

SAFEGUARDING AFRICA'S LITERARY HERITAGE: TIMBUKTU RARE MANUSCRIPTS PROJECT

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Good morning ladies and gentlemen, it gives me great pleasure to speak to you here today about the *Timbuktu Rare Manuscripts Project*. As you are aware, this Project was created as a result of a bi-lateral agreement between the governments of Mali and South Africa in 2003; this Project is both a Presidential Special Project and the first NEPAD Cultural Project. As a conservator involved with the Project, I like to share with you today some of our experiences, as well as some of what we have learned about the manuscripts of Timbuktu.

1. Introduction: the place of Timbuktu¹

I would like to first set the context for this presentation: that is the place of Timbuktu – it is a city of legend and myth, as much as of actual history. The city of Timbuktu is located in modern-day West African country of Mali close to the river Niger² at its northern-most bend, on the fringes of the Sahara desert. It is thought that Timbuktu was founded some time around 1100 CE (Bovill 1958:88; Hunwick 2003:1; Saad 1983:4). The fortuitous placement of Timbuktu at the crossing of the Niger River and a major caravan route that continues to Marrakech (Morocco) in the north and swings towards the modern-day state of Sudan across the Sahara desert; as well as one of the major routes for pilgrimage to Mecca is surely a large part of the reason for its success as a centre of commerce – which brought with it both wealth and culture (Bovill 1958:105; De Villiers & Hirtle 2003:212; Saad 1983:6).

By the mid-15th century Timbuktu enjoyed wide renown as a major center of Islamic learning (Hunwick 2003:2). However, it is important to note that Timbuktu as a center of learning was not unique to West Africa, or the wider Sudanic African region. Timbuktu's reputation as a centre of learning needs to be viewed in the context of an established tradition of Islamic learning throughout the whole of the West African and Sudanic region;³ as well as that of pan-Islamia - with whom Timbuktu maintained strong trading and intellectual ties (Saad 1983:4, 17). However, it is important to note that despite the reputation Timbuktu enjoys today, it was never the only city of scholars in the region; rather it shared its social traditions of learning with other cities and mercantile communities in the region (Saad 1983:18).

1.1 Timbuktu's famed manuscripts, scholars and libraries

Part of the legend of Timbuktu's manuscripts is due to the reputed vast number of manuscripts⁴ to be found in Timbuktu; literature on the subject ascribe anything between one to five million manuscripts in Timbuktu and its immediate

¹ A number of legends exist as to how Timbuktu came by its name. One relates that the original market was presided over by an elderly woman of considerable ferocity. *Tin'Buktu* in the Tamashek language means "Place of the old woman" (De Villiers & Hirtle 2003:212).

² The river Niger derived its name from the Tamashek phrase "*gher n-gheren*" meaning "river among rivers" (De Villiers & Hirtle 2003:112).

³ For more on the literary heritage of the region, particularly efforts in conserving Mauritania's manuscript heritage, see Werner.

⁴ The designation of "manuscript" is applied to texts that are hand written; while "books" are printed.

environs. Timbuktu's most celebrated scholar, Ahmed Baba (1564-1627 CE) claimed that his personal library contained some 1 600 volumes (Hunwick 2003:3), and that his was the smallest library within his family. His family, the Aqit, were the leading scholarly family during the 16th century in Timbuktu. The 16th century traveller Leo Africanus, noted that books were the most valued among the various articles of trade and wrote that: "... hither are brought divers manuscripts or written books out of Barbary, which are sold for more money than any other merchandise." (De Villiers & Hirtle 2003:212; Saad 1983:88). In addition scholars returning from pilgrimage further augmented Timbuktu's manuscript collections over the centuries and study in other centres of Islamic learning, often copied by their own hands. Within Timbuktu there existed an active copying and scribal industry (Hunwick 2003:3) that ensured a continual production of manuscripts for the consumption of scholars, students and literate citizens.

The easy availability of manuscripts in Timbuktu was an important factor in the integration of Timbuktu into the wider universe of pan-Islamic scholarship (Saad 1983:79) – and this remains the case even now as scholars from far travel to Timbuktu to study the manuscript collections there. Extensive private libraries are known to have existed from an early date in Timbuktu; and that these libraries were open to consultation and borrowing by interested scholars. Scholars of Islamic culture have noted the fact that extensive private and public collections have been a feature since the earliest days of Islam throughout Islamic lands, a situation which contrasts starkly with the dire picture that contemporaneous Europe presented. Currently there are some twenty private manuscript libraries in Timbuktu and approximately one hundred other libraries in the immediate environs of Timbuktu (Hunwick 2003:4).

1.2 Scholarship as a social tradition in Timbuktu⁵

The presence of vast numbers of manuscripts in Timbuktu is no real surprise; given the high esteem scholarship was held within Islam. Teaching was (and is) viewed as both an obligation and an honour. Throughout the pan-Islamic world ambitious men were able to acquire status and build a career as teacher, scholar, courtier or jurist after undergoing extensive learning apprenticeships in the Islamic sciences. Historians have defined Timbuktu as a centre of scholarship informed by a tradition of the where status and influence could readily be derived through the acquisition of Islamic learning (Saad 1983:22) – and a factor which impacted very strongly on the city of Timbuktu's social stratification (Saad 1983:4) and sense of identity.⁶ The activity of teaching and scholarship seems to have formed a sort of social adhesive serving to cement ties between families (Saad 1983:70). Ties forged through the student/ teacher relationship also appear to have resulted in added ties through matrimony and facilitated joint ventures in commerce. The apprenticeship of a prospective scholar of Islam has parallels to that of an apprentice craftsman. That is, that a general understanding seems to have

⁵ The following breakdown was obtained from Saad (1983:70), see Berkey, Sabai, and Robinson for more information regarding Islamic scholarship. The Islamic sciences which lie at the core of the Islamic educational process throughout pan-Islamia can be divided into two categories. The first (and most important) consists of four branches of closely related subject matter, though of varying sources: Quranic exegesis (*tafsir*), traditions of the Prophet Muhammad (*hadith*), jurisprudence (*fiqh*) and the sources of law (*usu'l*). These four branches share a preoccupation with the governance of society and the conduct of individuals along ideal Muslim lines; and range from ethical standards and direct prescriptions to legal principles and precise laws. The second category of Islamic sciences includes: the fields of grammar (*nahw*), literary style and rhetoric (*balagha*), logic (*mantiq*) and doctrinal theology (*tawhid*). Of these, only grammar was considered to form an essential part of a scholar's education. The remainder (as well as astronomy, history mathematics and medicine) may be included to further refine the scholar's learned capabilities or to earn him a greater versatility in juristic deductions and in Islamic doctrine.

