

**COMST TEAM 5: CONSERVATION AND PRESERVATION**

**WORKSHOP 2: Preservation of Middle Eastern Manuscripts - Restoration and digitization process: what should be done first?**

**DATE:** 4th April 2011  
**VENUE:** University Library, University of Leiden, Leiden, Netherlands  
**CONVENORS:** Stéphane Ipert, Centre de Conservation du Livre (FR)  
Karin Scheper, Library of Leiden University (NL)

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## **SUMMARY**

The second open workshop of COMSt team 5 (third team meeting, counting the first informal roundtable in London in March 2010 and the first public workshop in December 2010 in Istanbul) was convened on 4 April 2011 at Leiden University, the primary aim being to discuss the assignment of priorities in the processes of physical restoration and digitization of manuscripts.

Firstly, the history of the Leiden University Library and its various ongoing projects were introduced by Ch. Keijsper, Head of the Special Collection, M.-O. Scalliet, Curator of the South East-Asian Collections (who drew particular attention to the Snouck Collection), and M. van den Boogert, who spoke about the Brill digitization project involving some of the Leiden Library Oriental manuscript collections (Raphelengius, Scaliger, and Golius). Other projects presented during the workshop included the digitization of the Hellenic Parliament Library (A. Revithi, with details on the digitization techniques used), the conservation census of the Arabic manuscripts in the National Library of Florence (S. Fani; s. project description above), and the conservation and digitization efforts at Uppsala University Library (A. Larsson). Among the projects being conducted in part in the Oriental countries one should highlight the activities of the LIGATUS team at the St. Catherine monastery of Sinai (N. Pickwood, A. Velios, who presented on condition survey and its results) and a project of digitization and preservation of manuscripts in Ethiopia (E. Balicka-Witakowska, who gave insights into the challenges of digitization field work). While Ethiopian manuscripts are digitized within the country in order to make them available to Western scholars, the University of Saint-Esprit de Kaslik in Lebanon conducts large-scale digitization efforts with the opposite goal: making manuscripts preserved in the West available in electronic form in the University library (J. Moukarzel).

After sharing these and other experiences, the discussion moved onto the assignment of chronological priority between material conservation and digitization. The necessity of material analysis prior to digitization was highlighted by I. Rabin, whereas K. Scheper described cases where urgent conservation and restoration measures had to be taken before manuscripts could be digitized. N. Sarris reflected on the nature of changes incurred by the restoration process that may influence digitization results; he also contemplated the possibilities offered by digital photography for future manuscript restoration.

Part of the workshop was devoted to the discussion of the technical norms to be applied in manuscript digitization (M. Mayer) and the relevant legal and ethical aspects (Z. Genadry, S. Ipert). As to the

former, adherence to the ISO standards was advised, and recommendations were made to refer to the recent *AIC Guide to Digital Photography and Conservation Documentation*. With regard to the latter topic, it was highlighted that, while most Oriental countries do not yet have laws protecting intellectual property rights, it is important to guarantee fair use when digitising manuscripts that are owned by persons or institutions in the Orient. This is the case even though digitized images are not originals, and would therefore not fall under intellectual property laws.

## **DESCRIPTION OF SCIENTIFIC CONTENT AND OF DISCUSSION**

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The objective of the second open workshop of COMSt Team 5 was to address and analyze the central issues of preservation, conservation and digitization for research and education purposes. These issues were examined from different perspectives and using different approaches, in order to determine the differences in perception of the problems and consequently finding solutions for the preservation (conservation and digitization) of Middle Eastern manuscripts in accordance with the particular preservation circumstances of the manuscript collections kept both in the East and the West, both in private libraries and institutions, preserved both for museum and for accessibility reasons, etc.

While the manuscripts are witnesses of cultural heritage that belongs to all or most of all and thus must be accessible to a broad (scholarly) public, they are fragile unique works, and the libraries are responsible for their preservation and conservation. Digitization is a valid response to this challenge as it both secures the documents and makes their contents easily available.

The recent acceleration in the growth of digital collections and the diversity of their formats offer, however, an additional challenge for the libraries and archives in handling and preserving manuscripts. Documents held in library collections are part of the universal heritage and as such should be saved carefully. Some of them are rare or valuable. They have very different physical characteristics, both in terms of size and presentation as well as mechanical strength and state of conservation. This diversity has an impact on the entire digitization process (choice of material, resolution, formats, indexing rules, etc.) and thus must be considered at the conception of each digitization project.

