Timurid and Safawid eras, including the Qajar period, has revealed that the paper used for producing books in these years was generally dyed. Experts on the field of papermaking recommended dyeing the paper in two respects: one was the aesthetic aspect and the other the effect of the paper's colour on the reader. According to them, white paper had a harmful visual effect on the reader, while dyed paper reduced the strain on the reader's eyes. In his famous treatise entitled *Golzār-e Ṣafā*, Seyrafi, a renowned expert from the Safawid period, says the following:

کاغذ ار رنگ کنی خوبتر است   کز سفیدی به بصر صد ضرر است
ضرر چشم پسندیده مدان   خامه بر کاغذ بی رنگ مران
رنگ کن کاغذ زیبا ز نخست   تا بود خط تو وچشم درست
از تو چون زین هنری می جویم   بهر تو مختصری می گویم

Paper once dyed is better, for white surely harms the eyesight one hundred times.

It is not favourable to hurt the eyes, it is wise to refrain from penning on uncoloured paper.

First, dye the paper to beauty, so that your hand and eyes remain fine.

Since I expect you to scale great heights in this art, I have helped you with this little part.

In some old treatises, references have also been made to the harmful effects of certain kinds of dyed paper on the eyesight with regard to the ink used for calligraphy and the dyes employed for colouring paper – Mohammad Boḵāri and Solṭān ʿAli Mašhadi discussed this matter in almost the same way in their respective works, *Favāyed al-ḵoṭuṭ* and *Ṣerāt al-Ṣoṭur*, for example. The latter mentions the following:

چشم را رنگ سرخ وزرد وسفید   خیره سازد چو دیدن خورشید
بهر خط نیمرنگ می باید   تا از او دیده ها بیاساید
رنگهایی که تیره رو باشد   خط رنگین بر او نکو باشد
کاغذ سرخ را سفید نویس   تا نماید خط تو خوب ونفیس
کاغذی کان کبود رنگ بود   از سفیداب دلپسند بود

---

[14] Māyel Heravi 1993, 16.

[15] Māyel Heravi 1993, 17.

[16] Māyel Heravi 1993, 17.

> Eyes get dazzled when they see red, yellow and white paper just as they do while looking at the sun.
>
> For the purpose of calligraphy, temperate colours should be used as they relax the eyes.
>
> The coloured lines are good on dark paper.
>
> Write on red paper with white colour so that your handwriting (calligraphy) stays nice and elegant.
>
> On blue paper, writing with white is pleasant.

However, in his treatise, *Favāyed al-ḵoṭuṭ*, Mohammad Boḵāri points out the following about other colours:

اما بعضی رنگهای دیگر هست نوشتن خطا است وبه خط سیاهی در او نوشتن
سبب خیرگی چشم می شود ورنگ سرخ وسبز وسوسنی وماوی سیر
وسفید تیره می سازد.

> There are some more colours with which it would be a mistake to write, and writing on them with black ink will dazzle (blind) the eye. Red, green, dark blue (violet), full blue, and white make (the eye) dark.

چشم را رنگ سرخ وسبز وسفید   خیره سازد چو دیدن خورشید
ماوی سیر وسوسنی با هم   چشم را تیره سازد وپر نم

> Red, green and white dazzle the eye (make it blind) like looking into the sun.
>
> Full blue, dark blue and violet also make the eye dark and moist.

The most recommended dye for colouring paper: henna

One of the methods that have always attracted experts' attention is paper-dyeing with natural extracts of henna. This has been used in various ways throughout history.

Among the different coloured papers, henna is specifically recommended for making natural colour (*ḵodrang*) in historical documents either in its pure state or when mixed with saffron. For example, Bābā Shāh-e Isfahāni poetically says in his treatise *Ādāb al-Mašq* that:

هیچ رنگی به از حنایی نیست   حاجت آنکه آزمایی نیست

> There is no colour comparing to henna, there is no need for experiment.

In addition to this, Majnun Rafiq Heravi suggests in his *Ādāb al-Mašq* that:

ای طرفه پسر که عشق داری   وز عشق هوای مشق داری
رو کاغذ طرفه ای بدست آر   بریان ولطیف و صاف وهموار
رنگی که صفای خط در آن است   از آب حنا وزعفرانست

> Oh wonderful son who hath love in you, and with that love you desire to practise writing,
>
> Go and gain the wonderful paper, paper that is crisp, delicate, pure and smooth.
>
> The beautiful colour that adorns the calligraphy comes from henna dye and saffron.

However, several writers mention the need to add a few drops of black ink to the mixture of saffron and henna: Bābā Shah Isfahani in his treatise *Ādāb al-Mašq*, Majnun Rafiq Heravi in his treatise *Savād al-ḵaṭṭ* and Solṭān ʿAli Mašhadi in *Ṣerāt al-Ṣoṭur*. In *Ṣerāt al-Ṣoṭur*, for example, it says:

هیچ رنگی به از حنایی نیست   با تو گویم که رنگ آن از چیست
زعفران وحنا وقطره ای چند   از مداد است بیش ازین مپسند
خط بر او خوب وهم طلا خوب است   زینت خط خوب مرغوب است

> No colour is better than the colour of henna, I will tell you what the colour is made of.
>
> Saffron and henna and a few drops of ink, do not allow any more [than that].
>
> Both calligraphy and gold will go with it nicely, it is the ornament of fine, high-quality writing.

As mentioned earlier, henna dye was recommended by different masters based on their own experience. Perhaps that is why this colour was used so much in Persian paper manuscripts. Most historical treatises put more emphasis on the ratio of henna and water for obtaining the dye. This was also explained in various historical sources that were studied, including *Resāleh dar Bayān-e Kāḡaḏ Morakkab va Ḥall-e Alvān*, *Golzār-e Ṣafā*, *Resāleh dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāḡaḏ-e Alvān* and *Resāleh dar Bayān-e Rang Kardan-e Kāḡaḏ*. In all these sources, the methods used for making henna are almost the same. In *Resāleh dar Bayān-e Kāḡaḏ Morakkab va Ḥall-e Alvān*, for instance, the anonymous author describes the henna dye called *k̲odrang*[17] as follows:

> رنگ خودرنگ - قدری برگ حنای پاک، بی غبار وخاک را، که ناکوفته بود در آب گرم کند ویک روز یا یک شب بگذارد، بعد از آن بپالاید وصاف سازد وکاغذ بدان رنگ کند. وهر یک سیر حنا را ده سیر آب باید، واگر آب زیاده کند، رنگ مله شود. واکثر این رنگ اختیار کرده اند.

> Put a few clean, loose, unbeaten henna leaves into hot water for a while. Keep them for a whole day or a whole night and then filter them to get an extract of henna leaves. For every *sir*[18] of henna add 10 *sirs* of water. If more water is added, the colour will become dull and dusty (*mālle*). Most [experts] have chosen this colour.

On the other hand, in other treatises, the right ratio of water to henna is mentioned instead of any exact measurements. Ali Seyrafi says the following in *Golzār-e Ṣafā*, for example:

> کاغذ ای دوست چو خود رنگ کنی   خود به این رنگ هماهنگ کنی
> بستان برگ حنا را بسیار   پاک کن وانگهی از گرد وغبار
> آب کن گرم در آن رنگ نخست   پس حنا ریز در آن آب درست
> وزن آن آب حنا را دریاب   یکی از برگ حنا وده آب
> یک شبانروز به جایش بنه   صاف کن آب به آن رنگ بنه
> کاغذ از رنگ تو گیرد وایه   خشک سازش پس از آن در سایه

> Oh friend, if you want to dye paper in *k̲odrang*, harmonise yourself with this colour.
>
> First of all, heat some water and then add the henna leaves to it in the right proportion.
>
> Paper receives its joy from your dye. Afterwards, let it dry in the shade.
>
> Acquire large quantities of henna leaves and clean them by freeing them of dust.
>
> Be aware and conscious about the weight of the henna dye: it should be one portion of henna leaves and ten portions of water.
>
> Leave [the mixture] a day and a night, then filter the liquid and use it as a dye.

It should be mentioned here that a lower concentration of one *sir* of henna and half a *mann* of water was only recommended in one treatise, *Resāleh-ye Ṣaḥāfi*, whereas in the treatise *Resāleh dar Bayān-e Rang Kardan-e Kāḡaḏ*, the ratio was not indicated at all; instead, the writer advised the reader to obtain the desired colour by trial and error.

Since all our sources strongly advised dyeing paper with henna, I studied the anti-fungal properties of henna and conducted a scientific examination in the second phase of the study.

Scientific analysis

In this analysis, the effects of henna extract were specifically examined to explore the reason for it being used for paper-colouring, as repeatedly advised by masters in Persian historical treatises, who recommended employing a ratio of one part henna to ten of water. The analysis was carried out in two stages.

Materials and techniques

In the first stage, the chemical composition of henna was reviewed and its colouring matter was investigated. It was found that the leaves of henna contain 7% tannin, 6% fat, 1.2% essences and 2–3% lawsone (2-hydroxy-1,4-naphthaquinone) responsible for the anti-microbial properties of henna[19] It was also found that henna has fungicidal properties, as previously reported by Soker.[20]

In the first stage, an examination was also carried out to investigate the relation of *aspergillus flavus* fungus growth on paper with the concentration of henna dye without taking into account the ratio that was advised by the masters. Three different samples of undyed and unsized historical handmade paper from the sixteenth to the nineteenth centuries – seemingly of different grammage and different fibres – were selected from the conservation laboratory of the Iranian Parliament's library in Tehran where papers were divided into three groups. In each of these, the papers were divided into four pieces of 2.5 x 2 cm in size for the sample experiments. To dye the samples of paper without any consideration of the ratio advised in the historical recipes, 1, 2 and 3 grams of powdered henna leaves (prepared from Yazd in central Iran) were soaked in 60 ml of distilled water (1.8–3.3 and 5% respectively) in three separate containers and kept under artificial light for four hours to see how the henna dye

[17] *K̲odrang* preserved the natural colour of the material, leaving it unchanged; at the same time it was a yellowish colour.

[18] *Sir* is a traditional Iranian measure equivalent to 75 grams.

[19] Malekzadeh 1968; Malekzadeh and Shabestari 1989.

[20] Soker 2000.

