Historical and scientific analysis of Iranian illuminated manuscripts and miniature paintings

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Abstract
The present study aims to identify the materials and techniques used in Persian illuminated manuscripts and miniature paintings and its major significance in comparison with Indo-Iranian and Mughal paintings. The research methodology was based on oral interviews with traditional masters, historical analysis and scientific analysis. During the historical survey over 30 Persian historical treatises from the fifteenth to the nineteenth centuries (i.e., from the Timurid period through to the Qajar period) were collected and studied. All the recipes from these treatises were categorized and the information was used as the basis for scientific analysis.

Scientific analysis to reveal the materials used in different paint layers of Persian miniature paintings was carried out. For this task, twelve selected illuminated manuscripts, miniature paintings and paint boxes from the sixteenth to late nineteenth century were collected. For comparative analysis, five Indo-Iranian miniature paintings, as well as two paintings belonging to the Mughal period were also collected and added to the samples as the references.

Introduction
The objective of the present research was to identify the materials and techniques used in Persian illuminated manuscripts and miniature paintings and its major significance compared to Indo-Iranian and Mughal paintings. The research methodology was based on three approaches. The first consisted of a series of interviews carried out with the artists from Iran and India. The traditional Iranian masters such as Saeed Jazizadeh, Tolestones, Farida, were among these artists.

The second method was historical analysis, by collecting the Persian historical documents and treatises on the recipes and techniques from Taimurid, Safavid, and Qajar periods. During the historical survey the historical documents, including over 30 historical treatises (such as Gohargah Safa, Aaddal al-Mo'ad, Kishkuyh dar bayn-e ketab Murshidah wohif al Khans, Fowzehr of Khore), were collected and studied.1 These sources are related to the materials used in the art of bookmaking and painting from the Timurid to the Qajar period, such as different techniques of making dyes for paper colouring, pigments, and dyes used as paint, binding mediums, sizing materials, finishing techniques, and so on. All the recipes were collected and categorized and the information was used as the basis for our scientific analysis.

Historical data on techniques was collected for the most commonly recommended dyes, sizing materials, pigments, etc. that may have had a major role in the stability of the Persian paintings as a case study for further analytical research.

Finally, the third technique was the scientific analysis from original samples selected from Iran Bastan Museum, private collectors and traditional artists. The Safavid miniature paintings in the Iran Bastan Museum collection, primarily from Iran and India, include a wide range of dates and styles. A representative selection of paintings was chosen for analysis of the materials used in these paintings. One Indo-Iranian painting and one Mughal painting from tenth and eleventh century AH (sixteenth and seventeenth century) were selected. Different types of pigments were also collected from traditional artists for analytical identification. Samples of the paints and pigments were also collected from a beautiful artistic illuminated paper box belonging to Safavid period (16th–17th century) for scientific comparative study.

The materials used in the paintings including paper fibre, sizing materials, ground layer and pigments were analysed for materials identification. All the colours were sampled from each painting and paint palette under study. A complete record of the paper fibre, sizing materials, presence of ground layer and its nature, and pigment identification has been provided in Tables 2–5. It also indicates the identification methods used in each case.

Study background review

Indian and Persian paintings occupy an important place in the realm of Asian Art. In this regard, numerous articles have been published, books were compiled and attractive albums and reproductions were prepared by museums and art centres and so on. A quick glance over the bulk of these sources reveals that the majority of them have been put together from an art historian's points of view. Few sources mentioned have touched on the areas of painting techniques and the materials used.