⁶ Saad (1983:22) further elaborates that scholars in this tradition were the leaders of the urban community of Timbuktu; and served as its representatives and as regulators of its public affairs. In their combined roles as notables and learned elite, the scholars could marshal considerable resources and mobilise wide sectors of the city's population. Naturally, this gave them a dominant voice in the internal affairs of their community. Furthermore, scholars and a common subscription to the tradition of Islamic learning seem to have played a city-wide integrative role which transcended the diverse ethnicity of the city's inhabitants (Saad 1983:33).

existed between the two parties that in exchange for the knowledge imparted, a student would amongst other things, assist his master in whatever may have been his source of income.

2. Understanding the Islamic manuscript tradition: knowledge transmission and scholarship as social tradition

My fellow *Timbuktu Rare Manuscripts Project* Conservation Team members and I, as conservators, felt from the outset that it is important to gain an understanding of the context in which the manuscripts were created, were/are used, archived or discarded. As conservators, our professional code of ethics requires that we strive for the most complete understanding possible of any given item's history and circumstances in order to make treatment decisions that are as informed as possible. In this part of Africa we are probably more familiar with the records of our mutual colonial and post-colonial histories - compared to West and North Africa with its long Islamic history that is reflected in the composition of its recorded history. The research of pan-Islamic manuscript culture and specifically that found in Africa will fulfil another of the *Timbuktu Rare Manuscripts Project's* expected outcomes, that of capacity building amongst South African conservators.

Any given book or manuscript is always more than just the textual information that it holds - it is a living historical entity, capable of revealing much more information than just that contained in the text and/or illustrations. The study of "the book" as a socio-historical entity is a complex study of many interrelated factors: the origins, production (that is, materials, formats, script, typography, and illustration), content, use and role of books in culture, education and society in general (Atiyeh 1995:xiii).

Modern scholarship's present understanding of the ancient world (as well as of relatively more recent times) tends to be overwhelmingly dependant on texts (Bowman and Woolf 1994:1); furthermore, use of these texts (be they literary or documentary in nature) depends on the assumptions with we make about how they were originally produced, read and understood.

2.1. Islamic knowledge transmission as a context of Islamic manuscript tradition

"Seek knowledge, even as far away as China" is a famous injunction attributed to the Prophet Mohammed. This injunction reflects a principle generally held in the Islamic world: that the pursuit of knowledge (*'ilm*), and specifically religious knowledge, is a worthy activity to be encouraged (Berkey 1992:3). Islam's high estimation of the value of knowledge translated into broad-based social and cultural support for education and study.

However, the place of the manuscript in Islamic scholarship and knowledge transmission needs to be briefly qualified here. During the research I have undertaken for the Project has created a more complex picture of a society in which writing as a record was viewed with a certain wariness (Robinson 2003:172), and especially so when it came to the writing of religious texts. However, for the most part Islam is considered to be unique in valuing both orality and writing in the transmission of knowledge (Cook; 1997:437, 489; Berkey 1992:21, 43). The equal importance of orality in knowledge transmission is a factor that shaped the nature of Islamic learning culture and had enormous social consequences.⁷ This

⁷ Berkey (1992:43) writes that the overwhelming preference for transmitting knowledge was through oral transmission in Islamic knowledge transmission. Oral transmission was viewed as the only truly legitimate means of transmitting knowledge is deeply embedded within Islamic academia (Berkey 1992:24). Berkey (1992:18, 24) notes that this bias was present from Islam's earliest days and has survived to the present; giving Islamic learning a measure of informality by not binding it to a system of formal qualifications obtained from formal institutions of higher learning - allowing for a vitality and flexibility in the study of the Islamic sciences. Therefore, institutions of learning played no actual role in Islamic education; though schools existed as buildings and endowments Islamic law allows no corporate identity to any particular institution. As a consequence, no formal degree system was ever established (Berkey 1992:16). Rather, it was the student's personal connection with his teacher(s) (or *shaykh*) was of great importance. A person's education was judged not on where it was obtained, but from whom - as students built their own careers on the reputation of their teachers (Berkey 1992:23).

has a certain resonance for us this part of Africa, where orality and literacy have traditionally each been consigned to polarised sides of a debate about Africa's intellectual heritage and future.

In closing this section, I would like to briefly mention the scholar and educator Ibn Jamaa, as an illustration of the regard for manuscripts within Islamic civilisation (and sentiment probably not that unfamiliar to librarians today). Ibn Jamaa in his writings found it necessary to remonstrate with students who used their books as pillows, as fans, or to squash bedbugs with; Ibn Jamaa further wrote elsewhere that a person who did not keep a book "in his sleeve" could have little wisdom in his heart (Berkey 1992:24).

2.3 Islamic manuscript culture: manuscripts, libraries, and bibliophiles

It is generally acknowledged that the widespread availability of paper made it that much easier to produce one of the important vehicles for transmitting of knowledge in Islamic society - manuscripts. Islamic written culture, particularly during the time of the middle ages was by all accounts incomparably more brilliant than anything known in contemporary Europe, until the invention of printing with movable type in the 15th century (Bloom 2001:91). Despite the absence of printing in Islamic lands the spread of written knowledge is considered comparable (if not superior) to the spread of written culture in China following the adoption of large scale printing in the 10th century.

