San Gemini Preservation Studies 2013

Introduction to the Restoration of Book Bindings in Italy - SG204A and SG204B

Preliminary Course Outline
Instructor: Prof. Flavio Marzo

<table>
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<tr>
<th>Theory classes-SG204A</th>
<th>Workshop-SG204B</th>
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<tr>
<td>8:30-12:30 am Monday - Friday</td>
<td>2:30-6:30 pm Monday - Friday</td>
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<td>1st Week</td>
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1st Day Introduction to the history of San Gemini and visit to Carsulae (all day)

Introduction to ethics of conservation

Book components and terminology

Writing support/media:

- Paper:
  Overview
  Manufacture techniques
  woven
  machine made
- Parchment:
  Overview
  Manufacture techniques
  Recognition of the animals
- Decorative papers:
  glue paper
  xylographic paper
  printed paper
  marbled paper
- Writing area
  margins
  impagination
- Inks:
  carbon inks
  iron gall inks
  mixed inks
  printing inks
- Text decoration

Making of facsimiles of historical sewing structures (first 2 weeks)

The first workshop project involves making 4 facsimile of historical book bindings types using original materials and tools. Some historic materials, such as parchment, are too expensive and will be substituted with modern imitations.

The project starts making the sections that will make up the book block for the facsimile

- Folding and preparation of the sections (20 sections made of 4 bifolia each sewing typology)
- How to place and space the sewing stations onto the spine

List of binding facsimiles that will be made in workshop:

1) Unsupported sewing structure (Islamic style)

Used typically from the Early Middle Age to the 18th Century in the Eastern Mediterranean and Middle East, commonly with book block in paper.

Features:

The text block will be sewn on 4 sewing stations. A spine lining of linen will be applied to secure and stabilize the book-block. Islamic end bands (primary and secondary sewing) will be executed at head and tail. The cover will be made in two halves with front flap.
### 2) Western medieval style binding

Europe from 14th to 19th Centuries with parchment and paper book blocks.

**Features:**

The book block will be sewn on 3 double cord supports with packed sewing all along. A parchment or linen spine lining will be applied on the spine between the supports (panels). Western end bands with primary and secondary sewing around cord cores will be made at head and tail. The supports will be laced through the boards. Attaching the spine lining on the inside of the boards will reinforce the board attachment.

### 3) Limp parchment binding

Sewing structure commonly found in the South Western Europe from 15th to 18th Century with book blocks in parchment and paper.

**Features:**

The book block will be sewn on 3 single alum tawed support with all along packed sewing. A spine lining of Japanese paper will be applied to the spine to secure the book block. End bands with primary sewing on alum tawed cores will be made. A soft laced cover will be applied to protect the book block.