There are very few serious works on the materials used in Persian and Indian miniatures. The earliest work that I have come across during my survey was published by A.P. Laurie in 1935.2 The references and sources are somewhat neglected until 1980s. A technical analysis of Indian painting materials in 1985, is a work that appears after a gap of almost forty years.3 As can be expected, this work emerges from a more scientific and technical background. Three years later, a scholarly work by Elisabeth West FitzHugh entitled ‘Study of pigments on selected paintings from the Vever collector’ appears in An Annotate and Illustrated Checklist of the Vever Collection.4 In this work, she has undertaken a scientific comparative pigment study of miniature paintings originating from Egypt, India, Iran and Iraq. Six years later a work by Yvess Porter entitled Painters, Paintings and Books was published.5 It is a study of the Indo-Persian technical literature until the 18th century. A recent sixteenth-century work treats the materials used in Persian paintings based on some of the Persian recipes; however the sources originated mostly from India. Scattered works, some of which are quite significant, were published in Iran, India, Pakistan, Turkey, and elsewhere. They provide us with some information relating to the subject. However, most of those works emphasize the pigments and dyes used in different forms of art such as wall paintings, fabric paintings, oil paintings and the like. ‘Examination and Analysis of Wall Paintings’ and ‘Identification of Natural Red Dyes in Old Indian Textiles’ by Dr. O.P. Agrawal, ‘Scientific investigtions of materials used in the 14th and 15th century cloth paintings’ by B.N. Bardhan, ‘Conservation, Technical studies of scroll paintings’ by A.R. Shah, ‘Conservation of Indian miniature paintings, priests and water colours’ by S. Subbaratnam, and many other works are among scholarly efforts in the field of pigments and conservation of the works of art.6

Some scholars did extensive research and laboratory work on specific pigments. Although such works have a background in the chemistry, the results are valuable only when it comes to the interdisciplinary field of conservation which requires as much artistic and aesthetic sense as it needs the support and minute scientific approach. Gettens, Khan, Plestis, FitzHugh, Schwimmer, and Weimer are the figures whom we owe considerable more than once, while going through the published sources on the scientific studies of pigments.7 The present study is based on oral traditional knowledge, historical literature of the fifteenth to nineteenth centuries Persian and Indian treatises as well as laboratory works from original samples.

Oral and historical analysis review
During the first and second stages, the oral interviews with the Iranian traditional masters and the historical survey from historical recipes, the author collected valuable oral information, historical documents and a number of treatises relating to the recipes for materials used in the art of the book and miniature painting that were documented during the Timurid, Safavid and Qajar periods. The author has only included a small number of these references within the present paper since this group of sources and references would require an entire article to give them the attention that they deserve. The preparation of support layers has been discussed in these sources in different subjects such as papermaking (kaghas), dyeing paper (gooshkhana), sizing (shah ‘ilam) and burnishing (mohir kursani). These topics have already been analysed historically and scientifically by the author and are published in international journals.8

A variety of supports mentioned in these oral and historical sources have already been identified and documented by the author. Briefly the supports that can be found in these two sources are: card board (madqar), decorated papers (mehrib paper, abri paper), ground works such as gold (hum-e-san), silver (tabas-e-jahannam), gold powders (hoom-e-gurrage, gooshkhana), green verdigris (hum-e-qargho) marcasite (hum-e-marghul) and gold marcasite (hum-e-qarghol).

Preparation of the paint layer and the variety of pigments and dyes have also been discussed and documented by the author based entirely on the oral and historical sources. The paint layer can be divided into the categories of opaque colours (from), transparent colours (rosh), resinos colours (isminh). The pigments have also been divided into two categories. Primary colours (ensfadi) and Secondary colours (mahyeh). In these sources binding medium (yebz) is also discussed and is divided into two sources: Vegetable source (gum arabic or sam-e-arabic) and animal source (fish glue or afshin mah). The preparation of the brush is another subject that is thoroughly discussed by these sources. They identify hair from squintails tail and hair from cat’s tail as the main sources for making brushes. From some of these sources one can find the technical application of the materials used in the art of the book making and miniature painting as well.