Not all writing was religious in nature (Bloom 2001:111) any subject from legal and administrative matters to poetry, philosophy, geography, navigation, mathematics, medicine – cookbooks apparently enjoyed considerable popularity as a literary genre (Bloom 2001:112). Bloom further (2001:113) notes: "Islamic society fostered such a respect for book learning and scholarship that rulers and the wealthy opened their doors to the learned and lavished large sums of money on them. Caliphs, governors, courtiers, gentlemen-scholars and physicians sponsored new books as well as translations of Christian and Jewish works written in Syriac and Greek. ... People wrote books simply because they wanted to or because patrons or rulers suggested they do so. Writers expected to be paid with honours, presents and often cash. Others, such as secretaries and judges in state chanceries and offices, wrote books in their spare time."

Numbers of books and manuscripts ascribed to Islamic manuscript production are so immense that they are often, at best, accused of being profound exaggerations. A frequently quoted example is the library of the Umayyad caliph and bibliophile al-Hakam II (Umayyad caliph, r. 961 – 76 CE) was reputed to have contained some 400 000 volumes: however, only one known volume from his library is known to have survived (Bloom 2001:87). Further anecdotes (Robinson 2003:7) only serve to reinforce a sense of now vanished collections of considerable numbers:

- the historian al-Waqidi (d. 823 CE) is said to have left no fewer than 600 trunks of books each requiring two men to hoist on his death;
- the essayist al-Jahiz (d. 868 CE) was famously reported to have been found crushed to death by his books;
- a nameless 10th century courtier is said to have declined a post on account of the difficulty of moving his library which is said to have included 400 camel loads of books - for the theology titles alone.

Most scholars of Islam do agree that nothing in the contemporary Christian/European world could compare with the "bibliomania" found throughout pan-Islamia (Bloom 2001:116; Robinson 2003:7), for example:

- in 841 CE the monastery library of St Gall (in modern-day Switzerland) held some 400 volumes;
- in the early part of the twelfth century CE the monastery of Bobbio (in modern-day Italy) held some 650 volumes;
- the richest library in Christendom was reputed to have been the library of the Sorbonne (in Paris, France) held a total of 2 066 volumes (with 300 listed as lost).

Compared to the library of al-Hakam II (Umayyad caliph, r. 961 – 76 CE) in Cordoba (in modern-day Spain) which is said to have contained 400 000 books; the library's catalogue alone is reputed to have accounted for 44 volumes of 20 folios each. Granted that this figure is probably a somewhat inflated statistic, but bear in mind that even at one-tenth of this number, it would still have been larger than any library in contemporary Christendom (Bloom 2001:120).

2.4 Destruction and loss of manuscripts

The surviving numbers of Islamic manuscripts, set against the numbers of manuscripts recorded in historic documentation is a silent testimony to the incredible loss and attrition suffered by Islamic manuscripts over the centuries. A salutary tale is that of the fate of al-Hakam II's 400 000 volume-strong library that after his death: the collection was variously destroyed and dispersed by his successor (Bloom 2001:121). A further example that is considered to be not untypical of the fate of many collections: during the 11th century, Cairo's city's libraries were systematically plundered by soldiers and bureaucrats who had gone unpaid by their rulers and paymasters; historical accounts record that 18 000 volumes of science and 2 400 illuminated Korans were taken from the caliph's palace in 1068 CE (Robinson 2003:31).

Dramatic stories of cataclysmic violence against manuscripts aside, manuscripts are lost to posterity for a variety of reasons one of these is due to the medium itself, well made paper is very durable having an estimated lifespan of some 500 years. But paper also has its limits. Extreme unfavourable climatic conditions and the depredations of pests, amongst others can conspire against their survival. Human agency also bears a large responsibility for the loss of manuscripts: human agency due to theft, misplacement, accidental or intentional destruction is a large factor in determining the ultimate fate of many manuscripts (and their surviving fragments).

3. The materials of the Islamic manuscript tradition: paper as a legacy of Islamic culture

The histories of paper and of Islam are closely intertwined. Not only did paper served as a medium of cultural, religious and scholarly transmission of Islamic culture. Most of all it is thanks to Islamic culture, trade and military victories that spread paper from its Chinese origins – across the Asian continent, Near East, North Africa and finally to Europe (via the Iberian Peninsula) within a mere two centuries.⁸ A vestige of the pivotal role played by Islamic civilization in the spread of paper making is preserved in how paper is still counted today in bulk quantities called reams (Bloom 2001:9).⁹

The introduction of paper and papermaking across the Islamic lands in the 9th and 10th centuries is generally acknowledged by scholars to have been a remarkable historical and technological achievement that transformed society in its wake (Atiyeh 1995:xiv; al-Hassan & Hill 1992:190; Bloom 2001:47).¹⁰ By all accounts the Islamic paper making industry

⁸ Paper is thought to have been invented some time in China during the latter part of the 1st century BCE (Bloom 2001:1, 32). Imperial household records award a patent to an Imperial courtier Tzai Lun around 105 CE. Europe only acquired the technology of paper manufacture by the 11th or 12th centuries CE (Bloom 2001:1). The first paper mill in Europe was established at Fabriano, Italy in 1276 CE; another century passed before a paper mill was established at Nuremberg, Germany in 1390 CE (al-Hassan & Hill 1992:191). The unification of Western Asia under Islam in the 8th century meant that the Islamic encounter with paper in Central Asia, resulted in its rapid spread Samarqand to Iran, Iraq, Syria and North Africa to Spain within a mere two centuries; compared to the approximately five centuries it had taken to spread from China to Samarqand (al-Hassan & Hill 1992:191; Bloom 2001:47; Hrbek 1988:5).