Another important aspect is the interaction between the digitization and the restoration. On the one hand, the approach may be to digitize the manuscripts in their current state. However, the digitization should not become a new variable in the causes of deterioration of the manuscripts. The manipulations due to the operation of digitization contain mechanical risks for manuscripts. Thus, it may be essential that they be restored before the digitization as the noticed deteriorations can be additionally stressed during the digitization process. A possibility would be a double digitization procedure: the first aiming to the reproduction of the manuscript in its actual situation, and the second after its restoration, so that the maximum of information about the manuscript would be kept, in its condition before and after restoration.

The aim of the workshop was thus to share experiences, define best practices in digitization and restoration, and discuss the technical standards to be followed to ensure the best preservation of documents. The workshop focused on (1) Document selection and the decision-making process, (2) Digitization and restoration process and (3) Legal and ethical issues.

### **§1 Documents selection and the decision-making process**

Several papers dealt with collecting information about the manuscript before the digitization, which is a preliminary step essential for any relevant project. It is only on the basis of these details that it can be

decided which manuscript must be digitized first, which needs an appropriate restoration before, which handling is required etc.

Two condition surveys were presented, one for an Occidental library (Florence, S. Fani) and one for an Oriental one (St. Catherine, A. Velios), and several particular case studies (e.g., Leiden, M.O. Scalliet, M. van den Boogert, and K. Scheper; Hellenic Parliament Library, A. Revithi).

The LIGATUS project used for the digitization project of the manuscripts belonging to the St. Catherine's Monastery in Sinai, Egypt, a condition survey template (presented by A. Velios, *Condition surveys for digitization: St. Catherine's Library, Wellcome Trust Library*) composed of 10 pages to collect information (each page corresponding to a specific part of the bookbinding). The template covers the description of the opening characteristics of the manuscript; a drawing to indicate the shape of the book included three different measurements in order to depict how the manuscript opens (left of centre or 25% of the volume, centre or half of the volume and right of the centre, the other 75% of the volume); three more drawings indicate how the boards open, while another sketch in the middle indicates with the use of arrows the areas where the text block breaks. All these indications will be of use to the person who will be digitizing the object in order to know whether any special assistance, cradle or support will be needed or any kind of restoration is needed prior to the digitization handling. This model seems to offer a particular example of good practice.

K. Scheper (*"Conservation for digitization: Selection and the decision-making process. Examples of some conservation choices"*) described the challenges when, within Leiden Library's Special Collections, out of the 260 manuscripts that were to be digitized in a time-frame of a few months, only the most urgent cases could undergo conservation treatments, which meant a one-by-one condition assessment of each manuscript, resulting into the grouping of similar types of damages into selected categories. Different types of damages need different approach concerning their digitization and help the curator for the selection of the manuscript which need restoration prior to digitization. In the cases where the entire text-block structure is broken, action should be taken, depending whether there are loose folios (sewing structure broken-thread deteriorated), or if some elements of the binding should be secured in place (for example, traces of endbands). Manuscripts with loose boards and those with partly loose material are the second category to be treated prior to digitization, for example in the case of a manuscript where the covers and the leather flap are original (with internal blind tooling decorations) with only an additional repair leather on the spine. This repair was eventually removed, in order to add a new spine lining that was attached through the boards and could be flexible and strong. All treatments and initial conditions must be very well documented for future researchers' use.

A similar challenge was faced by the professionals at the Hellenic Parliament Library (A. Revithi, *"Digitization project of the Hellenic Parliament Library"*) who made classification with different criteria (in case of bound objects):

- the type of the binding: how tight the binding is, the tighter the more difficult it is to open the book properly, without damaging the spine in order to scan it;
- the size of the book: very small sizes can be as difficult to scan as much as very large objects; disproportioned sizes can also be difficult to handle (very small, but thick books)
- torn pages that run the risk of further damages;
- the first and the last leaves of each book are those that are mostly damaged during the scanning, because they cannot rely on a solid opening of the spine, therefore are unevenly pressed and handled.

Collecting information and classification of manuscripts according to different characteristics such as the state of conservation is an essential step in the scanning process. In the sense that the resources are not unlimited, priorities must be identified.