Scientific analysis review
We find that several analytical methods have been used for the identification of different components of a miniature painting viz., support, pigments, sizing material, etc. For analyzing the materials of paintings, an important consideration is that the method should be non-destructive. Twelve selected illuminated manuscripts, miniature paintings and paint boxes ranging from the sixteenth to late nineteenth century were collected. For comparative analytical research, an Indo-Iranian miniature painting as well as two paintings belonging to the Mughal period were also collected and added to the group of samples as references (Figures 1–5).

For the identification of the layers, the following were examined and analyzed:

1. Support layer (paper fibre and sizing materials)
2. Ground layer
3. Surface layer (pigments and dyes)

The analysis of materials was carried out at the Research Centre for Conservation Cultural Relics (RCCCR) in Iran, Institute of Standard Industrial Research of Iran (ISIRD), National Research Laboratory for Conservation of Cultural Property (NRLC) in India and the Indian Conservation Institute (INTACH).
Sizing material

Historical analysis

According to Persian historical treatises, a variety of sizing materials were used during the Tahirids to Qajar periods, and they have already been identified and published by the author. Sizing materials from proteinaceous materials including animal glue; starches from rice or wheat; vegetable gums; mucilages of plants and seeds; fruits and sugar were mentioned. The sizes that the author has identified from the historical sources are starches; wheat (esnash, bedgum) and rice (nasb, kharoom), plus mucilages; rice (lashkherem), beanroot seed (qaph, qaphar), sahwa, and mucilage of marshmallow (lashes khaan, cucumbar seeds (hads adhmar, khan). Fruit juices; syrup, grape syrup (shirxang), juice of sweet melon (adh horoogha) animal glue; fish glue (khariio naf), vegetable glue; gum arabic (sum arabi), kind of vegetable glue (tahmaq).

The sizes were not only used in pure form but also occasionally depending on the type of paper, mixed sizes were also practiced. In Resaheh dar hayvan khaan the author advised: "If the paper has deep purplish colour and it is difficult to write on, the advice is to apply either sweet melon juice (adh kherooq) or syrup of Egyptian rock sugar (adh naeem or mery) or myrtle extract (adh e movil) with mucilage of flowers (zippiah) and mucilage of oil from cooked rice (ashes khaan). All these materials make paper strong and if paper is fulished it becomes smooth like a mirror."  

Scientific analysis

The scientific analysis that has been carried out to identify the sizing materials used in Persian paper has already been identified and published by the author. Sizing materials were identified by staining and FT-IR (Fourier Transform Infra-Red) spectrometer analysis. Starch was also detected in paper by the formation of the characteristic blue colour when a dilute aqueous solution of iodine-potassium iodide was added. Large collections of sizing materials mentioned above were prepared based on our historical survey from historical treatises, for comparison with the samples by FT-IR spectrometer analysis. Trigancith (lamb) thought not mentioned in historical treatises under study, was added as our analytical sample since it was recorded in scientific reports. FT-IR spectrometer was carried out with a Nicolet, Model 510 instrument provided with a microscope attachment. Sample preparations were carried out by mixing KBr and the unprepared sample in the ratio of 10:1. Identification of the sizing materials in the sample is obtained by comparing the infrared spectrum with reference spectra or by recognizing specific bands. Table 3 provides a complete record of the sizing materials found and indicates identification methods used in each case. Unlike the Indians who used limited sizing materials to improve the mechanical strength and to smoothen the surface, Iranians used various materials in the sizing process. According to our investigation cucumber seeds were extensively used compared to other sizing materials.
Presence of ground layer

Historical analysis

According to Indian sources the next layer after preparing the support layer was sizing and varnishing, a layer called the ground layer. In Indian Mughal miniature painting, before applying paint on the paper, the sketch was prepared by the master artist on the smooth surface of the paper in light blue or reddish-brown ink. This primary sketch was drawn in soft lines suggesting only the outlines of the figures. These were later corrected and bold, accurate, hard lines were drawn. A coat of white pigment known as ground layer was applied to obliterate the incorrect lines. In Persian historical treatises we did not find any evidence that the ground layer was applied on the support layer before the paint surface layer.