⁹ Today, a ream has 500 sheets. Originally a ream contained some 480 sheets, or enough to make up 20 quires (that is, booklets of 24 pages each). The modern English word "ream" derived in the first instance from the Arabic *rizma*, meaning "bale or bundle". From the Arabic word *rizma*: derived the Spanish *resma* (*risma* in Italian, *ries* in German, *ris* in Danish), and eventually the Old French *rayme* (al-Hassan & Hill 1992:192; Bloom 2001:9; Loveday 2001:53).

¹⁰ There is an interesting historical anecdote from the much travelled Ibn Battuta (1304 – 1368 CE) who visited Egypt in 1327, illustrating the use of paper as being associated with people of "quality" which Bloom cites in his book (2001:81) on the role of Islam in the history of paper. Ibn Battuta relates that no person could enter the city of Damietta (in modern-day Egypt) without the governor's seal - persons of "repute" had the seal stamped on a piece of paper which they showed to the gate keepers - all others had the seal stamped on their forearms.

was widespread, large and vibrant, sadly time does not permit me to delve deeply into this interesting aspect of Islamic manuscript culture. Documents, books and other forms of graphic notation (all of which represented distinctly new ways of thinking) spread through Islamic society the increased availability of paper encouraged the transition in medieval Islamic times from a memory-based to a text-based culture.

Scholars generally ascribe the reason for the widespread adoption of paper throughout Islamic lands to the bureaucratic necessity of documenting state functions (Bloom 2001:89,91; Robinson 2003:20): for example, the levying and administration of taxes, paying of the army, building of public works, and the like. This aspect of Islamic society grew in size and complexity during the 7th and 8th centuries – a voracious appetite for paper may also have served to ultimately undermine the Islamic paper making industry (Robinson 2003:20). By the mid-14th century Maghribi and Egyptian chancelleries had begun to use European papers; Islamic lands eventually became net importers of the European-manufactured product (Bosch 1981:32).¹¹ By the 16th century paper manufacturing had largely disappeared from Islamic lands, with the exception of Turkey, Iran and India. The eclipse of the Islamic paper making industry has been so thorough that any memory of it has also been eclipsed, it is only in more recent times that scholarship has been able to recover the Islamic contribution to the history and spread of paper (Bloom 2001:9).

This is not to say that this change was either smooth or uncontested. Muslims were troubled about using paper manufactured by non-Muslims. Some papers even bore images (in the form of watermarks) that some Muslims, found objectionable (Bloom 2001:86).¹² European paper manufacturers, with an eye to satisfying their clientele began to incorporate symbols with significance to Muslims as watermarks (Bosch 1981:32): a particular example is the so-called “three crescents paper” made in Venice. This class of watermarks became increasingly common in papers of the 17th – 18th centuries. There is no evidence to suggest that figurative or epigraphical watermarks were used in traditional Islamic papermaking. The lack of watermarks in Islamic manufactured paper is generally ascribed to the technical differences in the paper making process, particularly the greater flexibility of the Islamic papermaking screen (Bosch 1981:30).

3.1 Watermarks in Timbuktu: high hopes, dénouement and an unexpected use

Before continuing, I would just like to briefly explain what watermarks are. Watermarks are generally defined as a distinguishing letter, design, or symbol incorporated into a paper during the manufacturing process, these marks a most

¹¹Italian paper makers had begun manufacturing paper from the 13th century CE and were soon exporting it to North Africa and Western Asia Bloom (2001:9) credits the success of the Italian paper making industry to a greater access to water power and a further development of Italian technology that enabled the development of a stronger and cheaper product than was locally available in many Islamic lands. Soon paper makers in Islamic lands were unable to compete with European exports. The oldest paper mill in Europe, named after the town in which it is located in Italy, Fabriano, is still in operation today. The huge importance of paper making as an industry in Islamic lands was little more than a mere whisper by the 19th century, as the art of papermaking had died out centuries before (Bloom 2001:53). There now remains virtually no reliable evidence, apart from the surviving sheets of paper themselves, that paper was actually ever produced in Islamic lands (Bloom 2001:53).

¹² In Tlemcen (now in western Algeria) a noted juriconsult Abu Abdallah ibn Marzuq delivered a long fatwa (that is, a legal decision) on 21 August 1409. It was titled *Tarqir al-dalil al-wadiah al-malum ala jawaz al-naskh fi kaghid al-rum* (or, Decision...concerning the permissibility of writing on paper made by Christians). Bloom (2001:87) writes that this historical document is indicative of the fact that Italian paper had now entirely supplanted local production by the beginning of the fifteenth century: according to the document paper had once been made in Tlemcen, Fez (Morocco) and other Muslim regions of Spain, but now no longer was. Pious Muslims were thus forced to write on European paper containing watermarks they found offensive as they included representations of European Christian iconography such as crosses, or that of living beings. Ibn-Mazuq's decision framed the problem in terms of ritual purity and subsequently argued that writing in Arabic over the idolatrous designs rendered them invisible. Therefore, in writing God's name (and message) on such papers, replaced falsehood with truth – a situation he held to be analogous to the transforming a Christian church into a mosque.

easily viewed as a translucent impression in the paper when held up to a light source.¹³ The earliest watermarks appear in European-manufactured paper from the 13th century.¹⁴ In addition to the watermark, a countermark may appear on the same sheet of paper on the opposite half of the sheet to the watermark itself. The countermark is a generally smaller or subsidiary mark; in most cases the countermark appears to be the initials or name of the papermaker, countermarks began to appear in paper during the 17th century.

