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Indian drawings from the Rijksmuseum: an insight into their  
production, their purpose and their significance

Amélie Couvrat Desvergnés

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Amélie Couvrat Desvergnès

## Indian drawings from the Rijksmuseum: an insight into their production, their purpose and their significance

### Abstract

Among the collection of Indian miniature paintings at the Rijksmuseum in Amsterdam, about twenty drawings from the Pahari and Rajasthan regions and from the Mughal court have so far received little interest from scholars and are still unknown to the public. However, the study of Indian drawings has recently begun to increase through several noteworthy exhibitions and essays focused on the subject. Therefore, the aim of the study is to shed light on the purpose and significance of Indian drawings from the angle of technical art history. Three main themes drawn from these artworks were identified to better approach the diversity and complexity of the topic. Firstly, some of the drawings embody the making process involved, normally unseen in a finished painting. Secondly, some drawings give an insight into workshop practices. Thirdly, some pieces emphasize the development of a new artform influenced by European and Persian models: drawing in black ink. Close-up examination with digital microscopy, infrared reflectography, and pigment identification with X-ray fluorescence also contributed to the methods of investigation by illustrating the various aspects. The combined data will provide a comprehensive insight into artists' techniques, workshop practices and patterns, and identification of materials.

### Keywords

Indian drawing, Rajput drawing, materiality, production process

### Introduction

The Rijksmuseum in Amsterdam owns a collection of almost 400 Indian miniature paintings, which feature a representative survey of styles and themes found in the diverse schools of the subcontinent between the sixteenth and nineteenth centuries. Among these are about 25 drawings from the Pahari and Rajasthan regions and from the Mughal court. They are very diverse in their levels of execution, ranging from cursory drafts to elaborate sketches. This collection in general is still relatively unknown to the public, and has not yet been studied in depth.<sup>1</sup> The first scholarly interest in Indian drawings came from A.K. Coomaraswamy, who wrote the essay *Indian Drawings* in 1910.<sup>2</sup> The first full-scale exhibition was curated by Stuart Cary Welch in 1976 at the Fogg Art Museum,<sup>3</sup> but the most accomplished study in the field was the exhibition *Drawn from Courtly India* at the Philadelphia Museum of Fine Art in 2015.<sup>4</sup> This show recognised Indian drawings as accomplished works of art in their own right.

What usually comes to mind while talking about Indian art are the exquisite miniature paintings made of opaque watercolour and gold paint applied on paper. For a long time, scholars focused overwhelmingly on these paintings. Considered crude and messy, drawings were often considered only as objects of study to decrypt the meaning of the paintings, rather than as artworks in themselves. The current research project, through the angle of technical art history, intends to show that drawings are not always unfinished paintings, but that they cover a much larger spectrum. Through a selection of drawings from the Rijksmuseum, we will see that even the tiniest detail can provide valuable information on other purposes and functions, and therefore highlight their historical and artistic significance.<sup>5</sup> Three main themes were identified to better approach the diversity of the topic. First, some of the drawings embody the making process involved in producing a finished painting. Secondly, some drawings are shown as a means for diffusing motives and forms, and point to the importance of copying and inventing. The third theme emphasizes the development of a proper art form influenced by European and Iranian models. Alongside the above points, the project was also an occasion to explore the materials used and to address a few questions relating to the conservation of such objects. The drawings studied belong to three main geographical areas: the Pahari region in the lower foothill of the Himalayas, with pieces from Jammu, Kashmir and the Kangra valley; Rajasthan, with drawings coming mostly from the kingdoms of Bundi and Kotah; and the Mughal imperial court located around Delhi-Agra.<sup>6</sup> While reading the article, you can enjoy the viewing of some items by using the 'curtain viewer,' which reveals underdrawings and unseen elements. This new visualization tool, which was developed by Rijksmuseum computer scientist Dr. Robert Erdmann, can show different layers of a painting (sketches, retouching) just by swiping the mouse pointer over the artwork (follow the link in the relevant notes).

1 Fifty paintings and among them a few drawings, considered as the most striking of the collection, were displayed in the Exhibition *50 X India, de Mooiest Miniaturen van het Rijksmuseum*, in the Stedelijk Museum, Amsterdam, in 2008.