Fig. 6: Fungal growth of paper group samples dyed with henna extract solutions.

affected the paper in general. Each solution was filtered with a filter paper. The four paper samples collected from each group were soaked in solutions for 5, 15, 30 and 60 minutes. Each paper group was dyed simultaneously in the three different concentrations for the four different lengths of time to observe the effects of time and the concentration of dyes used in the colouring process on the growth of *aspergillus flavus* fungus on paper samples. A phosphate buffer was prepared (pH = 7.0) and the process was carried out in the Microbiological Laboratory of the Gamma Irradiation Centre, Tehran. In all the experiments, 10 ml of *aspergillus flavus* was prepared containing approximately 1×10^{-7} spores per ml. The concentration of the suspension was estimated by the pour plate method. Potato dextrose agar was applied to each sample to accelerate the growth of fungus process on paper. The samples were incubated at 25°C for four weeks and the diameter of the zone of inhibition was measured to the nearest millimetre by means of a celluloid millimetre ruler. A magnifying glass was used when needed (see fig. 6).

In the second stage, further analytical work was carried out in a different laboratory at the Centre for Environmental Research in the Department of Environmental Health Engineering, University of Tehran. This time, the research aimed to investigate the effects of henna dye on the *aspergillus flavus* fungus in different ratios, and more specifically on the relation between the henna concentration advised by masters – with a ratio of one part henna to ten parts water – and the growth of fungus directly on henna dye.[21] Pure henna leaves from Yazd were prepared. This time, Sabouraud dextrose (from Merck) was prepared instead of potato dextrose agar due to its availability and lab procedure. All the samples were diluted in double-distilled water and then sterilised in an autoclave for 15 minutes at 121°C. The laboratory work was conducted directly on the henna solution in concentrations of 2.5%, 5%, 7.5%, 10%, 12.5%, 15% and 17.5%. These solutions were incubated for two hours at 75°C. To get the complete extract, the solutions were kept at room temperature for 24 hours and then filtered. The extracted solution was used to culture the fungus. One gram of Sabouraud dextrose agar brass was mixed into 15 ml of henna solution extracts where the samples were all sterilised. In this phase, the research was only done on the henna solution to see the result. In the next phase, which is still to come, the result on henna paper will be examined as well. *Aspergillus flavus* fungi were inoculated into all the henna samples: 2.5% (plate a), 5% (plate b), 7.5% (plate c), 10% (plate d), 12.5% (plate e), 15% (plate f) and 17.5% (plate g), including untreated samples (plates 1 to 4), and the samples were studied every twelve hours (see fig. 7).

Results and summary

In the first stage, the results showed that the samples which were dyed with henna had a greater tendency to inhibit the growth of *aspergillus flavus* fungus than the undyed paper samples. The samples dyed with henna showed that the growth of the fungus depended on the concentration of henna and the length of application: the growth of the fungus decreased if the concentration of henna was higher and the application took longer. As for the type of paper used, this did not lead to any significant difference in behaviour. It should be noted that even when the highest concentration of henna was employed and the dye was applied for a long time, the growth of the fungus decreased, but it was still noticeable – perhaps due to the lower concentration of henna dye used in the experiments (1.8–3.3 and 5%) rather than the advised ratio of 10% in the masters' recipes.

In the second phase, our experiment showed that henna dye can only act as a fungicide that combats the *aspergillus flavus* fungus if it is used in a concentration of more than 10%. Fungal growth in a henna extract with a higher concentration than 10% was reduced by 60% and was further reduced by 80% in a 17.5% henna concentration (see fig. 8).

This means that the recipes suggested by Iranian masters in the fifteenth and sixteenth centuries may have been based on their knowledge of empirical chemistry and that henna dye was used to prevent fungus growth on paper, more specifically to counter *aspergillus flavus*. To be able to

[21] Barkeshli, Ataie, and Alimohammadi 2008a.

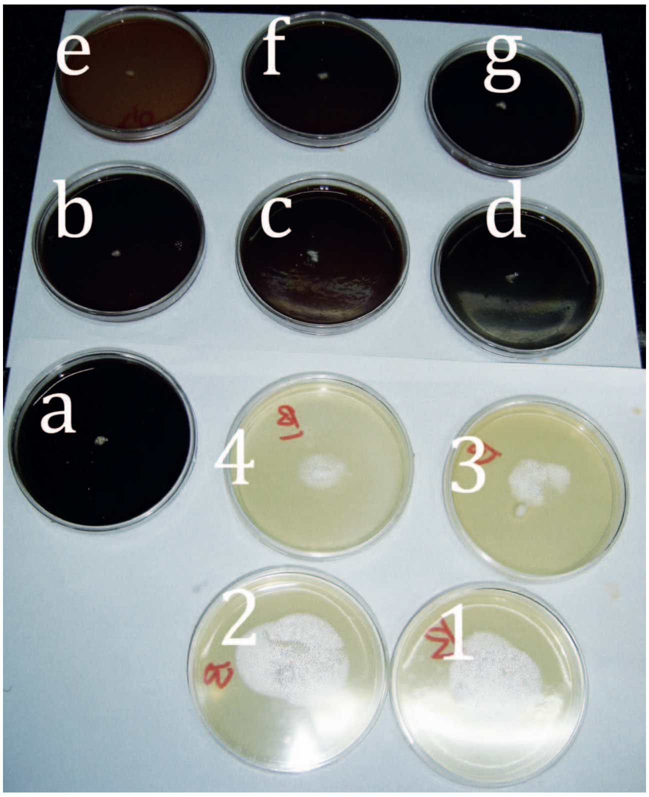


Fig. 7: Culture of *aspergillus flavus* on untreated samples (Petri dishes 1 to 4) and henna treated samples 2.5% to 17.5% (Petri dishes a to g).

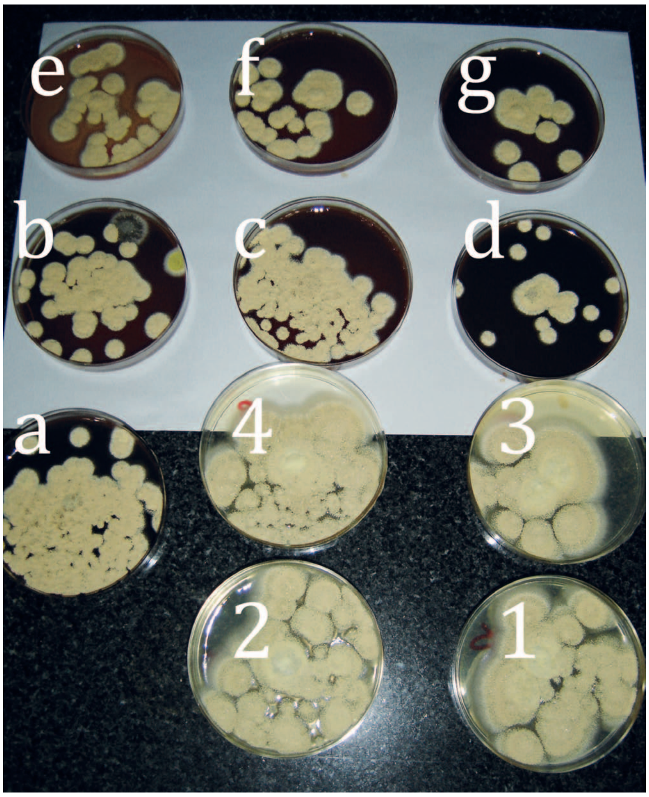


Fig. 8: Culture of *aspergillus flavus* on untreated samples (Petri dishes 1 to 4) and henna treated samples, 2.5% to 17.5% (Petri dishes a to g) in eight days.

confirm this statement, though, further research needs to be carried out on other species of fungus and different types of paper, of course.

Case study III: techniques and materials used in sizing paper

'Sizing' (*āizi*) paper is a process of preparing the surface of paper to make it suitable for writing, illuminating or painting on. After a sheet of paper has been formed and dried, the cellulose fibre it contains can continue to absorb water unless it has been 'sized', i.e. impregnated with a substance like starch, glue or wax to prevent such penetration. There are different techniques available for sizing paper, depending on requirements, such as soaking or applying one or a number of layers of sizing material on the paper surface with the help of a soft brush.

Specimens from China (third century CE) indicate that contemporary papermakers used a range of sizing techniques, from coating the surface of the paper with gypsum to treating it with gum, glue or starch to prevent ink from spreading in an undesirable way.[22] According to Hunter, one of the earliest methods of sizing paper was covering the surface of the sheets with a thin coating of gypsum. The next improvement was to render the body of the paper and the surface of it impermeable to ink by the use of lichen, starch or rice flour.[23]

In Iran, according to Canby, once the paper was dried, it was sized by soaking it in albumen or a starchy solution to fill in and even out the surface for painting.[24] Before the Islamic era, in the Sassanid period (fifth–sixth century CE), the Iranians used sizing materials over the cloth to prepare the surface for writing and painting.[25] After learning the process of papermaking from the Chinese, Iranians started the tradition of sizing paper to prepare a suitable surface on it for writing and painting. The chief contribution of Iranian papermakers working under Arab rule was the perfection of rag paper thanks to improved techniques for beating the

[22] Bloom 2001, 33.

[23] Hunter 1957, 194.

[24] Canby 1993, 14.

[25] Māyel Heravi, 1993, 572.

fibres and by preparing the surface for writing by sizing it with starch.[26]

Certain scientific investigations have also revealed valuable information on materials used in the sizing process. According to Wulff[27] and based on chemical investigation, the Iranian papermakers at Samarqand made an important contribution to papermaking by introducing a new method in sizing paper to make it more suitable for writing on with ink and a reed pen. Wheat starch and later gum tragacanth[28] or asphodel[29] (*seriš*) were used as sizing substances.

Persian recipes

A number of different sizing materials were prescribed in Persian historical treatises. Our historical analysis was preliminarily based on eleven treatises from the thirteenth to the eighteenth centuries. Most of the authors of these historical treatises are known to us today, while others are anonymous. These sizing materials are described in historical treatises from the late Seljuk and early Ilkanid (seventh–eighth century Hijra/twelfth–thirteenth century CE), Timurid (eighth–ninth century Hijra/fourteenth–fifteenth century CE), Safawid (tenth–twelfth century Hijra/sixteenth–eighteenth century CE) and Qajar periods (1193-1344 Hijra/17791925 CE), as we shall see below.