Theories abound as to why watermarks originated and how their incorporation into a sheet of paper became an established practise in Europe. There are the mundane and self-evident explanations ascribing the origins of watermarks to that of a trade- or manufacturer's mark (that also acted as a form of guarantee of manufactured quality). Watermarks are widely thought to have acted as indicators of quality, weight and size of a sheet of paper, and possibly as identifying marks/guides for illiterate craftsmen/traders. Yet, other theories, of the origins of watermarks rival that of the *Da Vinci Code*: some theories hold that watermark symbols were the covert communication of forbidden and heretical religious groups to which the craftsmen belonged.

Our team was excited and intrigued to find European manufactured paper bearing watermarks in Timbuktu. At the time we were vaguely aware that watermarks have been the focus of a considerable amount of scholarship by bibliographic scholars. Thus the possibility of being able to trace the origin of the paper became a very real possibility for our team in 2003; along with the possibility of understanding the mechanisms that resulted in the paper/manuscripts ultimately ending up in Timbuktu. However, subsequent research has deflated our initial excited expectations.¹⁵ Watermarks as a field of bibliographic research is problematic, and while the field has great potential, this potential is yet to be realised. This is not to say that the watermarks held in the manuscripts in Timbuktu do not hold the potential for contributing to the knowledge of the paper and manuscript trade in Africa and to the understanding of watermark history.

During our 2004-fieldwork trip to Timbuktu we found that the watermarks we encountered in manuscripts in Timbuktu to be of an unexpected use. In two of the manuscripts we examined in detail we noticed that the watermarks ran across the (probable) spine fold of a manuscript's folios at right angles to the right-hand edge of the individual leaves. By placing the two halves of the watermark image(s) together we could attempt a tentative reconstruction of the manuscript's folded order. As a result we could conclude that it is probable that many of Timbuktu's manuscripts originally consisted of folded sections (or "quires"), rather than the piles of single pages (or "leaves") that we initially encountered. This finding was further confirmed by the discovery of the last three intact folios deep within the text block of one of these manuscripts. Yet another piece of the puzzle of Timbuktu's manuscripts had been put in place (with many others remaining to be found and put in place).

3.2 The Islamic manuscript structure

¹³ The entry for *watermark* in the *Bookbinding and conservation of books: a dictionary of descriptive terminology* further clarifies: "...true watermarks are a localized modification of the formation and opacity of the paper while it is still wet, so that the marks can be seen in the finished sheet of paper when viewed by transmitted light." [Available: <http://palimpsest.stanford.edu> (accessed 9 December 2004)].

¹⁴ Watermarks appear to have been a largely European phenomenon. No real equivalent has as yet been found in Islamic manufactured paper. Only in Islamic papers of Spanish origin have something approximating a watermark been found: a zigzag indentation running from the top-bottom of the sheet, or a series of overlapping diagonal crosses. It is surmised that these marks were made with a stylus or brush while the sheet of newly-made paper was still wet. These marks are not considered to be true watermarks (Bosch 1981:30; Loveday 2001:53).

¹⁵ Despite all these caveats concerning the usefulness of watermarks to bibliographic research, literature on the subject of watermarks state that the continued research of watermarks to has much to offer. Bibliographic scholars continue to devote much space in their books on the topic of watermarks. The sense of things is a field that has much scope for further study, partly due to the challenges presented by the physical nature and quirks of the watermarks and paper.

The study of the Islamic manuscript structure¹⁶ has received much attention by conservators, bibliographic scholars and art historians. This is all the more remarkable for the paucity of historical Islamic records regarding the technical aspects of constructing (or binding) the Islamic manuscript .

The book structure traditionally associated with Islam is that of the codex (Szirmai 2000:51).¹⁷ At the time of Islam's founding, the codex had been around for some five centuries (Bosch 1981:23). The codex seems to have been introduced to Arabia by Ethiopian craftsmen; in the hands of Arabian craftsmen the structure underwent a gradual simplification, but its embellishment soon surpassed anything seen (Szirmai 2000:51). The traditional understanding of Islamic books is that the text blocks are normally sewn and subsequently cased into a cover (Bosch 1981:46). Early Islamic bookbinders adopted the link stitch sewing techniques used in the early Coptic and related binding traditions of the Middle East and Ethiopia.¹⁸

Islamic bindings have a distinctive appearance, particularly when closed. The cover forms a wrapper around the book. Only the top (head) and bottom (tail) text edges of the book are visible. A particular feature of the Islamic manuscript cover is the use of a pentagonal (or envelope) foreedge flap that results in the books being almost completely enclosed (Bosch 1981:55). In some cases this flap may be secured with a cord or tie that wraps around the entire volume. This tie may be attached to either the apex of the pentagonal foreedge flap or the spine (or in some cases both).

3.3 The manuscript structure encountered in Timbuktu

Any definitive statements about the general structure of the binding structures found in Timbuktu are as yet not possible. The SA Conservation Team has only seen a small fraction of manuscripts from the collections at the Ahmed Baba Center in Timbuktu. We have had a chance to carefully examine only a handful of bindings at this stage; this is not to say that some generalized observations are not possible - and I would like to share these with you today.

- manuscripts probably consisted of folded quires, mostly unsewn

Our initial encounters with the manuscripts lead us to wonder if they consisted of a number of single sheet pages (leaves). However, following our encounter with two manuscripts during our 2004-fieldwork visit we have been able to establish that originally some manuscripts original did consist of gatherings (or quires) of unsewn folios. These folios have separated at the spine fold as a result of the effects of time, wear and tear and the very dry climate of Timbuktu.

Interestingly, we have also encountered an isolated example within a manuscript that bore evidence of having been sewn.

- " wrapper-like" manuscript covers

¹⁶ The Arabic script reads from right to left, resulting in a book-format that is the reverse of what Roman alphabet-based literates are used to – opening at what would be considered the “back” of the book (Bloom 2001:111).

¹⁷ The codex book structure consists of rectangular sheets of paper or parchment folded into gatherings (sections) that are sewn together and attached to protective covers. The individual leaves may be written either before or after compilation (Bosch 1981:23).