2 A.K. Coomaraswamy, *Indian Drawings* (London: Essex House Press, 1910).

3 S.C. Welch, *Indian Drawings and Painted Sketches* (New York: The Asia House Gallery, 1976).

4 A.M. Cameron, *Drawn from Courtly India: The Conley Harris and Howard Truelove Collection*, exhibition catalogue (Philadelphia: Museum of Fine Arts, 2015).

5 All of the drawings from the Rijksmuseum are accessible on the museum [website](#) by acquisition number.

6 The term *Pahari* derives from the word *Pahar* which means 'from the hill.'

### Indian drawings as indicators of production processes

The first part of the study presents tracings, pounces or unfinished paintings which embody the various steps of the making process to create a complete painting. An Indian painting was executed in several steps, including under-drawings, made freehand or with the help of a pounce; primary sketches in reddish ink; application of a white priming; secondary drawings in black ink; colouring and finishing. In the collection, a tracing from the Pahari region dating to the nineteenth century and featuring the raga of *Bhairava Ragini*, personified by a woman worshipping the god Shiva, was made on a transparent support of animal skin (RP-T-1993-194).<sup>7</sup> This was generally used to copy and then reproduce the design by pricking for pouncing, becoming the source of other copies made by pupils or other artists, although this specific one was not used as pounce since it shows no pricked holes. The species of the animal was identified at the University of York; the mass spectrometry method MALDI TOF allowed us to identify the collagen of the beast, in this case sheep. Since the support is extremely thin, it is most likely that it came from a skin which had been split. The animal was widely and cheaply available in India, and due to the presence of abundant fat cells and its natural spongy quality, the skin delaminates easily to create a thin material suitable for pouncing and tracing.<sup>8</sup>

Another similar drawing from Kangra in the Pahari region, made on paper and featuring the Coronation of Rama (AK-MAK 1539), was used as a pounce as indicated by the network of perforations along the contours of the figures and by the overall darkish shade on the surface caused by the charcoal powder used to transfer the design onto a new support (Fig. 1).<sup>9</sup> Dashes of colour were used as colour indications for the execution of the paintings. Two touches of blue on both of Rama's hands indicate that the skin of the god had (as usual) to be painted in blue, while two dashes of yellow show that his clothes had to be in yellow. In fact, this drawing is a model called a 'master drawing'. Similar works were kept in the workshop to be reused for other compositions and passed down from generation to generation. Colour indications and notes were used as an *aide-memoire* for further works. In that sense, artists played the role of preservers of drawings which transmitted a repository of forms and knowledge.<sup>10</sup>

Some sheets were restored and lined before entering the collection. But this treatment, even if justified by the poor condition of some supports, appears quite disturbing today because it no longer gives access to important information, such as annotations on the verso. A pounce from Jaipur in Rajasthan, illustrating ladies on a terrace, was lined onto a sheet of modern Indian paper so that precious indications about the usage of the work are hardly legible today (RP-T-1993-281).<sup>11</sup> Only the left figure in this image was pricked for pouncing,



Fig. 1 Detail of *The Coronation of Rama*, Kangra, Pahari region, nineteenth-century, AK-MAK-1539. To see the whole drawing, visit this [link](#).

<sup>7</sup> *Bhairava Ragini*, Pahari region, India, eighteenth century, [RP-T-1993-194](#).

<sup>8</sup> For more information on supports made of transparent sheep skin in Indo-Iranian manuscripts, see A. Couvrat Desvergnès, 'Skin against Paper: Identification of Interleaving Materials in Indo-Iranian Manuscripts,' *The Book and Paper Group Annual* 34 (2018): 130.

<sup>9</sup> *The Coronation of Rama*, Kangra, Pahari region, nineteenth century, [AK-MAK-1539](#).

<sup>10</sup> Cameron, 35.

<sup>11</sup> *Ladies on a Terrace*, Jaipur, 1800, [RP-T-1993-281](#).

<sup>12</sup> *The Killing the Wild Elephant Kuvalayapida and a Wrestling Match at King Kamsa's Court*, Kangra, 1800–1840, Volkenkunde Museum Leiden, RV-3025-31.

<sup>13</sup> For more information about translation and interpretation of colour annotations see B.N. Goswamy, 'The Technique of Pahari Paintings A Discussion of Colours and Pattern Notes', *East and West* 7, No.3/4 (1967): 287.

<sup>14</sup> *A Princess Receives Flowers*, Kangra, 1800, [RP-T-1993-299](#).

and due to the lining the tiny holes are visible only on a light sheet; thus valuable information suggesting only part of a sketch was used and reproduced for a later composition has been obscured.