In his treatises *Ādāb al-Mašq*, *Rasm al-Ḵaṭṭ* and *Savād al-Ḵaṭṭ*, Solṭān Aḥmad Majnun Rafiqi Heravi advises the use of soft, smooth and even paper to write or draw on. To make fragile paper strong enough, reduce the fluffiness of paper fibres and make the surface of the paper smooth enough to write on, Mohammad Boḵāri also recommends applying sizing materials in his work *Favāyed al-Ḵoṭuṭ*.

In *Ḥaliyyat al-Ketāb,* the term *dāru* is used for sizing, whereas Teflisi calls the sizing *gune dādan*. Simi uses this last term just once when referring to a marshmallow starch. Three elements are involved in the sizing process: a base (*taḵte*) to spread paper on it during the sizing process, sizing substance (*āhār*) to apply on the paper in order to smooth the paper fibres, and burnishing tools (*mohre*) to make the sizing adhere to the paper fibres and make the paper even and ready for writing on.[30]

Historically, besides the type of fibre it contained and the place of its production, paper was known by different names, partly depending on the sizing of the sheets. In his book, Yves Porter quoted from *Resāle-ye ḵošnevisi*, where *ḵaṭṭaiʾi* paper is described thus: 'to size *ḵaṭṭaiʾi* paper, whether it is meant for exercise or for calligraphy, if the starch is thick, we repeat the process two or three times'.[31]

In *Ḥaliyyat al-Ketāb* and *Majmuʿat al-Sanāʿi* we can find recipes for sizing paper in such a way that the paper becomes similar to Baghdadi paper, a kind of well-known paper made in Baghdad and mentioned in historical treatises.[32] Also, different sizes were used as an appropriate base or support for calligraphy or painting according to requirements. Different types of paper, such as a single sheet of paper, two-layered paper (*kāḡaḏ-e do puste*) or three-layered paper (*kāḡaḏ-e se puste*), paper board (*muqawwā*) and albums (*muraqqaʿ*) were made using sizing materials. Gholam Dehlavi describes the process of album preparation by instructing the pages of manuscripts to be sized and burnished on both sides: 'Size the paper on the front but not on the back, with great care, like a fresh colourful flower. Then polish the paper on the other side until it shines brighter than a mirror for writing'.[33]

From our study, the materials can generally be categorised as proteinaceous materials, which include animal glue, starch from rice or wheat, vegetable gum, or mucilage from plants and seeds, fruit or sugar. A number of burnishing materials were also employed, such as agate stone (*ʿaqiq*), jade (*yašm*), ivory (*ʿāj*), glass (*zejāj*), crystal (*bolur*) and shell (*jis*). Teflisi uses the term *abgine* for glass used as a polishing tool. Sometimes even a person's bare hands were used to smoothen the surface of paper. A hard and smooth base made of flint (*čaqmāq*) was also employed, and a wooden board was used as the base for burnishing and sizing paper.

[26] Bloom 2001, 68f.

[27] Wulff 1976, 237.

[28] Gum tragacanth is called *katirā* in Persian. It is a natural gum obtained from the dried sap of several species of Middle Eastern plants of the genus *Astragalus*. The sap is drained from the root and stems of the plant and then dried.

[29] Asphodel belongs to the family of the *Liliaceae*. In Iran, a glue called *seriš* is made from the bulbs of this plant, which are first dried and then pulverised. The powder forms a strong glue when mixed with cold water.

[30] Cf. Canby, 1993, 14.

[31] Porter, 1994, 28.

[32] Bloom 2001, 48ff.

[33] Gholam Mohammad Dehlavi, *Taḏkere-ye ḵošnevisan* ('Biographies of Calligraphers'; 1221 Hijra/1806 CE), ed. M. Hidayet Husain, Calcutta 1910; cf. Porter 1994, *Painters, Paintings and Books,* 28.

Vegetable base sizes

The first category is vegetable base sizes, which include types of starch, gum, plant mucilage, fruit juice and sugar.

1. Starch (nešāste)

A general term for starch, *nešāste*, which we believe to be rice starch, was mentioned in seven treatises. The process of sizing with starch (*nešāste)* was discussed in detail in *Bayān al-Ṣenāʿat* by Teflisi, *Jowhar-e Simi* by Simi Neyšapuri, *Ṣerāt al-Ṣoṭur* by Soltān Ali Mašhadi, *Favāyed al-ḵoṭuṭ* by Boḵāri, *Ādāb al-Mašq* by Bābā Shāh-e-Isfahāni and *Resāle dar Bayān-e Kāğaḏ Morakkab va Ḥall-e Alvān* and *Resāle dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāğaḏ-e Alvān* by anonymous authors. The eminent calligrapher Solṭān Ali Mašhadi, for example, devoted several couplets of his treatise on calligraphy, *Ṣerāt al-Ṣoṭur*, to sizing and glazing paper by hand, as shown here:

در باب آهار ساختن و کاغذ آهار کردن

ساز آهار از نشاسته کن　　بشنو این زپیر پخته سخن
اولاً کن خمیر وآب بریز　　پس بجوشش دمی به آتش تیز
پس لعاب سرش به او کن ضم　　صاف سازش نه نرم ونه محکم
رو به کاغذ بمال وسعی نمای　　تا که کاغذ نیوفتد از جای
کاغذِ خویش چون دهی آهار　　مال آبی به روی او زنهار

About producing sizing material and paper sizing

Prepare the size (*āhār*) from starch learn these words from an old man.

First make a paste, then pour in water, then boil this on a hot fire for a moment,

Then add some glue (*seriš*) to thin starch, strain it [so that it is] neither too thin nor too thick,

Spread it on paper and make sure, that the paper does not move from its place.

When you are applying size to your paper, moisten the paper slightly with water, carefully.

It is worth mentioning that *Ṣerāt al-Ṣoṭur*, *Favāyed al-ḵoṭuṭ* and *Resāle dar Bayān-e Ḵaṭṭ va Morakkab va Kāğaḏ va Sāḵtan-e Ranghā* specifically advise mixing asphodel glue (*seriš*) to the starch paste. To prepare layered paper, Simi Neyšapuri describes the technique using starch size thus:

قدری نشاسته، آهار تنك كند وبیالایند، وکاغذ را به آهار بر هم میتوان چسباند؛ چنانكه هر دو یكی شود، مهره زند وبنویسد، كه خط بر وی بغایت خوانایی وزیبایی بنهایت می آید. وبا كاغذ سلطانی برابر آید.

Cook some starch and size paper. Pieces of sized paper can stick together in such a way that they become one sheet. This can then be burnished and written on. Calligraphy on this paper is legible and beautiful, and is as good as it is on *soltāni* paper.[34]

Wheat starch (nešāste-ye gandom):

This is specified in *Golzār-e Ṣafā* by Ali Seyrafi and in *Ḵaṭṭ va Morakkab* by Hossein Aqili Rostamdari. *Ḵaṭṭ va Morakkab* describes the technique as follows:

در بیان آهار کردن

چون خواهد که کاغذ را آهار کنند باید که اول شیره گندم بگیرند وصاف کنند وبعد از آن بپزند. وچون آهار پخته شد تخته بیاورند وبر بالای آن تخته نمدی یا کرباسی بیندازند وآهار را در قدحی ریزند ویک قدحی دیگر آب در پیش هم بگذارند وبعد از آن اندکی آهار از پنبه بردارند وبر آن چیز مالند، بعد از آن پنبه دیگر از آب تر کنند فی الحال بر آن مالند وبیندازند.

To size a piece of paper, take some wheat starch, filter it and then cook it to make a paste. Then take a wooden board and cover it with felt (*namad*) or a muslin cloth. Take two bowls; pour the starch into one and some water into the other. Moisten a ball of cotton with starch and rub it over the paper. Finally, take another piece of clean cotton ball, moisten it with water and rub it over the starched paper. The paper can be sized this way.

In *Golzār-e Ṣafā*, Seyrafi describes the process beautifully in the form of a poem:

صفت آهار نشاسته

ای مرا دیده ودل سوی تو باز　　طلبم ناز تو هر دم به نیاز
حال آهار که وافی باشد　　شیره گندم صافی باشد
طبخ کن شیره گندم بسیار　　پس بپالای وببر باز بکار
چونکه آهار کنی ای مهوش　　بشنو از من صفت آن دلکش
تختهای پیش نه از روی قیاس　　نمد افکن به سرش یا کرباس

[34] The term *soltāni* means 'royal' in Persian. According to Bābā Shāh-e Isfahani (tenth century Hijra/sixteenth century CE) in his treatise *Ādāb al-Mašq, soltāni* is high-quality paper, which is also known as *dolatābādi*. In his book *Kāğaḏ dar Zendegi va Farhang-e Irāni* (1390 Hijra/2011 CE), Iraj Afšar says that *soltāni* paper refers not only to *dolatābādi* paper but also to *samarqandi* paper – the high-quality paper made in Samarqand in the eighth century. See Barkeshli 1998, 102, table 1.

قدحی پر کن از آهار دگر　　قدحی آب همان پیشآور
جز وی آهار به پنبه بردار　　کاغذ ای سرو روان ده آهار
تر کن از آب دیگر پنبه پاک　　پس به آهار بمالش چالاک
که همان مصلح آهار شوی　　صفحه زین قاعده هموار شوی

Attributes of Different Sizings

My dear: my eyes and my ears are open to you, I always long for your grace.

The perfect kind of sizing is a fine clear extract [starch] made of wheat.

Cook (boil) the wheat extract many times and filter it and use it repeatedly.

While you size [the paper], oh moon-faced one, hear from me the attributes of that heart attracting one.

Bring correctly measured boards and place over them felt or muslin cloth.

Fill a bowl with sizing up to the brim and bring forward another bowl filled with water.

Take an amount of sizing with a piece of cotton, oh gracefully flowing cypress tree, apply sizing on paper.

Make wet another piece of clean cotton and rub it over the sized paper.

Hence you become a restorer of sizing and the page becomes smooth with this foundation.