A conservation survey was also undertaken within the framework of the project of the Brill Editions with the partnership of Leiden University to digitize the manuscripts of Raphelengius, Scaliger, and Golius Collections (Leiden University Library), that include approximately 3,000 volumes and 60,000 images (mostly Arabic manuscripts; M. Van Den Boogert, *"The Brill Digitization Program of Leiden University Library"*). Prior to digitization, an overall evaluation of the manuscripts which need conservation treatments was needed, knowing that the project would cover the complete restoration costs.

Problems that occurred during digitization, with particular reference to objects shape, were mentioned by M.-O. Scalliet (*The collection of Leiden University and the project of its digitization*), on the example of a manuscript in the shape of a long, fine cylinder, inscribed along its surface.

## §2 The digitization and restoration process

The second group of contributions approached the interaction between the digitization and restoration processes. It would appear, from a conservation point of view, that it would be easier for a conservator to receive the object after the digital scanning has taken place, in order to restore the damages that (accidentally) may have been caused by the photography. Nevertheless, according to the preservation condition of each object, we can define two types of procedures to be followed: in the first case, where the object is in need only of basic preservation treatments (like surface cleaning, page numbering and cataloguing), the document can be digitized at the end of those treatments and after the choice of a proper housing. In the cases of damaged objects, after the first basic treatments, the manuscript undergoes a first digitization, then it is restored (conservation treatments and proper housing solutions are chosen) and afterwards the final digital copy is taken, as has been illustrated by J. Moukarzel (*"Digitization as conservation or as diffusion process?"*).

During the digitization, certain recommendations for the handling must be clearly known by the professionals, as making sure that the stress applied to the object does not exceed that during "normal" use in a reading room by an experienced reader, that during digitizing the ms is lying on a book-rest made of soft material, with an opening angle of 120° and that no glass plate is used. Most damages occur during improper handling, particularly when the appropriate equipment is not used (M. Mayer, *"Norms & Recommendations for Digitization"*).

The main question posed is what will happen to those manuscripts which are not in position to be handled during digitization and for which no microfilm copies are available?

For S. Fani (*"The BNCF experience & project for Arabic manuscripts digitization"*), a protocol of work should be found in order to minimize risks and cost in terms of preliminary conservation intervention, so in conclusion a possible strategy for digitization should include:

- identification of specimens which could be really deteriorated by the digitization and define which are their most critical damages (Cf. §1);
- identification of specimens not faithfully reproducible and their damages;
- finding quick and low-cost methods of intervention for each case (hoping in the collaboration of the Restoration Lab) or finding a way to handle them with minimum mechanical stress and risks;
- ensuring high competence in book handling of the persons in charge of digitizing the manuscripts or attending to them during the scanning.

Some examples presented during the workshop highlighted the fact that due to the severe damage of the objects (heavily folded, stained, torn and fragile supports, insect and/or ink corrosion, mould and rodent attacks, previous linings and adhesive tapes, detached or misplaced folios, etc), it has been imperative to proceed to an initial digitization prior to the actual conservation treatments (in order to both document the initial condition of the object and also to record all possible details that might be lost because of certain conservation treatments), followed by the final digitization and housing of the object.

A particular case is the digitization during field work (E. Balicka-Witakowska), when even basic conservation measures may be unavailable: in this case, even when restoration may be highly desirable, the priority should lie with the digitization, in order to primarily secure the contents of the fragile objects.

But, a common rule is that if a restoration is made, the digitization must be done before it, as the restoration itself may cause new alteration: Washing of discolouration; Adhesive removal; Adhesive ageing discolouration, etc, as highlighted by N. Sarris (*"Uses for the Digitization of Manuscripts in Conservation Practice: Colour Measurements for Observing Colour Changes in Paper Conservation"*). All the appropriate information and documentation must be collected before the restoration, following the international standard.

### §3. Legal and ethical issues

At the end of the process, digitization aims to produce a copy of the original substitution in order to ensure a better conservation (reducing handling).

However, as has been stressed by Z. Grenady & S. Ipert (*"Legal Aspects of Digitization of Documents"*), the legal framework must ensure this situation and allow free dissemination of digital images. Issues related to intellectual property rights and ownership should not impede the free circulation of images, in the context of a non-commercial use (as the "2008 Green Paper Copyright in the Knowledge Economy" which aims to improve free movement of information and expand the exceptions set by the Bern Convention aiming to enhance the knowledge.)