Through the nineteenth century in the Pahari region, it was also a common practice to note on the drawing the names of colours to use or the patterns to execute instead of using licks of colours. On a model from the Volkenkunde Museum in Leiden, featuring the killing of the wild elephant Kuvalayapida and a wrestling match at King Kamsa's court, every part is annotated.<sup>12</sup> The difficulty is to translate and interpret the writing and the expressions written in vernacular languages such as *devanagiri*, *takri* or *braj*. These are today understood by a limited number of scholars.<sup>13</sup>

In contrast, some compositions often result from spontaneous gestures. For *The celebration of Gangaur*, a drawing made in Bundi in Rajasthan (RP-T-1993-269), it seems that no pounce was used since there are no traces of charcoal, but instead a very rough layout of the composition was made freehand with a bright orange ink, indicating, for instance, the head of the woman standing on the rooftop terrace of the building with a roughly shaped circle. This indicated, for instance, the head of the woman standing on the rooftop terrace of the building with a roughly shaped circle. A more precise composition was then done with strong and angular lines of black ink. It is interesting to note that the second drawing is in some places quite different from the first sketch, which only served for a rough placement of the figures. If the black outlines of figures are powerful and expressive, the background of plantains and coconut trees is more freely elaborated with a greyish ink (Fig. 2). Regarding the accumulation and superposition of lines, reflecting hesitation in the composition, it is most likely that this work was a sort of preliminary study to be reused and adapted for further paintings.

Besides free sketches, some drawings which appear to be unfinished clearly show the various steps of production involved. In *A Princess Receives Flowers* from Kangra, in the Pahari region, the first sketch was roughly executed with red ink (RP-T-1993-299),<sup>14</sup> then a thin coating of white priming was applied. Depending on the region and the practice, white chalk or white lead were used. Then the drawing was repeated with a precise black line. When the composition was complete, a second layer of white ground was laid over the drawing in such a thickness that the black lines remain visible. The ground, followed by burnishing, prepares the support and prevents the paints being absorbed by the paper. It also smooths the preparatory drawing. Then the first colouring is undertaken on the image, such as the blue of the sky and the green of the grass and the trees.<sup>15</sup>

Infrared reflectography was used to visualise the underdrawings of some final paintings and therefore to detect alterations between the primary design and the finished painting.<sup>16</sup> The method revealed the initial composition of a large-scale scene from the *Mahabharata* painted in Kangra in the first half of the nineteenth century (RP-T-1979-33).<sup>17</sup> Significant changes were observed. A bird in the upper right part of the image is missing in the final painting, although he was sketched in charcoal in the preliminary composition. The blood and the details of weapons, armouries and arrows were done at the end, above the paint layers. The arm of a warrior in the middle of the composition, which is present in the early sketch, was eventually chopped off in the final painting. Only the outlines of the buildings were drawn, whereas the bricks and the arches were painted at the end. And the group of warriors on the left-hand side is not present in the final version.<sup>18</sup>

#### Indian drawings as testimonies of the apprenticeship

Several drawings of the Rijksmuseum, coming mostly from Rajasthan, emphasise the importance of copying the models, studying the older compositions, and sketching from nature. A very cursory

15 For more information about the making processes of Pahari paintings, see V.C. Ohri, *The technique of Pahari painting: an inquiry into aspects of materials, methods and history (based upon observation and field-work)*, (Shimla, New Delhi: Aryan Books International Indian Institute of Advanced Study, 2001), 52.

16 Infrared reflectography was carried out with OSIRIS A1, Opus Instruments Ltd, operation wavelength 0.9–1.7µm, 150mm focal length F/5.6–F45.

17 *The Wrath of Jarasandha at Mathura*, Kangra, 1820, Pahari region, RP-T-1979-33.

18 To visualise the under-drawing of the painting by using the curtain viewer, visit this [link](#). (N.B. This site is only supported in Google Chrome.)



Fig. 2 *The Celebration of Gangaur*, Bundi, Rajasthan, eighteenth century, RP-T-1993-269. The primary sketch was briefly executed in orange ink, whereas the final composition was made with strong lines drawn in black ink.



Fig. 3.1 Study for tiger hunt, Kotah, Rajasthan, 1830, RP-T-1993-266.

19 *Fighting animals*, Kotah, Rajasthan, eighteenth century, [RP-T-1993-267](#).