¹⁸ The structure, materials and techniques that are considered to be the archetypical Islamic binding have “remained remarkably constant throughout the Islamic world over time...The folios were collated and assembled in gatherings, which were normally sewn into a single body using a link-stitch... that picks up the preceding gathering ... [typically there were two sewing stations per binding, irrespective of the size of the binding]... [T]he coloured [sewing] linen or silk thread was soften too thin for its function and [frequently] broke. After sewing the spine was lined, usually with linen... [which] projected beyond the spine ... on either side to form hinges by which the body was attached to the cover boards. After the [text block] edges were trimmed, end bands were sewn to the head [top] and tail [bottom] of the spine...The typical Islamic book cover, of leather made rigid with pasteboard, had foreedge ... envelope [or pentagonal] flaps. Sometimes flexible covers of skin, paper or cloth were used...corners were not systematically fixed: sometimes the mitres were lapped; occasionally butted...Islamic bindings often had doublures (linings) of paper, leather or fabric pasted onto the inner face of the upper and lower boards and overlapping the adjacent flyleaf” (Turner 1996:356). See BOSCH, G ... et al. *Islamic bindings and bookmaking: exhibition catalogue*. (pp 24 following), has a detailed breakdown of how the traditionally conceived Islamic book structure was put together. Also: SZIRMAI, JA. *The archaeology of the medieval book binding* (pp51 – 61); and GREENFIELD, J. *ABC of bookbinding*. (pp 80,83, 88).

The covers of the manuscripts we have encountered are not adhered to the text block in any way, (compared to the traditional conception of Islamic bindings in literature on the subject) – serving rather as a wrapper to the loose leaves of the manuscript. Nor is there any evidence that the text blocks were ever cased into their covers; bearing in mind that many of the covers are significantly worn and/or show signs of extensive renovations. Many of the covers bear evidence of repairs (in leather) of the original cover. In some cases we have observed that the stiffening for the cover is of some sort of thick (and stiff hide) with a very deep grain patterning; as well as paste board composed of layers of older written paper and textile. Leather covers are decorated with a blind tooling that appears to be of a freehand nature. Our observations of local craftsmen have lead us to think that possibly a wooden tool was used to score the leather, rather than the use of hot stamping tools.

- widespread evidence of ties to hold the manuscript together

A distinctive feature that we have encountered in Timbuktu is the widespread evidence of the former presence of ties to wrap around the cover of the book once it is closed. The substance, method of wrapping and nature of the ties can now only be guessed at, but it seems a variety of strips, plaits and rolled/twisted leather strips may have been used. The placement of the ties seem to be on the spine or foredge of the cover, or on the apex of the pentagonal foredge flap (where in some cases any eyelet made in the cover's corner has been observed, either as a place to anchor a tie or to tread a tie through.) I have as yet not encountered anything in the literature on Islamic binding about such ties.

- pentagonal foredge flaps: a diversity of formats shapes and placements

The pentagonal foredge flap that is so closely associated with Islamic manuscript bindings is a consistent feature of the bindings that we have thus far encountered. What initially surprised me though, was the universal practise of tucking this flap under the upper cover so that it is hidden once the book is closed. In the literature, though I have discovered a single mention of this as a general practise (Bosch 1981:55). Bosch, though, notes that depictions of the book in Islamic art almost invariably show the flap exposed, as it had become an important signifier in Islamic painting convention. Literature on Islamic manuscript binding structure invariably indicates that the foredge flap does close over the front board. Though certainly from what we have observed the practise of closing the flap under the front board is a very strong local practise. Combined with the evidence of the, now, detached ties; it is probable that originally the foredge flaps did close over the manuscript cover, as there is no physical way to both tuck the foredge flap into a cover and wrap up the manuscript with ties. However, once once the ties were lost – the foredge flap was tucked into the manuscript to keep the contents secure – recalling another technical term for the foredge flap – that of “envelope flap”.

- Conservation implications of the closing position of the foredge flap

The placement of the foredge flap may initially appear to be little more than a pedantic argument – but it has a very real consequence for the conservation of the manuscripts. The practise of tucking the foredge flap into the manuscript cover is extremely damaging to the text block, and also seems to be a cause in the manuscript's distortion.

In being aware of the history and context of Islamic manuscripts, aided evidence of the closing placement of the foredge flap outside of the manuscript cover will allow us to make certain recommendations regarding future practise and should conservation replacement covers be constructed for manuscripts (which I will discuss in more detail below).

In concluding this section, I would like to say that in Timbuktu we have an exciting opportunity. This opportunity may not be that in the clichéd role of bibliophilic treasure hunter uncovering uniquely wonderful and singular treasures of amazing illumination and fine binding - though these do exist. But to uncover an even rarer treasure, that is, an understanding of the types of manuscripts used by everyday literate persons. There is a principle within bibliographic

studies that states that the books that have survived are the rare treasures, precisely because they are more valued they enjoy a greater consideration by the preceding generations. It is the more everyday, mundane and unappreciated volumes used by the average person that tends not to survive because of the fact that they are undervalued documents of everyday life. Therefore, field of bibliographic studies understands that it is skewed towards a better understanding of the rare, costly and treasured volumes because they form the greater part of the surviving codexical history that modern scholars can access. Here in Timbuktu we have a rare opportunity to discover a treasure of the everyday working manuscripts used by the everyday scholar and aspirant scholar – while assisting in the preservation of an immense literary treasure indigenous to Africa.

4. Challenges in the preservation and conservation of Timbuktu's Islamic manuscript heritage: dealing with the adverse climatic and environmental conditions

A large part of the current conservation and preservation efforts in Timbuktu, by both the South African conservators and the Malian trainee-conservators, is focused on dealing with the consequences of the adverse climatic and environmental effects that conspire against the continued survival of its many manuscripts.