Rice starch (nešāste-ye berenj):

Rice was specified in various sources – Teflisi’s *Bayān al-Ṣenāʿat,* Simi’s *Jowhar-e Simi* and the anonymous *Ḥaliyyat al-Ketāb* (the tenth chapter of *Bayān al-Ṣenāʿat*). In *Ḥaliyyat al-Ketāb*, the process of making starch paste from rice and using it as a sizing material is stated as follows:

در صنعت دارو دادن کاغذ که مانند بغدادی شود ونشف نکند

بیارد برنج سفید اعلا، وبا نمک می مالند وبه آب می شویند تا سپید وروشن شود وطعم نمک از او برود وآنگه قدری آب در او کنند ویک شبانروز بنهند تا نرم گردد چنانکه به انگشت بمالند حل شود. پس در هاون کند وبه آب می سایند وآنچه نرم می شود در ظرفی پاکیزه کند تا جمله جمع شود آنگه بپالایند ودر پاتیله کنند وبه آتش نرم می جوشانند وبه چوبی می جنبانند تا غلیظ شود آنگه بنهد تا سرد شود. بعد از آن کاغذ را بر بالای تخته ای پاکیزه بگسترانند واز این دارو به رکویی سفید پاکیزه بر کاغذ می مالند وکرباس دیگر برآفتاب بگسترانند کاغذ را بر بالای آن افکنند تا خشک شود، آنگه لعاب بدهند ومهره زنند که بسی لطیف باشد. دیگر از هر رنگ که خواهند در میان این دارو کنند که کاغذ رنگین نیکو آید وکسی از بغدادی فرق نتواند کرد.

Take the best-quality white rice, rub it with salt and wash it until it is clean and the taste of salt disappears. Then add some water and keep it for a whole day until it becomes soft and dissolves by rubbing. Place it in a mortar (*hāvan*) and grind it together with water. Put the soft parts into a clean pot so that it all comes together. Then filter it and put it into a large copper vessel. Boil it on a slow fire; stir it with a wooden stick till it becomes a paste. Let it get cold. Spread the paper on the wooden board. Size the paper with a clean cloth moistened with the paste. Spread a piece of cloth in the sun and put the paper over it till it dries. Finally, burnish the paper until it is very smooth. Dyes can be added to the paste to get coloured paper. By using this method, nobody will be able to distinguish this paper from Baghdadi paper.

Simi and an anonymous person in *Resāle dar Bayān-e Kāġaḏ Morakkab va Ḥall-e Alvān* describe a number of sizing materials that could be used when the paper is very thin and the pen used for writing gets stuck and is unable to move over it smoothly. One of the sizing materials they recommend for use is oil-free rice porridge (*ḥalim-e berenji bi roġan*).

2. Gum:

Two other sizing materials mentioned in the historical treatises that fall into this category are gum arabic (*samġ-e arabi*) and gum tragacanth (*katirā*).

Gum arabic (samġ-e arabi):

This substance is mentioned in *Jowhar-e Simi*, *Resāle dar Bayān-e Kāġaḏ Morakkab va Ḥall-e Alvān*, *Golzār-e Ṣafā*, *Ḵaṭṭ va Morakkab* and *Resāle dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāġaḏ-e Alvān*. According to these sources, gum arabic is a very good sizing material and is suitable for writing. Hosseini Aqili Rostamdari says in *Ḵaṭṭ va Morakkab*:

نوع دیگر آن که صمغ را آب کنند وکاغذ را بدان آهار کنند.

… and furthermore dissolve gum arabic in water and size the paper with it.

In one of his couplets in *Golzār-e Ṣafā*, Seyrafi mentions gum arabic as the last material for sizing:

صمغ است دگر آخر کار   این همه هست به جای آهار

… the last one is gum arabic, these are all used as sizing.

Gum tragacanth (katirā):
Katirā is known to have been employed as a sizing material, but in the Persian sources we studied, only Teflisi mentions its use for this purpose.

3. Asphodel (seriš):
This is a well-known vegetable glue which has already been mentioned above and was traditionally used for binding books in Iran; see Sultan Ali Mashhadi in *Ṣerāt al-Soṭur* and Moḥamad Boḵāri in *Favāyed al-Ḵoṭuṭ*. As mentioned above in the rice-starch recipe, Soltān Ali Mašhadi devotes several couplets of his treatise on calligraphy, *Ṣerāt al-Ṣoṭur*, to sizing and glazing paper by hand. In the couplet, he mentions *seriš* being added to rice starch to make the size for paper as follows:

پس لعاب سرش به او کن ضم   صاف سازش نه نرم و نه محکم

Then add to thin starch some glue (*seriš*), strain it [so that it is] neither too thin nor too thick.

4. Plant mucilage (loʿāb):
Mucilage is a gummy or gelatinous substance produced in certain plants by the action of water on the cell wall, as in the seeds of quinces, flax, etc. It is also a polar glycoprotein and an exopolysaccharide. Mucilage in plants plays a role in the storage of water and food, seed germination and thickening of membranes. A number of kinds of mucilage were used as sizing materials to size paper in Iran according our historical analysis. *Jowhar-e Simi*, *Resāle dar Bayān-e Kāğaḏ Morakkab va Ḥall-e Alvān, Golzār-e Ṣafā, Ḵaṭṭ va Morakkab* and *Resāle dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāğaḏ-e Alvān* state a number of sizing materials made from plant mucilage, but the descriptions are not as detailed as that of starch.

Rice mucilage (loʿāb-e berenj):
In *Golzār-e Ṣafā* and *Resāle dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāğaḏ-e Alvān*, mucilage from rice is mentioned as a sizing material. The difference between rice mucilage and rice starch is that in the case of rice starch, the whole rice is cooked and used as a sizing material. As for rice mucilage, however, only the mucilage part is collected from the upper part of the boiled rice and then used as sizing material. In some of his couplets on sizing material in *Golzār-e Ṣafā*, Seyrafi mentions rice mucilage as being the fifth material for sizing after starch and fish glue:

از برنج است دگر بار لعاب   کو بود خالی از چربی آب

… the other (sizing) is rice mucilage, the water (used) should be free of oil

Fleawort seed (espāghol, esfarze, qeṭūnā):
Fleawort[35] seeds are mentioned in the following sources: *Jowhar-e Simi*, *Resāle dar Bayān-e Kāğaḏ Morakkab va Ḥall-e Alvān*, *Golzār-e Ṣafā*, *Ḵaṭṭ va Morakkab* and *Resāle dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāğaḏ-e Alvān*. The techniques stated in the first four sources are the same; they only differ in the duration the paper is dipped in mucilage. *Golzār-e Ṣafā* and *Ḵaṭṭ va Morakkab* use the term *qeṭūnā* for these seeds. Hossein Aqili Rostamdari explains the process thus in his book *Ḵaṭṭ va Morakkab*:

نوعی دیگر بذر قطونا را در آب ریزند تا لعاب بدهد بعد از آن کاغذ را
در لعاب او بگذارند یک ساعت، و بیرون آورند.

Pour some fleawort seeds into water [and leave them in it] until you get some mucilage. Leave the paper in the mucilage for one hour and then take it out.

In *Jowhar-e Simi* and *Resāle dar Bayān-e Kāğaḏ Morakkab va Ḥall-e Alvān* (ninth century Hijra), the duration the paper is dipped in fleawort-seed mucilage is shorter. The sources say: 'Size a sheet of paper with mucilage from fleawort seeds all at one go, then let it dry', but Simi stresses that the mucilage from fleawort seeds must be filtered first and then used. In some of his couplets on sizing material in *Golzār-e Ṣafā*, Seyrafi, after discussing rice starch and fish glue, mentions that there are six more sizing materials: first of all, fleawort-seed mucilage; second, sweet melon juice; third, cucumber seed; fourth, grape syrup; fifth, rice mucilage; and last of all, gum arabic. In the first three couplets, he advises the reader on using fleawort seed as the best material for sizing after starch and fish glue:

35 Fleawort is *Plantago psyllium*.

هست شش چیز دگر ای دلدار — که مقوّی است بسان آهار
اولا بذر قطونا باشد — که لعابش چو مصفّا باشد
کاغذ انداز در او یک ساعت — پس برون آر که یابی راحت

Attributes of Different Sizings

There are six more materials, my dear, which are suitable for sizing

First there is fleawort seed, which has mucilage that is clear

Immerse the paper in it for an hour, then take it out and then you are done.

Cucumber seeds (tok̠m-e k̠iār):
Another sizing material is cucumber seeds, which is stated in *Golzār-e Ṣafā* and *K̠aṭṭ va Morakkab*, albeit in a very brief description. In *Golzār-e Ṣafā*, in some of his couplets on sizing material, Seyrafi mentions cucumber-seed mucilage as the third material for sizing, after starch and fish glue. Hossein Aqili Rostamdari says the following in his book *K̠aṭṭ va Morakkab*:

طریقی دیگر آن که تخم خیار را در آب ریزند تا لعاب باز دهد وبعد از آن کاغذ در آن اندازند وبیرون آورند.

Another method is to place cucumber seeds in water until their mucilage is extracted. Afterwards, place the paper in [the mixture] and remove it.

Melon seeds (ab-e tok̠m-e khiārein):
In *Jowhar-e Simi* and *Resāle dar Bayān-e Kāğaḏ Morakkab va Ḥall-e Alvān*, the authors state *āb-e tohkm-e k̠iārein* as one of the sizing materials. This term can refer to both the mucilage from cucumber seeds and all the seeds from the melon family since in some parts of Iran, *k̠iarein* is the term used for plants and fruits which are similar to the melon family, such as *ṭālebi* and *k̠arboze*. The word *āb*, usually used to mean juice or extract, is probably used in the sense of mucilage here since it refers to the seeds of the fruit.

Marshmallow mucilage (loʿāb-e k̠eṭmi):
Mucilage of marshmallow[36] is mentioned in *Jowhar-e Simi* (ninth century Hijra), *Resāle dar Bayān-e Kāğaḏ Morakkab va Ḥall-e Alvān* (ninth century Hijra) and *Resāle dar Bayān-e Tariqe-ye Sāk̠tan-e Morakkab va Kāğaḏ-e Alvān*. In the sources, the term 'dye' (*rang*) is used rather than 'size' (*āhār*). In the last source mentioned, for example, it says:

دیگر خطمی را یک شب و یک روز [نم کند و] کاغذ را بدان رنگ کند خط بروی خوب آید.

Soak marshmallow (in some water) for a night and a day. Dye the paper with it. The calligraphy on it will be nice.

Referring to marshmallow mucilage, *Jowhar-e Simi* and *Resāle dar Bayān-e Kāğaḏ Morakkab va Ḥall-e Alvān* state:

دیگر تخمی خطمی شبانروزی در آب کند وبیالاید وکاغذ را بدان گونه دهد.
واین بغایت مختار وپسندیده وکاغذ را نرم سازد وخط بر وی خوب آید.