20 For some examples of drawings from Deccan and Kotah illustrating the synthesis of Iranian influences and Hindu elements see S.C. Welch, ed., *Gods, kings and tigers: the art of Kotah* (Munich: Prestel, 1997), 17–18.

21 *Manini Nayika*, Kangra, Pahari region, 1810, Volkenkunde Museum, Leiden, RV 3025-59.

22 Chajju (1775–1850), grandson of Manaku, belongs to the 'second generation of Guler,' a dynasty of painters descending from Pendit Seu. To visualise the under-drawing of the painting by using the curtain viewer, visit this [link](#). (N.B. This site is only supported in Google Chrome.)



Fig. 3.2 *Tiger Hunt*, Kotah, Rajasthan, 1830, RP-T-1993-274.

sketch featuring a tiger hunt is representative of the production of Kotah in Rajasthan (RP-T-1993-266). The forests of the kingdom were full of tigers and the hunt was the favourite occupation of the Rajas (Fig. 3.1). The dynamism of the composition is stressed by the diagonal of the net, the bounding tiger, and the position of the hunters in the elevated shelter ready to shoot. Compared to a painting from the collection illustrating the same subject (RP-T-1993-274), the drawing offers a more expressive version (Fig. 3.2).

Artists were of course drawing from life, as was the case here. We know that painters followed their patrons during journeys, battles and hunts, and recorded their activities. But most often their education came from copying older drawings and paintings, which served as exemplars of widely used motifs.

In keeping with this, another drawing, also from Kotah and showing fighting animals, is inspired by fifteenth- and sixteenth-century Iranian models (RP-T-1993-267).<sup>19</sup> The insertion of creatures into decorative vine scrolls has a long history in Persian art, and dates back to at least the twelfth century. Why is such a design found in Rajasthan and in Kotah? The reason is that, because of politics and conflicts at the end of the fifteenth century, Iranian artists migrated to Deccan, a region located in central India. This results in the production of energetic drawings, a fusion of imported Muslim and native Hindu elements. At the collapsing of the Decani courts in the late seventeenth century, some artists found refuge and sponsorship at the court of Kotah, transporting with them influences and models which inspired further generations of artists up to the nineteenth century.<sup>20</sup> The contour line of the drawing here is somehow static and unmodulated, but traces of charcoal in some places, such as in the deer at the bottom of the composition, indicate that a preliminary sketch was done beforehand. Therefore the copy of old models was not only part of the education of the artists, but also played a role in the physical transmission of these models for the future painters. Copies and models often stayed in the court workshop, and were passed on to pupils for study and as a reference for further compositions.

From a technical aspect, drawings also contain interesting details featuring artists' habits. Sometimes, on the reverse of some sheets or on the margin of some paintings, we encounter intriguing patterns of strokes and lines. These are in fact tests by the painter. Just before engaging his brush he used to check the flow or the amount of ink, and so the support of the artwork served as a blotter to absorb excess of pigment or ink contained in the brush. A drawing from the Volkenkunde Museum in Leiden featuring *Manini Nayika* illustrates this aspect and shows an extensive network of trials on the verso.<sup>21</sup> On a painting from Chamba in the Pahari region, showing *Radha* flirting with *Krishna* (RP-T-1993-123), infrared reflectography reveals that under the blue painted border, some trial lines were made by the painter (Fig. 4). The painting is attributed to Chajju, an accomplished artist who belonged to a very well-established family of painters in the Pahari lands.<sup>22</sup> Both the clarity of the drawing,



Fig. 4 The infrared reflectography image reveals some trial lines present below the blue paint of the borders of the painting attributed to Chajju featuring *Radha flirting with Krishna*, Chamba, 1800, RP-T-1993-123.

which shows almost no alterations between the underdrawing and the final painting, and the accuracy of the contour lines, indicate that he completely mastered his drawing.

#### Drawings as artworks in their own right

Finally, the last point of the study features drawings as artworks in their own right. The art of brush drawing called *nim qalam*, which means 'half pen,' developed in North India at the Mughal court. This style on the one hand echoed the monochrome engravings brought by Jesuit missionaries and other European travelers after 1580, and on the other found inspira-



Fig. 5 Portrait of a Mughal prince, 1700, RP-T-1979-31.

23 Y. Rice, 'Lines of Perception, European Prints and the Mughal Kitabkhana', *Prints in Translation, 1450–1750: Images, Materiality, Space*, eds. S. Karr and E. Wouk (London: Routledge, 2017), 202.