Scientific analysis

The presence of a ground layer was detected by microscopic examination. Preparing cross sections was only possible for one of the paintings selected. Stereomicroscopy was carried out with a Leica DMLB microscope, equipped with a camera attachment. Identification of material used in the ground layer of Indian miniature painting was carried out by FT-IR spectrometer analysis with a Nicolet, Model 560. Identification of the material on the ground layer is obtained by comparing the infrared spectrum with reference spectra or recognizing specific bands. Table 4 provides the record for the presence of ground layer found and indicates the materials identified.

In Indian paintings, a ground layer was almost always present while in Persian paintings, the ground layer was seldom applied. This gives an explanation of the fact that the flaking of paint is very much more evident in Indian miniatures than in Persian miniatures.

Pigment

Historical analysis

According to classical treatises the colours were classified in two categories: Primary (mudoraka) and Secondary (mudurkha). According to these sources primary colours (mudoraka) are: white (lead white safedab, tin white udayakah), yellow (orpiment arsakh, rhabah rindah), red (vermilion sharmar, red lead suraj, red orpiment arsakh-e-shah, safflower maroon, carmine kirm-e-gereh, vermiculite), lac, lapis lazuli, wood rosas, and brown earth ab-e-omar), green (verdigris gojar), blue (lapis lazuli, natural lapis and artificial ultramarine lagoon, indigo nil), black (lamp black doduk) and metallic (gold tula, silver nagrah, brass hron) and copper ersis, mica tala).

On the other hand the secondary colours (mudurkha) are: face (red lead + white), elephant colour (green or blue + lamp black), light brown (yellow ochre + black), deep green (lamp black + indigo and rhabath), purple (lapis lazuli + vermilion) and turquoise (ultramarine-gevrad).

Referring to historical sources we can identify different techniques in the making of pigments and dyes and the types of binding medium advised by the masters for particular paint and purposes. For example Sarih in ghalati safi explains the technique for making lead white (safedah-e-shah) as follows: “Take some pieces of lead and place it in a big vessel. Heat it on fire till the lead melts. During this whole process, over the vessel, after the lead is melted wash it with vinegar (zareh) and sal-ammoniac (masuqah). When it is rubbed and pulverized finely, wash it thoroughly till you get pure safedah. In this way lead white is produced.” Allahshah explains the types of binding medium used with lead white as follows: “Moisture safedah with water. Pass it through a clean fine cloth. If it is required to use it on paper, add gum arabic. For other purposes mix it with egg white.”

Scientific analysis

Pigment identification was carried out in different techniques as follows: Microspectral Analysis, Microchemical Analysis, FT-IR, XRD (x-ray diffraction), UV (ultraviolet lamp). Table 5 provides a complete record of the pigments collected from traditional artists and selected paintings from Iran Bastan Museum and indicates the identification method used in each case. Figure 14 shows part of Safiwall illuminated manuscript belonging to 17th century of checklist no. 12 that its pigment identification was also under investigation. Table 6 shows the pigments identified from selected Indian and Persian miniature paintings from the Veyer Collection. By comparing Tables 5 and 6, it can be noted that the pigments used on the selected paintings come from a variety of sources. Some are artificially prepared inorganic materials like verdigris. Some are naturally occurring minerals, which were ground to produce powdered pigments, such as ultramarine. Others, such as cochineal, are organic pigments or dyes from animal or plant sources. The palette of the paintings is wide. Many of the colours were produced by a single pigment; others are a mixture of two or more colourants.
FitziHugh\(^{14}\) has indicated that terre verte was not identified on any painting in the series, nor has it been found on other Indian paintings.\(^{15}\) In the series which we examined, terre verte, the natural green stone (talco nibbe), was not identified either. According to our investigation, also a term used by the Persian artists for describing earth green is mainly a mixture of blue and yellow; a deep green colour shade however to make a definite statement on this fact needs further study. By comparing Tables 5 and 6 it can be noted that verdigris appears to be more common on Persian than on Indian paintings. According to previous extensive investigation done by the author based on historical survey and analytical research, it has been discovered that Zargar was used in Iran as a green pigment and mixed with saffron as an inhibitor to prevent the destructive mechanism of verdigris.\(^{16}\) In India, on the other hand, there is no evidence of mixing saffron with verdigris or with any other pigments.