Keep marshmallow seeds in water for a night. Then dye the paper with the mucilage. This process is highly appreciated, it softens the paper, and the calligraphy stands out well on it.

Mucilage from myrtle[37] seeds (tok̠m-e mord):
This is only mentioned in *Jowhar-e Simi* and *Resāle dar Bayān-e Kāğaḏ Morakkab va Ḥall-e Alvān*. The second source explains the process as follows:

دیگر کاغذی که دارای رنگ پیروزه ناک باشد ومانع قلم باشد، تدبیر آن است که به آب خربزه شیرین یا به آب نبات مصری یا به آبِ مورد وبا لعاب اسفیقول ولعاب برنج بی روغن [بگذارد که] مجموع مقوی کاغذ است، وچون کاغذ مهره زند مثلِ آینه نماید.

The paper that is of a turquoise colour and prevents the pen from moving smoothly on it [during writing] can be fixed by sizing [paper] with sweet melon juice or Egyptian rock sugar, mucilage from myrtle seeds, mucilage from fleawort seeds or oil-free rice mucilage, which all make the paper strong. And when the paper is burnished, it is like a mirror.

5. Fruit juice:
It is interesting to note that in the historical treatises, fruits such as melons and grapes are used as sizing material.

[36] Marshmallow is *Althaea officinalis*.

[37] Myrtle is *Myrtus communis*.

Juice of a sweet melon (ḵarboze):
This juice is mentioned as a good sizing material in *Jowhar-e Simi, Resāle dar Bayān-e Kāḡaḏ Morakkab va Ḥall-e Alvān, Golzār-e Ṣafā*, *Ḵaṭṭ va Morakkab* and *Resāle dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāḡaḏ-e Alvān*. Seyrafi mentions melon juice as the next-best material after starch and fish glue in *Golzār-e Ṣafā*:

دومین خربزه شیرین است   آبش آهار پی تزیین است.

… Second is sweet melon, its extract is size to adorn [paper].

After mentioning fleawort in his work *Ḵaṭṭ va Morakkab*, Hossin Aqili Rostamdari continues:

دیگر آنکه آب خربزه شیرین را بگیرند وکاغذ در آن کنند.

… and furthermore, they take the juice of a sweet melon (*ḵarboze*) and dip the paper in it for sizing.

Grape syrup (širey-e angur):
Grape syrup is mentioned as a sizing material in *Jowhar-e Simi*, *Resāle dar Bayān-e Kāḡaḏ Morakkab va Ḥall-e Alvān*, *Golzār-e Ṣafā* and *Ḵaṭṭ va Morakkab*. Seyrafi discusses grape syrup as the third material for sizing after starch and fish glue in his couplets on sizing materials in *Golzār-e Ṣafā*. The source *Resāle dar Bayān-e Kāḡaḏ Morakkab va Ḥall-e Alvān* mentions grape syrup as a sizing material and stresses the point that the grapes should be seedless. In *Ḵaṭṭ va Morakkab*, Hosseini Aqili Rostamdari maintains:

ودیگر آن که شیرهٔ انگور صاف کرده کاغذ بدان برکشند.

… and moreover, grape syrup is filtered and applied on paper as size.

6. Sugar syrup:
Besides different kinds of fruit juice, another glucose extract is also mentioned in some historical treatises: rock sugar. Egyptian rock-sugar solution (*āb-e nabāt-e meṣri*) is mentioned as a sizing material in *Jowhar-e Simi* and *Resāle dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāḡaḏ-e Alvān*. In the second of these sources, rock sugar is described along with other sizing materials mentioned above under the lemma 'mucilage of myrtle seeds'. It is to be applied on turquoise paper if the writer's pen is unable to move smoothly over the paper.

7. Mixed sizes
In *Resāle dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāḡaḏ-e Alvān*, sweet melon juice, myrtle extract and sugar syrup are described as materials to be added to plant mucilage in order to size paper. It says:

دیگر کاغذی که دارای رنگ پیروزه ناک باشد ومانع قلم باشد، تدبیر آن است
که به آب خربزه شیرین یا به آب نبات مصری یا به آبِ مورد وبا لعاب اسفیقول
ولعاب برنج بی روغن [بگذارد که] مجموع مقوی کاعذ است، وچون کاغذ
مهره زند مثلِ آینه نماید.

If a [piece of] paper has a deep turquoise colour and it is difficult to write on, the advice is to apply either sweet melon juice (*abi karboze*) or syrup of Egyptian rock sugar (*āb-e nabāt-e meṣri*) or myrtle extract (*āb-e mord*) with mucilage of fleawort seed (*espāghol*) and mucilage of oil-free cooked rice (*loʿāb-e berenj*). All these materials make paper strong, and if it is then burnished, it becomes smooth, just like a mirror.

It is possible there was no deliberate intention to introduce these sizing materials as mixed sizes since the above text is quite similar to *Jowhar-e Simi* and *Resāle dar Bayān-e Kāḡaḏ Morakkab va Ḥall-e Alvān*. Myrtle is mentioned as an extract (*āb-e mord*) in the second source, whereas in the first source, it is in the form of myrtle seeds (*toḵm-e mord*).

Animal base sizes

The next category is animal base sizes; animal glue obtained from fish is actually the only size found in the recipes in this category.

Fish glue (sirišum-e māhi):
This type of size is mentioned in *Jowhar-e Simi*, *Resāle dar Bayān-e Kāḡaḏ Morakkab va Ḥall-e Alvān*, *Golzār-e Ṣafā*, *Ḵaṭṭ va Morakkab* and *Resāle dar Bayān-e Tariqe-ye Sāḵtan-e Morakkab va Kāḡaḏ-e Alvān*, where its use is described as follows:

دیگر، قدری سریشم ماهی سفید را، سه شبانروز در آب پاک کند. وبعد از
آن به اتش، نرم گرم کند: در حال شود بیالاید، وکاغذ بدان برآرد وبا احتیاط
خشک کند ومهر زند وبنویسد.

> Soak a small amount of white-fish glue [*sirišum*] in water. Change the water and fill [the bowl] with fresh water for three days until it clears thoroughly. Heat the *sirišum* till it melts, then filter it with a piece of muslin cloth. Apply the fish glue on paper as sizing material. Let it dry in the sun carefully. They burnish [it] and then they write.

Ali Seyrafi describes the process as follows in his treatise *Golzār-e Ṣafā*:

صفت آهار سریشم ماهی

بعضی آهار بدین سان دادند　　فرقه ای رسم دگر بنهادند

از سریشم که بُوَد از ماهی　　اداده آهار به خاطر خواهی

که سریشم سه شبانروز به آب　　بنهادند که تا گشت لعاب

نرم کردند به آتش در کار　　چونکه شد نرم نمودند آهار

Fishglue as sizing

> Some size [paper] this way, others do it another way.
>
> *Sirišum*, which is from fish, gives adorable size.
>
> They leave *sirišum* in water for three days, until a mucilage is obtained.
>
> They make it turn smooth over a fire, when it is soft, they use it as size.

Jowhar-e Simi and *Resāle dar Bayān-e Kāġaḏ Morakkab va Ḥall-e Alvān* both specify that Caspian white fish should be used; this is found in the Caspian Sea and used to be very common in Iran.

Scientific analysis

In order to investigate the presence of sizing materials mentioned in historical literary references, the research was carried out in two stages. In the first of these, the sizing materials that were identified through historical analysis were prepared according to recipes for fingerprint data collection.[38] In the second stage, a series of sample analyses were conducted on the sizing materials of eleven historical Persian and Indian miniature paintings, illuminated manuscripts belonging to the Iran Bastan Museum and private collections from the sixteenth (Safawid) to nineteenth (Qajar) centuries.[39]

Materials and techniques

In the first stage, sizes were identified from our historical analysis. The materials were categorised as proteinaceous materials, which include animal glue, starch from rice or wheat, vegetable gum, mucilage from plants and seeds, types of fruit juice, and sugar syrup. Based on each category identified from the historical treatises, ingredients were collected from the local markets in Iran, viz. fish glue, rice and wheat starch, asphodel (*seriš*), fleawort seeds, cucumber seeds, melon seeds, marshmallow seeds, raw rice, grape syrup, melon syrup and sugar syrup. The sizings were prepared on the basis of the historical recipes. The duration of boiling, cooking and soaking the materials followed the recipes' specifications as much as possible. However, since the exact length of time was not specified in the recipes, the experiments needed to be repeated several times in order to get the consistency suitable for sizing. Handmade paper was selected from the conservation laboratory of the Iran Parliament (Congress) Library in Tehran and pieces of paper were divided into eleven groups for each sizing material under investigation. In each group, the pieces were divided into eight items of 2.5 cm^2 in size for the sample experiments. Each eight-item group was then divided into two sub-groups: four paper samples for sizing using a dipping technique and four other paper samples for sizing with a brush. In the case of the dipping technique, the paper samples were sized for four different lengths of time: 15, 30, 45 and 60 seconds. As for the brushing technique, the samples of paper were sized using a soft brush and one to four coats of size were applied. The paper samples were sized with the different materials identified in the recipes, left to dry at room temperature and then individually burnished with an agate stone on a flat wooden board.

In the second stage of the investigation, the large collection of sizing materials that was prepared on the basis of the historical recipes was compared with the spectra of original samples of paper. An analysis of the sizing materials used in the original samples was carried out using a staining method and Fourier transform infrared spectrometry (FTIR). The spectrometry was conducted with a Nicolet 510 P instrument equipped with a microscope attachment. Sample preparation

[38] Barkeshli 1997, 338, 420-422.

[39] Barkeshli, 2003, 2005.