24 RP-T-1945-1, RP-T-1993-185, and RP-T-1948-5 are viewable on the [Rijksmuseum website](#).

tion from Iranian models.<sup>23</sup> The technique involves the application of monochromatic lines made with a fine brush to produce subtle gradations of tone. The Rijksmuseum holds skilled portraits of courtiers and princes executed with black ink on refined papers.<sup>24</sup> Only details symbolizing the noble rank of the figure such as the jewels, dagger, sword and rich garments are highlighted with gold paint and touches of colours. Shading and modelling are done with fine brushwork such as stippling or hatching. An incomplete portrait of a Mughal prince (RP-T-1979-31), dated 1700, epitomizes the art of portraiture at the imperial court. No details such as the jewels, brocade sash, or the turban ornaments were executed, only the thumb ring was outlined. Both hands hold stems indicating that two flowers were meant to be painted. Although it is unfinished, the artwork emphasizes the production process involved to create such an object: subtle lines of ink depicted his physical features—the beard, the hair, the



Fig. 6 UV photograph of *The taming of a Rogue Elephant*, Kotah, Rajasthan, circa 1725–1745, Rp-T-1991-7. To see the painting under daylight, visit this [link](#).

eyebrows, the eyelashes—whilst the lips were highlighted with pale touches of red paint (Fig. 5). This may indicate that the master painter first undertook the most important part of the composition, the portrait, and then the rest was completed by a secondary painter or a pupil.

Another striking example from Kotah in Rajasthan is a coloured drawing showing the taming of a rogue elephant (RP-T-1991-7). Elephant scenes were a specialty in Kotah in the eighteenth century, and the animal became a pictorial subject on its own. It is interesting to note that the skilful modelling of the animal, made of cross hatching, contrasts with the multiple lines of the preliminary sketch which was intentionally left visible by the monochrome yellow background, producing a vigorous effect. With the naked eye the change can barely be seen in the position of the right arm of the attendant at the bottom left of the image. In the primary composition the pose of the attendant was rather simple, with both arms simply splayed out. But in the final version the arm was repositioned to make the composition more dramatic, and the initial sketch roughly concealed with yellow paint. Under UV light, the paint used for the correction has a neon yellow fluorescence distinct from the paint used for the background (Fig. 6). This may indicate that this was done at a later stage. However, this particular fluorescence is typical of Indian yellow, a pigment used widely in North India and in Rajasthan at the time.<sup>25</sup>

#### Materiality and usage: colouring materials and paper

##### 1. Identification of some pigments

A significant phase of the project sought to identify some of the colouring materials in order to provide an insight into the palette of pigments and inks used. Compared to their Western equivalents, little has been researched on Indian paintings in general or more particularly on provincial courts in Rajasthan and Pahari regions. Although V.C. Ohri, in his dissertation *The technique of Pahari painting: an inquiry into aspects of materials, methods and history*, delivers a comprehensive description of the materials and the techniques of Pahari masters, his study is mainly based on fieldwork, observation and conversations with artists. Nevertheless, the author stresses the need for scientific investigation to support the oral sources.

25 E. Isacco and J. Darrah, 'The Ultraviolet-Infrared Method of Analysis, a Scientific Approach to the Study of Indian Miniatures,' *Artibus Asiae* 53, No. 3/4 (1993): 470.





**Fig. 7** Krishna with the cows in front of the Linga, Bundi, Rajasthan, 1780, RPT-1993-263. The colour annotations were analysed with XRF to get an overview of the palette used.

26 XRF analysis were performed with Artax 2.0, polycarpellary lens, Model MCBM 50-0,6, molybdenum tube, focus 0,05 x 0,005 mm<sup>2</sup>. The setting was 50 Kv, 600 µA, 120 seconds, without helium.