In many cases historical descriptions based on historical treaties and documents correlate well with what has been found on the paintings; the description, however, mentions some pigments that were not found in these series of paintings. Figures 10 and 11 shows two samples of microscopic images of pigments found in Indian palettes; checklist no. 51 belonging to the 16\(^{th}\) century of Safavid period.

<table>
<thead>
<tr>
<th>Colour produced by Indian stains in case of historical paper fibres</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stain</strong></td>
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<tr>
<td>Saffron</td>
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<tr>
<td>Wilson</td>
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</tbody>
</table>

**Table 2** Paper comparison on Safavid, Indo-Iranian and Moghul miniature paintings.

<table>
<thead>
<tr>
<th>Origin</th>
<th>Owner</th>
<th>Object</th>
<th>Date</th>
<th>Check-list No.</th>
<th>Linen</th>
<th>Cotton</th>
<th>Hemp</th>
<th>Jute</th>
<th>Rag</th>
<th>Straw</th>
<th>Bam</th>
<th>Max</th>
<th>Japanese Fibres</th>
<th>WP</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRAN</td>
<td>Iran Bastan Museum</td>
<td>1849</td>
<td>2255</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Azarj</td>
<td>1849</td>
<td>2255</td>
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<tr>
<td></td>
<td>Shahr</td>
<td>1849</td>
<td>2255</td>
<td></td>
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<tr>
<td></td>
<td>Shiraz</td>
<td>1849</td>
<td>2255</td>
<td></td>
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<tr>
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<td>Isfahan</td>
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</tr>
</tbody>
</table>

**Key to Fibres**

- **Key to identification methods**
  - **m**: appearance by transmitted light on a microscope slide observed by polarized light microscopy
  - **s**: fibres identified by staining method

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**Figure 15** Microscopical analysis of paint, Moghul miniature painting, 17th Century A.D., checklist no. 4535.

**Figure 16** Microscopical analysis of paint, Safavid paint palette, 16th Century A.D., checklist no. 51.

**Figure 17** Microscopical analysis of paint, Safavid paint palette, 16th Century A.D., checklist no. 51.
### Table 3: Identification of using materials on Safavid, Indo-Iranian and Mughal miniature paintings.

| Origin | Owner | Object | Date | Check-List No. | Sta. | Ps | Gum | Imp. | Swae | Ric | Gra | Coq | Seg | Myr | Tra |
|--------|-------|--------|------|----------------|-----|---|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| IRAN   | Iron Rustum Museum | M | 1853 | 4353 | of |   |   |   |   |   |   |   |   |   |   |
| MIng   | T M | 1853 | 11 | f |   | f |
| *      | T M | 1853 | 12 | f |   |   |
| *      | T M | 1853 | 13 | f |   |   |
| *      | T M | 1853 | 14 | f |   |   |
| *      | M | 1853 | 15 | f |   |   |
| MIng   | M | 1853 | 16 | f |   |   |
| *      | M | 1853 | 17 | f |   |   |
| *      | T M | 1853 | 18 | f |   |   |
| *      | T M | 1853 | 19 | f |   |   |
| *      | M | 1853 | 20 | f |   |   |
| INDOA  | Iron Rustum Museum | M | 1853 | 4353 | of |   |   |   |   |   |   |   |   |   |   |
| MIng   | T M | 1853 | 17 | f |   |   |

#### Key to identification methods
- Identification of starch by staining the paper with iodine potassium iodide solution.
- Identification of using materials in the sample is obtained by comparing the infrared spectrum with reference spectra or by recognizing specific bands.