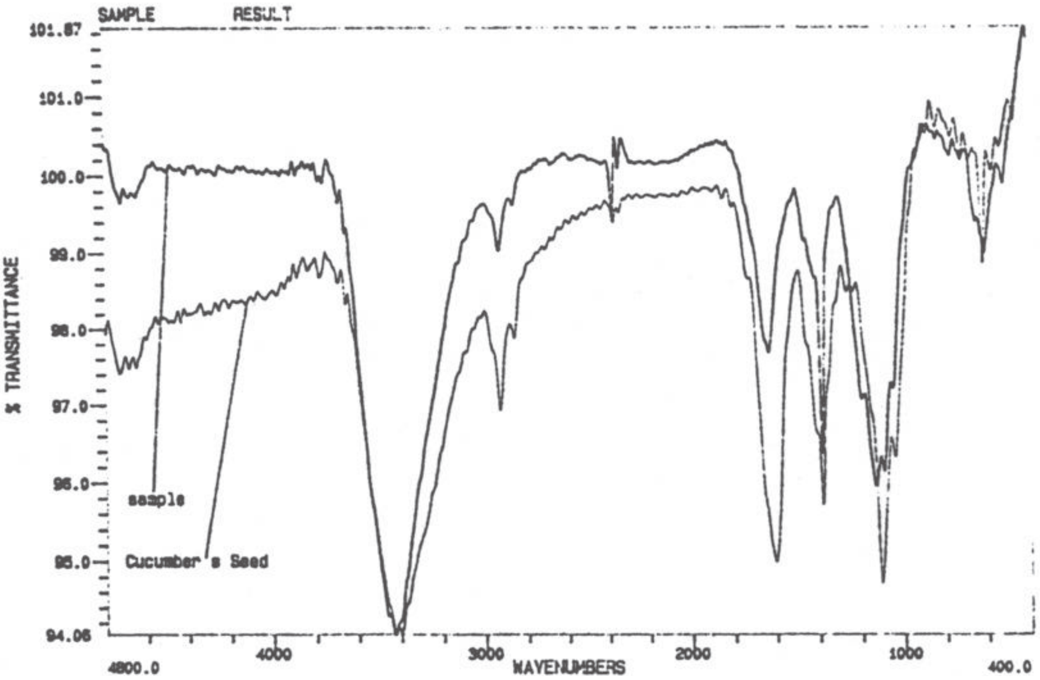


Fig. 9: The spectra of the sizing material of cucumber-seed mucilage (appendix B, table 1, checklist no. 18), Atiqi Collection, Tehran, Iran.

was done by mixing KBr and the unprepared sample (100:1). Identification of the materials in the samples was achieved by comparing the infrared spectrum with the reference spectra via recognition of specific bands.

Starch was detected on paper by the formation of the characteristic blue colour when a dilute aqueous solution of iodine-potassium iodide was added (see appendix B, table 2).

Results and discussion

The intention of preparing sizes based on historical recipes in the first phase was to collect data for a further analysis of original samples in order to identify the sizing material in stage two. However, our research in the first phase showed that each sizing material has its own particular properties and gives a certain effect to the paper. Further investigation is required here to collect more detailed data. Our visual and physical observations will hopefully be valuable for future research. We found that starch paste gives more body to paper and makes it firmer. In contrast, plant mucilage – especially from cucumber seed – gave the paper a lighter body and made it softer than the effect obtained using starch paste. Fruit and sugar syrups gave more shine to the surface of the paper we examined and made it stiffer compared to plant mucilage. As for vegetable and animal glue, they both added a lustre to the paper, but animal glue made the paper stiffer than vegetable glue did.

In terms of drying, the sizing material sometimes took a while to dry, depending on the duration of dipping and the number of layers of it that had been applied. The drying process was prolonged if the dipping or application process was repeated during the sizing procedure. It is interesting to note that cucumber-seed mucilage was what dried the fastest and paper sized with it was also easier to burnish than with other sizing materials.

In the second stage, our investigation showed that out of six categories of sizing materials recommended, mucilage from cucumber seeds was the most common sizing material on the paper samples identified by the FTIR method (see fig. 9). Out of the nine Persian miniature paintings and illuminated manuscripts examined, one of the sizes used was starch, seven were cucumber-seed mucilage and one was a mixture of tragacanth and cucumber seed. The reason why cucumber-seed mucilage was used more than other recommended sizes needs more investigation. According to our observations, paper sized with cucumber-seed mucilage gave better results in terms of aesthetics, giving the paper a lighter body and softer look. In terms of the sizing process, it dries faster and is easier to burnish. Moreover, I believe that there may well have been a reason behind it being recommended for sizing since cucumber-seed mucilage is less prone to attack by micro-organisms than starch, vegetable gum, animal glue, fruit extracts and sugar due to its nature and chemical composition. This assumption will be reported on in more detail in future.

Conclusion

There is a huge amount of information that can be found in historical treatises and recipes relating to the art of book-making in Iran. Most of these literary references are written in the form of poetry or mystical language. This paper has tried to show how it is possible for researchers to discover the reasons for authors choosing particular ingredients, which can be explained in terms of chemistry, and has presented some examples to show how scientists should look at such pieces of information. The research outlined here focused on introducing the author's theoretical and methodological approach by presenting three exemplary case studies.

To this end, twenty-four Persian treatises from the thirteenth to the nineteenth century were selected and their texts were studied in a bid to understand the techniques and ingredients explained and recommended by different masters in the art of calligraphy and bookmaking. Many of these texts are written in poetic language; the terms that were picked for them were used and understood in a specific way at the time of writing. The information we sought was collected and categorised in three areas: pigments used in illumination and painting, dyes used in paper-dyeing, and sizing materials used to prepare paper. From the huge amount of data collected in these three areas, three ingredients were selected as case studies to show just how modern science can contribute to an understanding of the reasons for using certain ingredients or certain techniques, or even using certain proportions of substances that were recommended.

The first case study presented in order to introduce our theoretical and methodological approach to material technology concerned the techniques used in conjunction with corrosive verdigris pigment, involving the addition of saffron to prevent the pigment from charring the paper. Our research showed that saffron is a very strong buffer and acts as an inhibitor, stopping the destructive effect that verdigris would otherwise have on paper.

The second case study presented was concerned with the art of paper-dyeing. In this part, we specifically focused on henna to see whether the ratio of 1:10 advised by master calligraphers had a factual reason behind it. Our research showed that henna has a fungicidal effect and can reduce the growth of *aspergillus flavus* fungus when used exactly in the advised ratio.

The third case study presented here focused on the sizing materials used in medieval and early modern Iran. Our study based on historical recipes showed that Iranians used a considerable range of materials in the sizing process. However, our scientific investigation revealed that only cucumber mucilage, starch and tragacanth gum were actually used in the original manuscripts. Moreover, our study showed that cucumber-seed mucilage was used more often than the other materials under investigation. The precise reason for this is still being investigated. However, I believe the rationale for this choice to be the notion that a microbiological attack on sized paper could be reduced due to the nature and chemical composition of cucumber-seed mucilage. This is a matter I am still investigating.

Our investigation has shown that art and applied science have been closely linked in the course of Iran's rich history. Moreover, we have been able to show that Iranian artists and masters of calligraphy had extensive knowledge of chemistry and the nature of the materials they employed in their work. They were also able to use mystical literary references as a means of passing on their knowledge to their pupils.

APPENDIX A:

1. Ali Seyrafi (tenth century Hijra/sixteenth century CE), *Golzār-e Ṣafā* (950 Hijra/1543/1544 CE) ('Garden of Joy'), Paris National Library (original), No. S.P. 1656; Tehran University Central Library (microfilm), No. 3637, Tehran, Iran.

2. Ali Hosseini, *Morakkab Sāzi va Jeld Sāzi* ('Ink-making and Binding'), part of the second, third, ninth, thirteenth and sixteenth chapters from *Kašf al-Ṣanāyeʿ* (attributed to the Qajar period), Tehran University Library copy, No. 2261, Tehran, Iran; Āyatollah Marʿaši Library copy, No. 4917, Qom, Iran.

3. Alkašfi, *Bayān al-Ṣanāʿat* ('Descriptions of Crafts'), (attributed to the Qajar period), personal library, A. M. Tākestānī, Tehran, Iran.

4. Anonymous, *Resāleh dar Bayān-e Kāğaḏ Morakkab va Ḥall-e Alvān* ('A Treatise about Paper, Ink and Dissolving Dyes'), (early or mid-ninth century Hijra/fifteenth century CE), Parliament Library copies, No. 1 and No. 4767 (1100 Hijra), Tehran, Iran.

5. Anonymous, *Ḥaliyyat al-Ketāb* ('Lawfulness of Writing'), (attributed to the Safawid period) in *Majmuʿah al-Ṣanāʾiʿ* (thirtieth chapter), Tehran University Central Library copy, No. 3875 (1005 Hijra/1596/1597 CE), Tehran, Iran; Āyatullah Marʿaši Library copy, No. 4917, Qom, Iran.

6. Anonymous, *Resāleh dar Bayān-e Tarīqe-ye Sāḵtan-e Morakkab va Kāğaḏ-e Alvān* ('A Treatise about the Technique of Preparing Coloured Paper and Inks'), (attributed to the Safawid period), Malek National Library copy, No. 2870, Tehran, Iran.

7. Anonymous, *Resāleh dar Bayān-e Rang Kardan-e Kāğaḏ* ('A Treatise about Dyeing Paper'), (probably thirteenth century Hijra/nineteenth century CE based on Timurid and Safawid information), Ḵānqah Neʿmatollāhi Library copy, No. 304, Tehran, Iran.

8. Anonymous, *Resāleh dar Maʿrefat-e Kāğaḏ-e Alvān* ('A Treatise about Coloured Paper'), (probably thirteenth century Hijra/nineteenth century CE based on Safawid and Timurid information), West Hamedan School Library copy, No. 5344, Hamedan, Iran.

9. Anonymous, *Resāleh Ṭalā va Noqreh va Ḥall Kardan-e ān* ('A Treatise on Gold and Silver and How to Dissolve Them'), (attributed to after the Safawid period), West Hamedan School Library copy, No. 5344, Hamedan, Iran.

10. Anonymous, *Resāleh dar Bayān-e Ḵaṭṭ va Morakkab va Kāğaḏ va Sāḵtan-e Ranghā* ('A Treatise about Calligraphy, Ink and Making Dyes'), (attributed to a later date, probably thirteenth century Hijra/nineteenth century CE based on Safawid and Timurid masters' recipes), Malek National Library copy, No. 4211, Tehran, Iran.

11. Al-Razi (c. 250–311 Hijra/c. 864–925 CE), *Ketāb al-Asrār* ('The Book of Secrets'), research and translation into Farsi by Dr. H. A. Sheybany, published by Tehran University, 1992, Tehran, Iran.

12. Bābā Shāh-e Isfahani (tenth century Hijra/sixteenth century CE), *Ādāb al-Mašq* ('Manners of Writing'), Malek National Library copy, No. 526 (1271 Hijra/1854/1855 CE); No. 2284 (1284 Hijra/1867/1868 CE), Tehran, Iran; Āstān Qods Rażavi Central Library copy, No. 130 (1292 Hijra/1875 CE), Mashhad, Iran.