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<th>2nd Week</th>
<th>3rd Week</th>
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<td><strong>The book structure: General notions about book structure and terminology</strong></td>
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<td>- The section: fly leaves, paste down, types: integral, separate (diagrams)</td>
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<td>- Sewing: unsupported: “Eastern” (Coptic-Islamic-Byzantine)</td>
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<td>- Sewing thread: Material: vegetable fibers (linen, hemp, cotton), animal (silk, wool), synthetic</td>
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<td>- Supports: cord (single, double), tape, leather (tanned, alum towed – strip single double, tongue, split, twisted)</td>
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<td>- Sewing techniques: without supports: sewing with curved needle, chain stitch, kettle stitch with support: with straight needle, on cords, single, double, all along, with compensation, herringbone sewing on tape, all along, alternate French tape on alum towed single, split, etc. knots, when, where and how to make them</td>
<td>- Sewing techniques: without supports: sewing with curved needle, chain stitch, kettle stitch with support: with straight needle, on cords, single, double, all along, with compensation, herringbone sewing on tape, all along, alternate French tape on alum towed single, split, etc. knots, when, where and how to make them</td>
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<td>- Spine shapes: Rounded and backed, flat</td>
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- Techniques: over-all, transfer, comb, panel, slotted
- Adhesives: vegetable glue (starch), animal glue (rabbit, bovine, ovine, mixed) Synthetic. How to recognize them and what and how to use them in conservation
- End bands: Western/Eastern
  With or without cores
  Material for the cores: vegetable cord, synthetic, animal (leather strips)
  Material for the sewing: vegetable threads (linen, cotton), synthetic
  Techniques:
  Primary sewing: number of cores (single or double), front or back bead, number of tiedowns (structural or decorative).
  Secondary sewing (decorative): number of cores, materials, techniques for the sewing (chevron, etc.), laced or not laced to the boards
- Book edges-trimming of the edges:
  Techniques: trimming of the edges (with or without the boards, blade marks), with or without squares.
  Decoration of the edges: painted (sprinkled, painted, marbled, etc.), goffrated, gilded.
- Boards:
  Materials: wood, paper board (laminated using reused material, pulp board)
  Techniques
- Covering material:
  Materials: Paper, leather, cloth/fabrics (vegetable, synthetic), metal
  Manufacture techniques
  Deterioration processes of: Tanned leather, alum towed leather
  Identification of the animal species
  Leather tinting
  Leather skiving
- Covering with adhesives:
  Vegetal (starches), animal (cow hide, pig hide)
  Synthetic (PVA, EVA, etc.)
- Turn ins: sequence of turning the leather on the boards, different techniques in trimming the corners
- Decoration of covers:
  Techniques: blind, gilded, etc.
  Tools for decoration
- Fastenings:
  Styles and materials

4) **Modern western case binding**, sewing on tapes

Used typically from the 18th and 19th Centuries with paper media

**Features:**
The book block will be sewn on 3 linen tapes with all along sewing. A linen cloth spine lining will be placed to secure the book block. Two false end bands will be applied to the spine at head and tail. A cloth case cover will be made to cover the book block.
<table>
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<th>3rd Week</th>
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| **Deterioration processes of organic materials in bindings** | **Analysing and documenting book bindings**  
(working with books from the local archives) |
| - External factors:  
  temperature  
  humidity  
  light  
  mechanical damage (handling, wear and tear) | - Features to document  
- State of conservation  
- Data sheets  
- Photographic documentation |
| - Internal factors:  
  natural deterioration process of organic materials  
  chemical interaction between materials |  |
| **Conservation techniques** |  |
| - Proposing different treatment options and estimating times  
- “Fit for purpose”, different approaches to conservation treatments related to different contexts  
- Documentation record and what to record (data sheets/images before, during and after conservation)  
- In situ repairs  
- Full conservation treatment of bound item  
  (Hypothetical full treatment)  
  1. Dry cleaning  
  2. Checking foliation  
  3. Dismantling  
  4. Washing  
  5. Deacidification  
  6. Re-sizing  
  7. Re constitution of the book block  
  8. Sewing (preparation of the sewing material and sewing frame)  
  9. New spine lining  
  10. New end bands like originals  
  11. Treatment of the cover  
  12. Re application of original cover |  |

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| **Prevention and Minimal Conservation Methods** | **Preventive conservation**  
(working with books from the local archives) |
| - Biocides and decontamination  
- Deacidification  
- Climate control  
  Temperature, humidity, light  
- Shelving, flat file drawers and other storage units  
- Storage Containers  
  drop back spine box  
  phase box  
  book shoe | - Box making:  
  Drop back spine box  
  Phase box  
  Book shoe  
  Four flap folder  
- Housing of fragments and mounting of single sheets |
<table>
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<tr>
<th>four flap folder</th>
<th>Option on how to treat pamphlet, single sheet collections and miscellaneous</th>
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<tr>
<td>• Housing of fragments and mounting of single sheets</td>
<td>• Digitization (affordable methods)</td>
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<td>• Option on how to treat pamphlet, single sheet collections and miscellaneous</td>
<td>photography</td>
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<td>• Handling procedures for rare and delicate books</td>
<td>digital processing</td>
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<td>• Digitization and how to minimize risk from handling documents:</td>
<td>data extraction</td>
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<td>minimizing damage during photographic processes, state of the art digitization, affordable alternatives</td>
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Last day of classes will include some time closing down the workshop