### Table 4: Presence of ground layer on Safavid, Indo-Iranian and Mughal miniature paintings.

<table>
<thead>
<tr>
<th>Origin</th>
<th>Owner</th>
<th>Date</th>
<th>Check-List No.</th>
<th>Ground Layer was observed</th>
<th>Ground Layer was not observed</th>
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<td>4353</td>
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<td>Low</td>
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<td>T M</td>
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<td>15</td>
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<tr>
<td>*</td>
<td>M</td>
<td>1853</td>
<td>16</td>
<td>m</td>
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<td>*</td>
<td>T M</td>
<td>1853</td>
<td>17</td>
<td>m</td>
<td></td>
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<tr>
<td>INDOA</td>
<td>Iron Rustum Museum</td>
<td>1853</td>
<td>4353</td>
<td>of</td>
<td></td>
</tr>
<tr>
<td>MIng</td>
<td>T M</td>
<td>1853</td>
<td>17</td>
<td>of</td>
<td></td>
</tr>
</tbody>
</table>

#### Key to nature of ground layer
- Gyp — Gypsum (calcium sulfate)
- Lw — Lead white (lead carbonate)
- Chik — Chalk (calcium carbonate)

#### Key to identification methods
- m — microscopic examination.
- f — FTIR examination of coating.

### Table 5: Pigment identification on Safavid, Indo-Iranian and Mughal paintings.

<table>
<thead>
<tr>
<th>Origin</th>
<th>Owner</th>
<th>Object</th>
<th>Date</th>
<th>Check-List No.</th>
<th>Ground Layer was observed</th>
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<td>of</td>
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</table>

#### Key to pigments
- Car — Carbon
- Cug — Copper green
- Gem — Red lead
- Ger — Gold
- Ind — Indigo
- Org — Organic red
- Org — Orange pigment
- Org — Red
- Org — Yellow
- Org — White
- Org — Bluish
- Org — Organic

#### Key to identification methods
- m — appearance by transmitted light on a microscopic slide observed by polarized light microscopy.
- c — elements identified and solubility determined by chemical microscopy.
- r — crystalline structure by x-ray powder diffraction.
- f — fluorescence in long-wave ultraviolet light.

*a Saffron was mixed with verdigris (Cu2S)*
Table 6 Pigment identification on selected paintings from the Vever Collection

<table>
<thead>
<tr>
<th>Object</th>
<th>Date</th>
<th>Check List Number</th>
<th>White</th>
<th>Black</th>
<th>Yellow</th>
<th>Green</th>
<th>Blue</th>
<th>Gold</th>
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Key to pigments
- Czr - Carbon
- Cug - Copper green
- Hgd - Hodge
- Ird - Indian red
- Lit - Lead white
- Plat - Platinum
- Org - Organic red
- Opj - Oxypruine
- Red Br - Red-brown
- Slv - Silver
- Ulv - Ultramarine
- Vnr - Vermilior

Key to identification methods:
- a = appearance by transmitted light on a microscopical slide observed by polarized light microscopy
- b = elements identified and solubility determined by chemical microscopy
- c = crystals structures determined by x-ray powder diffraction
- d = fluorescence in long-wave ultraviolet light

Notes
1. A part of this paper was presented at the International Conference of the School of Isfahan "Art, Literature and Thought" held in Tehran and Isfahan, 18th-22nd December, 2006.