13. Hossein Aqili Rostamdari (c. 930–984 Hijra/c. 1523-1577), *Ḵaṭṭ va Morakkab* ('Calligraphy and Ink'), Āstān Qods Rażavi, copy No. 2033, Mashhad, Iran; British Museum, copy No. 3648, London, UK; Tehran University Central Library copy (microfilm) No. 4021, Tehran, Iran.

14. Mir ʿAli Heravi (mid-ninth century–951 Hijramid-fifteenth century–1544 CE), *Medād al-Ḵoṭuṭ* ('Ink of Scripts'), (after 900 Hijra/beginning of the sixteenth century CE), Ostād Reżā Māyel Heravi Personal Library copy, Ms. H (early or mid-tenth century Hijra/early sixteenth century CE), Tehran, Iran.

15. Mohammad Ibn-e Dust Mohammad Boḵāri (976– ? Hijra/ 1568/1569–? CE), *Favāyed al-ḵoṭuṭ* ('Advantages of Scripts') (995 Hijra/1586 CE), Bukhara Library copy, no. (2617) 460 (331) (1222 Hijra/1806 CE), Bukhara, Uzbekistan.

16. Moḥammad Moʾmen Hosseini, *Toḥfe-ye Ḥakim-e Moʾmen* ('Present of Ḥakim-e Moʾmen'), (a treatise attributed to the Safawid period, tenth century Hijra/sixteenth century CE), Mahmoodi Publications, 1982, Tehran, Iran.

17. Simi Neyšapuri, *Jowhar-e Simi* ('Jewel of Simi'), (d. ninth century Hijra/fifteenth century CE), Bodleian Lib. Oxford, Ms. Or. 7465, (no date), fols. 38a–49b, (Meredith Owens, *Persian Illustrated Manuscripts*, London 1965, 92); Bodleian Lib. Oxford, Ms. 1241 (dated 1122 Hijra/1710 CE), fols. 344–356b (Sachau and Ethé, *Catalogue of the Persian, Turkish, Hindustani, and Pushtu Manuscripts in the Bodleian Library*, Oxford, 1889, vol. I, col. 762); in Porter (1994), *Painters, Paintings and Books*, App. 2.

18. Ṣādeq Bek Afšār (940–1017 Hijra/1533-1609 CE), *Qānun al-Ṣovar* ('Canons of Painting') (before 1010 Hijra/16001CE), Malek National Library copy, no. 6325; Tehran University Central Library copy, No. 7395, Tehran, Iran; in Porter (1994), *Painters, Paintings and Books*, Appendix 2.

19. Seyyed al-Sādāt Seyyed Yusef Hossein (second half of sixth century Hijra/twelfth century CE, Indian origin), *Resāle-ye Ṣaḥḥāfi* ('A Treatise on Bookbinding'), Persian, Madras Government Library copy (twelfth century Hijra/ seventeenth–eighteenth century CE), No. 437, Madras, India.

20. Solṭān Aḥmad Majnun Rafiqi Heravi (late ninth and early tenth century Hijra/late fifteenth and early sixteenth century CE), *Rasm al-ḵaṭṭ* (909 Hijra/1503 CE) ('Law of Writing'), Tehran University Central Library copy, No. 3522 (1056 Hijra/1646 CE), Tehran, Iran.

21. Solṭān Aḥmad Majnun Rafiqi Heravi (late ninth and early tenth century Hijra/late fifteenth and early sixteenth century CE), *Savād al-ḵaṭṭ* ('Blackness of letters') (after 930 Hijra/1523 CE), Malek National Library copy, No. 526 (1271 Hijra/1854/1855 /late fifteenth and early sixteenth century CE), Tehran, Iran.

22. Solṭān Aḥmad Majnun Rafiqi Heravi (late ninth and early tenth century Hijra/late fifteenth and early sixteenth century CE), *Ādāb al-Mašq* ('Manners of Writing'), Malek National Library copy, No. 4211 (1269 Hijra/1852/1853 CE), Tehran, Iran.

23. Solṭan Ali Mašhadi (841–926 Hijra/1437–1520 CE), *Ṣerāt al-Soṭur* (920 Hijra/1514 CE) ('Ink of Calligraphy'), Central Library of Tehran University copy, No. 4736 (1060 Hijra/1650 CE), Tehran, Iran; Malek National Library copy, No. 4765 (tenth century Hijra/sixteenth century CE); No. 4126, Tehran, Iran.

24. Teflisi, Habiš b. Ebrahim, *Bayān al-Ṣenāʿat*, ('Description of Crafts'), (d. 600 Hijra/1203 CE), Irağ Afšār (ed.) (1376/1377 Hijra/1957 CE), *Farhang-ī Irān-zamīn* (*FIZ = Revue trimestrielle des études iranologiques*), 5: 298–457.

APPENDIX B:

Table 1:
Sizing materials on selected paintings collected from the Iran Bastan Museum Collection and from private collections.

Origin	Owner	Object	Date	Check List No.	Sta	Cuc	Tra
IRAN	Iran Bastan Museum	M	16th c.	4555	sf		
	Atiqi Collection	I.M.	16th c.	11		f	f
	Atiqi Collection	I.M.	17th c.	12		f	
	Atiqi Collection	I.M.	17th c.	13		f	
	Atiqi Collection	I.M.	17th c.	14		f	
	Atiqi Collection	M	16th c.	15		f	
	Atiqi Collection	M	16th c.	16		f	
	Atiqi Collection	M	16th c.	18		f	
	Atiqi Collection	M	16th c.	19		f	
INDIA	Iran Bastan Museum	M	17th c.	4535	sf		
	Atiqi Collection	M	18th c.	17	sf		

Key to sizings
Sta = Starch
Cuc = Cucumber's Seeds
Tra = Tragacant (*katirā*)

The following sizing material were investigated without traces found: fish glue, gum arabic, ispagol, sweet melon, rice mucilage, grape syrup, sugar syrup, and myrtle juice.

Key to object
I.M. = Illuminated Manuscript
M = Miniature

Key to identification methods:
s = Determination of starch by staining the paper with iodinepotassium iodide solution.
f = Identification of sizing materials in the sample is obtained by comparing the infra red spectrum with reference spectra or by reorganizing specific bands.

Table 2:
Pigments collected from traditionally produced art objects and paintings in private collections and from selected paintings from the Iran Bastan Museum Collection.

Origin	Owner	Object	Date	Check list no	White			Red		
					Ldw	Cha	Tiw	Ver	Rld	Org R
Iran	Iran Bastan Museum	M	16^{th} c.	4555	f			m	m	
	Atiqi Collection	I.M.	16^{th} c.	11	m				m	
	Atiqi Collection	I.M.	17^{th} c.	12	m			m	m	
	Atiqi Collection	I.M.	17^{th} c.	13	m				m	
	Atiqi Collection	I.M.	17^{th} c.	14	m				m	
	Atiqi Collection	M	16^{th} c.	15					m	
	Atiqi Collection	M	17^{th} c.	16	f			m	m	
	Atiqi Collection	M	16^{th} c.	18	mfc			cm	cm	f
	Atiqi Collection	M	16^{th} c.	19	fc			c		m
	Tavoosi Collection	Pb	16^{th} c.	21	f				c	cf
	Bekhradi Collection	Pb	19^{th} c.	31		f		c	cm	fc
	Saneie Collection	P.P.	19^{th} c.	41			fc	mc	cm	cm
	Takestani Collection	P.P.	20^{th} c.	51		f		xm	xm	mf
India	Iran Bastan Museum	M	17^{th} c.	4535	mf			mc	mc	mf
	Atiqi Collection	M	17^{th} c.	17						f

Key to Subjects
I.M. = Illuminated Manuscript
M = Miniature
Pb = Paintbox
P.P. = Paint Palette

Key to Pigments
Br = Brown Earth
Car = Carbon
Cha = Chalk
Cog = Copper Green
Gld = Gold
Idg = Indigo
Ind = Indian Yellow
Ldw = Lead White
Mal = Malachite
Org R = Organic Red
Orp = Orpiment
Rd = Red Earth
Rld = Red Lead
Rub = Rubarb
Tiw = Tin White
Ver = Vermilion
Ult = Ultramarine

Key to Identification Methods
c = Elements identified and solubility.

f = Identification of sizing materials in the sample is obtained by comparing the infra red spectrum with reference spectra or by reorganizing specific bands.

m = Appearance by transmitted light on a microscopic slide observed by polarized light microscopy.

u = Fluoresces in long-wave ultraviolet light.

x = Crystalline structure by x-ray powder diffraction.

*Saffron was mixed with verdigris (Cog).

Pigments											
Yellow			Green		Blue		Earths		Black	Metallic	Others
Orp	Ind	Rub	Cog	Mal	Ult	Idg	Rd	Br	Car	Gld	
m		f			fc	m	m	mc	m	m	
					fm				m	m	
					m					m	
m			mfc		m			m	m		
					m				m	m	
									m		
		mf	c		f			m	m	m	
m		f	mfc		mcf			c			Saffron
c			f		cf			c			Saffron
c		f	cf		f	f	c	c			Saffron
c		mf	mfc		fm		c	c			Barium Sulphate
mc		mf			mcf	mcf	mc	mc			Prussian Blue
mx		mf		fxc	mxf		mc	mx	m		Barium Sulphate
m	mfu		fc		fm	m		mc	m	m	Langite
	u		fc		f				m		Green Atachamite

REFERENCES

Barkeshli, Mandana (1996), 'The Preparation of Copper Based Green Pigment (Zangar) In Iran As Mentioned In Medieval Persian Texts', *Conservation of Cultural Property in India* 29: 231-236.

—— (1997), *Scientific comparative study of materials used in Persian and Indian miniature paintings* (Ph.D. dissertation, National Museum Institute, New Delhi, India).

—— (1998), 'Using Traditional Japanese Paper-Making in the Restoration of a Thirteenth-Century Iranian Manuscript of the Holy Quran', in *Spiderwebs and Wallpapers: International Applications of the Japanese Tradition in Paper Conservation*, Proceedings of the International Seminar on Japanese Paper Conservation, 14–20 December 1998 ([Kyoto]: The Foundation for Cultural Heritage), 98–112.