The most important overwhelming factor is the extremely dry and hot climate (De Villiers & Hirtle 2003:85). Timbuktu's temperatures average: 25° - 35° Celsius in the winter months; and in summer can reach 50° Celsius.¹⁹ One of the first realisations we came to was that as far as possible we needed to remove the manuscripts from immediate contact with their hostile environment. One of the strategies we have used is to house the boxes in protective enclosures – that is boxes made of high quality archival materials. Protective enclosures are a universally practised strategy in preserving the contents of libraries and archives around the world. Enclosures isolate their contents from hostile environmental factors, as well as protecting the contents from further damage through accident or disaster.

- lack of humidity – embrittled paper

One of the most striking things about Timbuktu (and the region) is the very low level of humidity, (measured at an average of about 23 % during our 2004 visit). From a preservation point of view, a relative humidity level of 40% and below is considered to be too dry; and will result in the desiccation of materials kept in such conditions. The combination of heat and low humidity levels cause manuscript materials, especially paper to become extremely brittle and prone to mechanical damage.

One of the first things I have noticed about the paper in Timbuktu is how light it is, this does not mean that the paper is very thin or lightweight - it means that there is little moisture in the paper. The paper in Timbuktu can be described in technical terms as "embrittled": the lack of humidity probably being the largest cause of the brittle state of the paper. The brittle nature of the paper causes the edges of the pages to chip away with even the most gentle of handling. The damaged manuscript covers impact on the pages, causing the page's edges to be folded back, eventually snapping away from the rest of the sheet.

- periods of high humidity

¹⁹ Another factor in the area's arid climates are the very hot and dry winds that blow in the Sahara desert and strip what little moisture remains from the air; the most well known (and worst) of these are the winds that blow in November, the *harmattan* winds. Humidity has been tracked falling from 80% to 10% within hours (De Villiers & Hirtle 2003:81). Tests performed in Chad (in Bouroukou) measured an evaporation rate of more than 304 inches per year, the highest recorded as yet. In summer the relative humidity is so low that it can be life threatening – at 2.5%. This is compared to the stated "norm" of 30 percent (De Villiers & Hirtle 2003:85). The Sahara's inhabitants have apparently become so accustomed to water's absence that some have come to look upon flowing water with suspicion; due in part to the occasional ferocious flooding that can accompany sudden downpours. So much so that a distinction is made between rainwater, described as *meyi*, or dead; and well water which is described as *hai*, or life giving. (De Villiers & Hirtle 2003:107).

An infrequent climatic phenomenon occurs when rain does fall: the rain evaporates as it forms or upon hitting the ground due to the great heat (De Villiers & Hirtle 2003:108). This phenomenon creates an instant spell of unusually high humidity. The constant changes in temperature and humidity levels cause paper and leather to continually expand and contract in response to the climatic changes. Thus it is not only the very high temperatures and lack of humidity, but also the occasional drastic climatic changes that adversely affect the materials of which the manuscripts are composed. It is not a dramatic stretch to say that just about the worst of all conditions possible for the survival of manuscript materials occur in Timbuktu.

- water damage

Despite the fact that the region has a dry and arid climate, most of the manuscripts I have examined have clear and extensive evidence of water damage: tidemarks, loss of substance and texture as well as the more common ink and pigment staining.

- insect pests

There are insect pests such as termites that can and have caused immense amount of damage to manuscripts. I have seen quite a few manuscripts with once square manuscript text block now sculpted into hills and valleys of paper, creating an almost three-dimensional landscaped effect. It seems that the survival of manuscripts is something of a triumph over considerable climatic adversity as just about all of the worst of conditions for preserving manuscripts are to be found in Timbuktu.²⁰

- dust and sand

Dust and sand is everywhere in Timbuktu, even in your food. Dust and sand are harmful to manuscript materials as the particles abrade the surface of inks, paper and leather. Many of the manuscript covers are so scuffed and worn that we have difficulty in discerning any cover decoration; and pages invariably feel extremely gritty when handled. One of our initial challenges was in stressing the importance of good housekeeping in a place where sand is a ubiquitous phenomenon, beyond remarking upon or sweeping it away. Dry (or mechanical) cleaning to remove surface dirt on manuscripts prior to protective enclosing now forms a very important tool in the arsenal of the conservation effort in Timbuktu.

While much of our initial conservation and preservation efforts were (and will remain) focused on reacting to the extreme climatic conditions found in Timbuktu – we have now begun to focus on more proactive conservation efforts in dealing with the particular needs of the manuscript collection we are working with.

- reassessing standard conservation practises

The extremes of Timbuktu's climate have required a rethinking of many of the standard practises and preservation orthodoxies that my colleagues and I have worked with since our student days. In a few instances we have had to work to reverse well-intentioned actions on the part of earlier conservation efforts in Timbuktu. A particular example was the use of white gloves by staff of the Ahmed-Baba Centre trained to clean manuscripts as part of another conservation orientated

²⁰ Neil Harris (2004) writes that only recently have bibliographers begun to appreciate that the survival of books is a major issue within the discipline that requires much more study and analysis - especially as the greatest threat to the survival of books are humans. The important question is thus, not to try and understand why so many books have disappeared – rather to understand how it is that the few that have survived have managed to do so. The bibliographer OM Willard (circa 1940) concluded that as a general rule, the survival of any given book/manuscripts is in an inverse ratio to the number of copies printed. The idea being that that the higher numbers of print runs were aimed at a wider audience, these mass produced items were made of less robust materials and were thus less looked after or valued.

effort, unrelated to the South African Project, some years earlier.²¹ The shortcomings of the unconsidered use of white gloves was made even more evident in Timbuktu: the gloves were dirty, and had become worn through, and did not allow for the delicate/careful handling of the very fragile paper – worst of all the gloves has become a sort-of sand paper as the glove's weave had picked up sand, abrading the surface of the very manuscripts they were intended to protect. The practise of wearing white gloves was discontinued in 2003 on the strong advise of your team during our first fieldwork trip to Timbuktu in favour of handling with regularly washed hands.