Therefore, X-ray fluorescence (XRF) was run on some drawings to get an overview of the pigments used.<sup>26</sup> As for the model drawing from Bundi featuring Krishna in front of a linga (RP-T-1993-263), the colour indications made of touches of pigments were analysed (Fig. 7). Like the model for *The Coronation of Rama* seen earlier, it is curious to see that even the elements whose colours are obvious are still annotated, such as the green for the trees and the blue for the sky or the river, or for Krishna's skin which is a pictorial canon and was almost always painted in blue. This might indicate that this practice was somehow standardised and automatic. However, the various spectra and data show that the green was made from copper green, and maybe a bit of vermilion, as attested by the presence of mercury. The dark red was made from lead red and vermilion, the white from lead white, the orange of the cow from vermilion, the orange from the sky of vermilion and lead white. Blue was difficult to identify because some options, like indigo and lapis lazuli, contain only light elements not detectable with XRF, and the copper found in pigments like azurite is also present in other blue and blue-green pigments. The observation with UV light also reveals that the yellow pigment is Indian yellow because of its peculiar neon yellow fluorescence, and the presence of lead

white is confirmed by its specific purple fluorescence.<sup>27</sup> The results show that the pigments unsurprisingly correspond to what is usually found in the literature.<sup>28</sup>

### 2. Identification of the reddish and brownish inks in some sketches

Some art history essays and catalogues mention the use of sanguine ink to draw the primary sketch in red as referred to above.<sup>29</sup> Sanguine is a generic term used to refer to the colour of the ink, but may suggest that red ochre was used. However, no scientific research has yet been done on Indian inks. The colours of the various inks used in the Rijksmuseum drawings range from bright orange to brownish shades. Again, XRF was used as a screening method to determine the various components of the drawing inks found in nine drawings from Pahari and Rajasthan. Carbon inks also contain iron, lead, calcium, and sometimes copper, so while carbon is not detectable, the latter elements allow us to characterize the nature of the ink. The survey revealed that vermilion and lead red may be part of the composition of a red ink in three drawings (Table 1). As for the brownish inks tested in six drawings, the results indicate that some red components such as vermilion and/or red lead were probably added to a carbon-based ink in order to alter and smoothen the black tone of the latter (Table 2). If the data only constitutes a first step in material identification, this nonetheless gives us an insight into the materiality and provides perspectives for further research.

**Table 1.** Elementary analysis with XRF of reddish looking inks.

Drawing number	Elements found with XRF	Possible material
RP-T-1993-269, orange ink <i>Celebration of Gangaur</i> , Bundi	Pb, Hg	Red lead + vermilion
RP-T-1993-299, red ink <i>Lady receives flowers</i> , Kangra	Pb, Ba, Fe	Red lead + barium sulfate?
RP-T-1993-300, red ink <i>Radha and Krishna</i> , Kangra	Hg, Fe	Vermilion

**Table 2.** Elementary analysis with XRF of brownish looking inks.

Drawing number	Elements found with XRF	Possible material
RP-T-1993-266, verso, <i>24 Jains Tirthankara symbols</i> , Kotah	Fe, Pb, Hg	Probably carbon-based ink + vermilion + maybe red lead
RP-T-1993-268, <i>Fighting animals in a landscape</i> , Kotah	Fe, Pb, Hg	Probably carbon-based ink + red lead and vermilion
RP-T-1993-281, <i>Ladies on a Terrace</i> , Jaipur or Murshidabad	Fe, Pb, but no significant peaks	Probably carbon-based ink
RP-T-1993-267, <i>Fighting Animals</i> , Kotah	Fe, Hg	Probably carbon-based ink + vermilion
AK-MAK-1409, recto, <i>Study for Boars, Peacock, Parrot and Tower</i> , Rajasthan	Fe, Pb, but no significant peaks	Probably carbon-based ink
RP-T-1979-31, <i>Portrait of a Courtier</i> , Mughal India	Fe, Cu, Pb, Hg	Probably carbon-based ink + vermilion and maybe red lead

### 3. Reuse of paper

Paper was a precious commodity that was often kept and reused, particularly in the small provincial court studios, which had more modest resources and supplies than the imperial workshop. In Rajasthan and therefore in Kotah, every scrap of paper was filled to avoid waste; it was a common practice to use both sides of a sheet of paper. On the reverse of *The Tiger Hunt* (RP-T-1993-266, seen earlier) there was a drawn table with symbols, which is not easy to identify at first glance (Fig. 8). With a bit of research, these appear to be the 24 *Tirthankara* symbols from Jainism, one of the three major religions of north India. Jains believe in a cycle of reincarnations influenced by the effects of the individual's actions. The ultimate goal of the believer is to break the cycle and achieve liberation. Jains worship a group of 24 liberated souls called *Tirthankaras*, who act as teachers to the faithful. In the upper left corner of the chart, a haloed saint is still identifiable, sitting crossed legged on a throne with his representative symbol, the bull, below him. Further down the chart, the figures become more and more schematised until, in the lower right corner, they are merely two scribbles, symbolising the saint in the form of a figure of eight and a fish underneath. The different inks were analysed with XRF to identify their components. The deep black ink on the recto was a carbon ink

<sup>27</sup> E. Isacco and J. Darrah, 470.