—— (1999), 'The Presence of Saffron in Persian Miniature Paintings and its Preventive Role for the Destructive Effect of Verdigris', *ICOM Committee for Conservation Journal*, 12th Triennial Meeting, Lyon, France, Volume II, pp. 489–494.

——, (2002), 'Islamic and Islamic Art: The Islamic Arts Museum Malaysia-Volume 1, Islamic Arts Museum Malaysia Publications, Kuala Lumpur, Malaysia, 50–57.

——, Ataie, Ghasem H. (2002), '2H Stability of Saffron Used in Verdigris as an Inhibitor in Persian Miniature Paintings', *Restaurato. International Journal for the Preservation of Library and Archival Material*, 23: 154–164.

—— (2003) 'Historical and Scientific Analysis on Sizing Material Used in Iranian Manuscripts and Miniature Paintings', *The Book and Paper Group Annual*, 22: 9–16.

——, Ataie, Ghasem, Alimohammadi, Mahmood (2008a), 'Historical and Scientific Analysis of Materials Used in Iranian Paper Dyeing Process with Special Reference to Henna', *ICOM Committee for Conservation (ICOM-CC) Preprints* (15th Triennial Meeting, Delhi, India), 255–263.

—— (2008b), 'Historical and Scientific Analysis of Iranian Illuminated Manuscripts and Miniature Paintings', in *Contributions to the Symposium on the Care and Conservation of Middle Eastern Manuscripts, The University of Melbourne, Australia, 26–28 November 2007*, (The University of Melbourne: Minuteman Press), 74–88.

—— (2009), Traditional Preventive Measures Used in Persian Manuscripts and Miniature Paintings: Historical and Scientific Analysis of Iranian Illuminated Manuscripts and Miniature Painting', *Golestan-e Honar: Quarterly on the History of Iranian Art and Architecture*, 5.2 (=16): 8–22.

Barkeshli, Mandana (2011), 'Integration of Science and Art in the Muslim Artistic Tradition', in *2nd International Conference on Islamic Science in the Contemporary World, 2011, Kuala Lumpur*; *IIUM Repository* (http://irep.iium.edu.my/13085/).

Bloom. Jonathan M. (2001), *Paper before Print. The History and Impact of Paper in the Islamic World* (London: Yale University Press).

Canby, Sheila R. (1993), *Persian Painting* (London: British Museum).

Cennini, Cennino (1954), *The Craftsman's Handbook* (New York).

Hawthorne, John G.,and Cyril Stanley Smith (1961), *On Divers Arts. The Treatise of Theophilus. Translated from the Medieval Latin with Introduction and Notes* (Chicago: University Press).

Hinz, Walther (1970), *Islamische Masse und Gewichte, umgerechnet ins metrische System* (Leiden – Köln: Brill).

Hunter, Dard (1957), *Papermaking. The History and Technique of an Ancient Craft* (London: The Cresset Press).

Kühn, H. (1993), 'Verdigris and Copper Resinate', in A. Roy (ed.), *Artists' Pigments. A Handbook of Their History and Characteristics*, vol. 2 (Oxford University Press), 131–158.

Malezadeh, F. (1968), 'Antimicrobial Acitivity of Lawsonia Inermis', *Applied Microbiology*, 16.4: 663–664.

Malekzadeh, F., and Shabestari, P. (1989), 'Therapeutic and *In Vitro* Activity of an Extract from *Lawsonia Inermis*', *Journal of Sciences, Islamic Republic of Iran*, 1: 7–12.

Māyel Heravi, Najib (1993), *Ketāb-ārāʾi dar tamaddon-e eslāmi* (*The Art of Bibliopegy in Islamic Civilization*) (Mashad: Āstān-i Quds-i Raḍawī).

Porter, Yves (1994), *Painters, Paintings and Books. An Essay on Indo-Persian Technical Literature, 12–19th Centuries* (New Delhi: Manohar, Centre for Human Sciences).

Soker, Murat, Devecioglu, C., Haspolat, K., Kikicl, B., Dogru, O. (2000), 'Henna Induced Acute Haemolysis in a G6PD-Deficient Patient. A Case Report', *International Pediatrics*, 15.2: 114–116.

Soudi, M. R. (1988), *The Fungicidal Effects of Phenols and Quinines and their Medical Use against Dermatophites* (PhD dissertation, University of Tehran, Iran).

Wulff, Hans E. (1976), *The Traditional Crafts of Persia. Their Development Technology and Influence of Eastern and Western Civilizations*, (2nd ed.; Cambridge, Mass.: M.I.T. Press).

Zekrgoo, Amir H. (2008). 'Sufi Samāʿ and the Cosmology of Mandala', *Al-Shajarah: Journal of the International Institute of Islamic Thought and Civilization (ISTAC)*, 13.2: 179–209.

Contributors

Mandana Barkeshli
International Islamic University Malaysia
Faculty of Architecture and Environmental Design (KAED)
Department of Applied Arts & Design
P.O. Box 10
50728 Kuala Lumpur, Malaysia

mandana.barkeshli@gmail.com

Martin Delhey
Universität Hamburg
Centre for the Study of Manuscript Cultures
Sonderforschungsbereich 950
Manuskriptkulturen in Asien, Afrika und Europa
Warburgstr. 26
20354 Hamburg, Germany

martin.delhey@uni-hamburg.de

Max Fölster
Universität Hamburg
Centre for the Study of Manuscript Cultures
Sonderforschungsbereich 950
Manuskriptkulturen in Asien, Afrika und Europa
Warburgstr. 26
20354 Hamburg, Germany

max.fölster@uni-hamburg.de

Jost Gippert
Johann Wolfgang Goethe-Universität
Institut für Empirische Sprachwissenschaft
Senckenberganlage 31 (Juridicum)
60325 Frankfurt am Main, Germany

gippert@em.uni-frankfurt.de

Eva M. Maschke
Universität Hamburg
Institut für Historische Musikwissenschaft
Neue Rabenstr. 13
20354 Hamburg, Germany

eva.maschke@uni-hamburg.de

Tilman Seidensticker
Friedrich-Schiller-Universität Jena
Institut für Sprachen und Kulturen des Vorderen Orients
Löbdergraben 24a
07737 Jena, Germany

tilman.seidensticker@uni-jena.de

Bounleuth Sengsoulin
Universität Hamburg
Asien-Afrika-Institut
BMBF-Projekt Dynamiken von Religion in Südostasien (DORISEA)
Edmund-Siemers-Allee 1, Flügel Ost
20146 Hamburg, Germany

sengsulinb@yahoo.com

Thies Staack
Universität Heidelberg
SFB 933 Materiale Textkulturen
Institut für Sinologie
Akademiestraße 4–8
69117 Heidelberg, Germany

thies.staack@zo.uni-heidelberg.de

Eva Wilden
Universität Hamburg
Centre for the Study of Manuscript Cultures
NETamil
Warburgstr. 26
20354 Hamburg, Germany

École française d'Extrême-Orient Pondichéry
16-19 rue Dumas
605 001 Pondicherry, India

wilden.eva@gmail.com

http://www.manuscript-cultures.uni-hamburg.de/mom_e.html

This section of our website presents manuscripts from various parts of the world. Written in a clear and easily understandable way, these articles cover different manuscripts each month. Many of the overviews are written by members of CSMC and PhD students from its graduate school, while others are the work of international experts sharing the results of their research. Each *manuscript of the month* illustrates aspects of particular manuscript cultures by discussing specific cases. The articles show how fruitful it can be for researchers not only to regard manuscripts as containers of content, but to see them in a social and cultural perspective as well, from the production stage to later usage.

Various editors have worked on this section so far: Frederike-Wiebke Daub (2012), Antonella Brita and Karsten Helmholz (special issue, Oct 2012), Meike Zimmermann (Jan to Sept 2013) and Max Jakob Fölster (Oct 2013 to Feb 2015), Fridericke Conrad (Mar 2015 to June 2015) and Andreas Janke (ever since July 2015).

If you have any questions or suggestions about this section, the editor would be pleased to hear from you: andreas.janke [at] uni-hamburg.de

Publishing Information

Editors
Prof Dr Michael Friedrich
Universität Hamburg
Asien-Afrika-Institut
Edmund-Siemers-Allee 1/ Flügel Ost
D-20146 Hamburg
Tel. No.: +49 (0)40 42838 7127
Fax No.: +49 (0)40 42838 4899
michael.friedrich@uni-hamburg.de

Prof Dr Jörg Quenzer
Universität Hamburg
Asien-Afrika-Institut
Edmund-Siemers-Allee 1/ Flügel Ost
D-20146 Hamburg
Tel. No.: +49 40 42838 - 7203

Fax No.: +49 40 42838 - 6200
joerg.quenzer@uni-hamburg.de

www.manuscript-cultures.uni-hamburg.de

Editorial Office
Dr Irina Wandrey
Universität Hamburg
Sonderforschungsbereich 950
'Manuskriptkulturen in Asien, Afrika und Europa'
Warburgstraße 26
D-20354 Hamburg
Tel. No.: +49 (0)40 42838 9420
Fax No.: +49 (0)40 42838 4899
irina.wandrey@uni-hamburg.de

Layout
Astrid Kajsa Nylander

Cover
Photo: Manuscript 01222; National Central Library (國家圖書館), Taipei, Taiwan. Title: Xiangtai shushu kanzheng Jiujing sanzhuan yange li 相臺書塾刊正九經三傳沿革例. Copy by Yue Jun 岳浚 (1295-1377) of critical apparatus, comparing different editions of the Confucian classics, originally compiled by Yue Ke 岳珂 (1183-1243). Seal imprints from the top downwards: 1. Wu Chao 吳焯 (1676-1733) 2. National Central Library 3. Chen Xilian 陈希濂 (late 18th, early 19th century) 4. not identified 5. Wu Chao 吳焯 (1676-1733) 6. Wu Chao 吳焯 (1676-1733) 7. Chen Qun 陈群 (1890-1945) 8. Wu Quan 吳銓 (18th century)

Translations and Copy-editing
Carl Carter, Amper Translation Service

Print
AZ Druck und Datentechnik GmbH, Kempten
Printed in Germany

ISSN 1867–9617

ISSN 1867–9617

“Manuskriptkulturen in Asien, Afrika und Europa”
Universität Hamburg
Warburgstraße 26
D-20354 Hamburg

www.manuscript-cultures.uni-hamburg.de