- separating severely damaged manuscript covers from their former contents

Most of the manuscripts we have encountered thus far have covers that are so damaged that they cause actual harm to their contents. This factor necessitated a decision to separate the two parts. I would like to strongly emphasise that this was not a decision taken lightly and was preceded by much debate and soul searching. Wherever possible all attempts are made to keep items together, both for respecting the sake of the object's historical and physical integrity as a security measure in loosing at least one of the two parts.

However, I must stress that these covers are never discarded. Once again our professional code of ethics guides us in formulating our treatment decisions – nothing is discarded. Instead, the cover will be kept with the conserved manuscript cover (and its newly made conservation replacement cover) in a protective box.

- creating and making a conservation replacement cover

The removal of the existing cover required the designing and making of a replacement cover for the manuscripts contents (or text block). Malian trainee –conservators and ourselves were able to devise an excellent compromise for the new conservation replacement cover(s) which took into account both the conservation/preservation needs of the manuscript's text block, but respected the Islamic manuscript structure and aesthetic. Speaking for myself, it was a wonderful experience to see the research into Islamic manuscript history; binding and conservation come together in this cover. This particular approach has worked so well for the needs of the manuscripts in Timbuktu to which we have applied this method; that we are using this as a standard with which to approach the most severely damaged manuscripts in Timbuktu.

We took the shape and aesthetic of the traditional Islamic manuscript cover, covered in leather, but lined with an archival card; two additional flaps of archival card were introduced at the top and bottom of the cover to enclose the top (head) and bottom (tail) text edges. Thus this hybrid version of the traditional conservation 4-flap folder/portfolio fully encloses the text of the manuscript when the cover is closed. The manuscript, its conservation replacement cover and original cover are then housed within a clamshell box.

- manuscript fragments

The collections in Timbuktu consist of a large portion of manuscript fragments. These fragments have their particular needs when it comes to preservation-orientated storage. We have begun to devise protective enclosures that can house these fragments of varying size and format. The enclosures need to be completely enclosing to remove the items from their contact with the environment, while retaining accessibility for the reader.

- display and exhibitions

The global excitement over the manuscripts of Timbuktu has created a desire to view them. It is thus imperative that the manuscripts and manuscript fragments are displayed in such a way as to not damage them further. One aspect of the manuscript's safeguarding during exhibition is proper exhibition furniture. Working with the Malian trainee-conservators we

²¹ The use of white gloves as a universal practise in conversation practise has been for some time a subject of quiet discussion and a considerable amount of ambivalence amongst conservators in *certain* areas of conservation specialisation. Only recently has anything begun to appear in print; for a very good description of the issue, see Baker and Silverman (available on the IFLA website).

have begun to experiment with designs for display furniture that is flexible, will take into account the particularities of the manuscript structure and use local materials such as leather for covering the blocks and wedges.

- understanding the indigenous crafts traditions; and supporting local economy

An important aspect of our project is to understand the indigenous craft skills and traditions related to manuscript making. The South African Conservation Team has worked with the Malian trainee conservators to gain and understanding, the to document the process of leather tanning and curing in Mali. There are a number of reasons for this: the recording of- and building on knowledge of indigenous African manuscript production will be aided; and understanding what indigenous skill and craft traditions can be integrated with conservation treatments and practise. Furthermore, leather is plentiful in Mali, if supplies for the conservation purposes can be sourced and purchased locally not only makes practical sense – but supports the local economy in a meaningful way.

5. Conclusion

Ladies and gentlemen I would like to thank you for your time, and to grant me one further indulgence, that of quoting myself from a previous paper on the Timbuktu Rare Manuscript Project (but if find myself unable to better that which I have previously written):

“In concluding this paper I am going to end on somewhat of a personal note. If there is one thing I will take from this project it will be the partnerships forged between the South African and Malian teams during this Project. I as a South African have been immensely privileged to be able to assist in the preservation of an immensely important part of the world’s literary heritage, here in Africa. To assist in a precedent setting project, which is amongst other things the first cultural Nepal project, where Africans are helping fellow Africans to preserve their cultural history is an immense privilege.

“I have been benefited not only in being able to transmit my knowledge and skills to fellow Malian conservators, but in learning about the leatherworking traditions of Malian leather craftsmen who comprise members of the Malian conservator-trainee team. I have encountered an astounding manuscript making tradition very different, yet very similar to what I have been used to working with here in my part of Africa - Southern Africa.

“While paper remains paper and leather remains leather pretty much the same wherever one finds it I have also been challenged by the extremities of climatic conditions encountered in Timbuktu to devise solutions for obstacles to the continued survival the these manuscripts. The extreme climate has forced the entire Conservation Team to rethink many of the operating assumptions with which we have so comfortably been working with since our student days – and we are better conservators for it.

“When the manuscripts of Timbuktu are mentioned, it is almost invariably in the same breath as references to the amazing scholarly and literary heritage contained in those manuscripts. However, there is an immensely interesting and exciting bibliographic heritage that remains to be unlocked. Possibly one of the most exciting things about the bibliographic heritage of Timbuktu is the possibility of unlocking some of the past histories of the relatively ordinary students and scholars who used these manuscripts.

“Unlocking the bibliographic secrets of the manuscripts of Timbuktu will help in building an understanding of the economics of the paper, scribal, manuscript/book-making and other related trades. The watermarks of the Timbuktu manuscripts too may well have a bigger role to play than that which I am currently able to report. A closer analysis of the inks and pigments, cover decoration, interior decoration remain part of an exiting future in teasing out an understanding of Africa’s own book/manuscript historiography, in order to give it a place in the sun that it so richly deserves. ”

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