If we take risk to damage accidentally the manuscript heritage with the digitization process, it must be done only once, ensuring that the digital images will be freely accessible (for non-profit use) in order to not encourage anyone else to digitize again the object for their own purpose.

## ASSESSMENT OF THE RESULTS AND IMPACT ON THE FUTURE DIRECTION IN THE FIELD

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The workshop and the ensuing discussion showed that there is no single answer to the question *"Restoration and/or digitization: what should be done first?"*: the final decision mainly depends on the degree of deterioration of the manuscript and the resources available for the digitization project.

During the workshop, participant tried to define better the usual difficulties that occur during the digital scanning and formulate common standards to avoid mechanical damage on the manuscripts.

The digitization process must not become another cause of deterioration.

It appears that a detailed survey of a manuscript collection and the collection of information before the digitization may facilitate the process (choice of books which could be photographed first; in some cases, even if the book would open, there could be many breaks on the spine, or in other cases, the spine would break, but the book would be still structurally steady).

What is important is that the book remains in the exact same condition as it was before the digitization.

If we had to define a best practice, we should impose a scan before and after an eventual restoration of the manuscript being certain that the first scan may not be the cause of irreparable deterioration. However, this solution is often linked to the financial and logistical capacity of the libraries concerned and brings the inconvenient of multiplying the document handling.

The solution to this question must be taken case-by-case according to common standards well defined between professionals of libraries and emerging from cases studies.

A future project might be to work jointly between curator, conservator and photographer on the development of a common protocol on the photo shooting and handling of documents.

These professional must establish in all cases a good internal communication for each project of digitization and make sure that each stage of production is well respected.

Free access to digital images is also an essential criterion in the preservation of written heritage, in the sense that the scanning itself is an alternative copy to the original. The legal requirements must address this issue in order not to increase the number of digitization projects on a single collection according to the uses and private interests.

Last, a conservation strategy for digital images should be set up for each digitization project, to ensure the physical preservation of data (hard drive / master, copy, etc.) and their interoperability for the future.

The workshop has thus succeeded in achieving its goal, so that, in the course of sharing and discussing, it was possible to suggest a common approach for manuscript digitization projects. Considering the COMSt international and interdisciplinary nature these suggestions will find their way among the international scholarly community and will hopefully find a positive echo, offering guideline and orientation for relevant projects in the field.

The discussion results will be reflected in the corresponding chapter of the COMSt handbook to appear at the end of the COMSt RNP funding period.

## **FINAL PROGRAMME OF THE WORKSHOP**

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9.00	Chantal Keijsper, Head of the Special Collection in the University Library, <i>«Introduction to the Library Special Collection and digitization activities»</i> .
9.15-9.45	Marie-Odette Scalliet, curator of the South-East Asian collections, Leiden, <i>«The collection of Leiden University and the project of its digitization»</i>
9.45-10.15	Joseph Moukarzel, <i>«Digitization as conservation or as diffusion process?»</i> .
10.45-11.30	Zeina Grenady & Stéphane Ipert, <i>«Legal aspects of digitization of documents»</i> .
11.30-12.00	Arietta Revithi, <i>«Digitization project of the Hellenic Parliament Library»</i> .
13.30-14.15	Karin Scheper, <i>«Examples of repairs and conservation treatments prior to digitization»</i> .
14.15-14.45	Dr. Maurits van den Boogert, <i>«The Brill digitization project of the Library of Leiden University»</i> .
14.45-15.15	Athanasios Velios, <i>«The experience of St. Catherine of Sinai and the digitization project»</i> .
15.15-15.45	Manfred Mayer, <i>«Norms and recommendations for digitization»</i> .



- 15.45-16.15 Ewa Balicka-Witakowska, «*Digitization and preservation of the Ethiopian «geniza» in the church of the Four Celestial Creatures at Agwaza, Tigre*».
- 16.30-17.15 Nikolas Sarris, «*Uses for the Digitization of Manuscripts in the Conservation Practice: Colour Measurements for Observing Colour Changes in Paper Conservation*».
- 17.15-18.00 Round panel of various short presentations from COMSt team 5 participants:
- Sara Fani, *The BNCF experience and project for Arabic manuscripts digitization*
  - Adam Larsson, *Past and Future, digitization and conservation at Uppsala University library*
  - Wido van Peursen, *Peshitta project Leiden*
  - Ira Rabin, *Material analysis accompanying digitization*

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