11. HERAVI, Sultan Ahmad Majnoon Rafa' (1904). Rasa'il al-hath. no. 3522: Tehran University Central Library.


15. BARKESHLI, M (2003). Sizing material used in Persian miniature paintings. Washington: Annual Meeting of


Raman analysis of pigments found in Middle Eastern manuscripts in the University of Melbourne Collection

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Director, Centre for Cultural Materials Conservation, The University of Melbourne

Abstract
When Prof John Bowman developed the Middle Eastern Manuscript Collection for the Department of Middle Eastern Studies at the University of Melbourne, his focus was the language and the meaning of the texts, rather than the information encapsulated in the materials and methods of manufacture. Nevertheless this extraordinary collection of Qur’ans and related texts, books of poetry, astrology, grammar, mathematics, logic dictionaries, prayer books, biographies and books of sayings which include Arabic and Persian manuscripts as well as several Syriac, Utho, Ethiopean, Sarmir and Turkhic texts presents a wealth of information about the production of such manuscripts. When the collection was assessed for conservation and preservation requirements, a study was also undertaken of the materials and techniques of the texts. This included micro, macro, and nano investigation, and in this respect Raman spectroscopy has proven to be a useful tool by which to analyze the pigments used in illuminated texts, as it provides a non-invasive analytical technique. This paper provides an overview of the investigation of the materials and techniques within this collection, undertaken as part of the preservation program. It aims to characterise some of the pigments used in the production of these volumes. It discusses the issues that arose during the analysis and identifies further areas of investigation.

Introduction to the Collection

The management of the collection of Middle Eastern Manuscripts at the University of Melbourne presents a number of challenges. In the main these reflect the gradual dilution of knowledge that occurs when an object loses proximity to those who understand and maintain its cultural meaning. For the cultural collections housed in universities this can happen in several ways. First, the object is removed from its cultural use and context. Second, the provenance of the object is often also compromised and diminished either at point of removal from its original owner, or at point of reception at the university. Third, when the scholar who used the object retires, their area of teaching and research is not always continued and the role of the object, and the knowledge about it may also be lost. This has threatened to be the case with the Middle Eastern Manuscript collection. This paper is an exploration of the use of various epistemological methods in order to retain and develop the knowledge that can be imparted from this collection, despite the relocation of these objects from their original cultural source and despite shifts in knowledge bases within the University of Melbourne.

The University of Melbourne collection is predominantly the work of one man, Prof John Bowman, who built the collection as an aid to his teaching and research. Prof. Bowman sourced volumes for the collection from visits to the Middle East as well as from booksellers in the United Kingdom, who appear to have provided the majority of the material. The carriage of Islamic and other Middle Eastern bibliographic material across the globe reflects the colonization of the region, so it is no surprise that Britain is particularly well-endowed with collections of Middle Eastern manuscripts. The beauty of the manuscripts, coupled with their extraordinary textual content, made collecting individual volumes a popular pastime. Manuscripts entered Europe at all levels of society, as reflected in the provenance of many of the texts in this collection (one brought back to England by a soldier for example, others collected as part of academic collecting expeditions in the region).

In Orientalist Edward Said identifies an influential academic tradition ( Said 1981:209), which he argues was constructed with little reference to, or knowledge of the cultures of the region, but rather to support political and economic exigencies. Textual scholars however are an exception to this type of knowledge construction. The need to translate language and meaning, and the cultural richness embodied in the text and in the materiality of the book, provided scholars such as John Bowman with a range of extraordinary points of entry into developing an understanding of the cultures represented by the texts. The issue of language and textual interpretation remains key to the value of this collection at the University. However, when John Bowman retired in 1975, this textual focus was severely diminished. This paper explores the material focus that was used to invigorate interest in the collection at the University of Melbourne.

Professor John Bowman

Prior to joining the University of Melbourne, John Bowman was Lecturer in Hebrew and Old Testament Studies at University of Leeds. Shortly after he joined Leeds in 1946 he introduced the study of Arabic into the Department of Hebrew Language and Literature, which was subsequently renamed the Department of Semitic Languages and Literatures; and acknowledged the critical role of the book across the Middle East (Leeds University 2006). Today the University of Leeds holds a substantial and important Oriental Manuscript collection listing of 439 volumes (Leeds University 2002).

When Prof. Bowman arrived at the University of Melbourne he continued collection building for both teaching and research purposes. There are currently around 300 volumes in the University of Melbourne collection. These include...