<sup>28</sup> The literature on Indian pigments and techniques can be classified in five categories: the ancient treatises in Sanskrit see I. Nardi, *The Theory of Chitrasutras in India Paintings: a critical re-evaluation of their uses and interpretations* (London, New-York: Routledge, 2006), 120; the technical essays such as, among others, M. Chandra, *The technique of Mughal painting* (Lucknow: Provincial Museum, U.P. Historical Society, 1949), P. Brown, *Indian painting under the Mughals, A.D. 1550 to A.D. 1750* (Oxford: Clarendon Press, 1924); the scholarly dissertations based on surveys such as *Lapislazuli, Gold und Eichhörnchenhaare, Materialien und Techniken der Pigmentmalerei, Aus der Werkstatt von Meister Bannuji in Jaipur* (Zürich: Museum Rietberg, 2011); V.C. Ohri, *The technique of Pahari painting: an inquiry into aspects of materials, methods and history (based upon observation and field-work)* (Shimla, New Delhi: Aryan Books International Indian Institute of Advanced Study, 2001); the scientific essays reporting results of analysis: C.W. Bowen, 'Line and Color: Painting Materials and Techniques in Kotah', in *Gods, kings and tigers: the art of Kotah*, ed. S.C. Welch (Munich: Prestel, 1997), 83 and E. Isacco, *Les Pigments des Miniatures Indiennes* (Paris: l'Asiathèque, 2008); and the conservation or technical art history studies as seen in conservation journals and blogs such as the Chester Beatty Library and the Metropolitan Museum of Art.

<sup>29</sup> A.M. Cameron, 47, 52; V.C. Ohri, 44.



Fig. 8 The 24 Tirthankara Symbols, verso of a study for a tiger hunt, Kotah, Rajasthan, 1830, RP-T-1993-266-(V).

which also contained lead and copper, whereas the brownish ink on the verso contained these elements plus mercury and iron, which can be interpreted as vermilion and an iron-based product. It is difficult to say whether the latter is an iron oxide or if it comes from a byproduct (inks can be made in iron pots). However, this indicates that both inks are made from different materials. It is therefore possible that the sketch on the verso is from another hand, perhaps from a devotee of Jainism. It is known that the workshops hosted painters from diverse origins and religions—Muslim, Hindu or Jains. This reveals the context of the artwork and the intertwining between secular and religious art, as well as the interaction between artists of different traditions and beliefs, and the transmission of materials and ideas through journeys and exchanges among regional centres.<sup>30</sup>

30 A.M. Cameron, 40, 46.

Other Rajput paintings and drawings from the Rijksmuseum also show similar paper reuse and thus synthesis of influences and cultures. For instance, the drawing AK-MAK-1409 presents on the recto a sketched composition of different animals (parrot, peacock, boars and tower), all drawn from the same hand with the same ink, whereas the verso features an assemblage of various disparate elements such as the lotus feet of Krishna and Vishnu, a sketched horse and a floral motive, made of blue and red inks respectively (Fig. 9.1 and 9.2). As a matter of fact, in Indian paintings, parrots and peacocks are very common birds that every painter must know how to draw. And boars are often represented in Rajput paintings since Rajas were fervent hunting enthusiasts. It is, however, interesting to see the juxtaposition of powerful religious symbols—lotus feet being a metaphor for the divine feet of the gods, saints and other exalted spiritual beings—with living beings such as those described above.

Another significant example of this practice is seen in the making of the painting supports called *wasli*, paste-board constituted of laminated sheets of paper. In a *Portrait of Sukh-jivan Khan*, a ruler from Kashmir during the eighteenth century (RP-T-1992-10), infrared reflectography reveals that a drawing sheet was reused to make the *wasli*. The underlying sheet shows an elephant head, a bird with oversized wings, and a sort of magical creature with horse legs and a dragon tail (Fig. 10).<sup>31</sup> There were notable paper mills in the region of Jammu and Kashmir, and in Rajasthan. Among others, Sialkot, in modern day Pakistan, and Sanganer in Rajasthan, were active centres, producing well known paper of good quality and

31 To visualize the item with the curtain viewer, visit this [link](#). (N.B. This site is only supported in Google Chrome.)

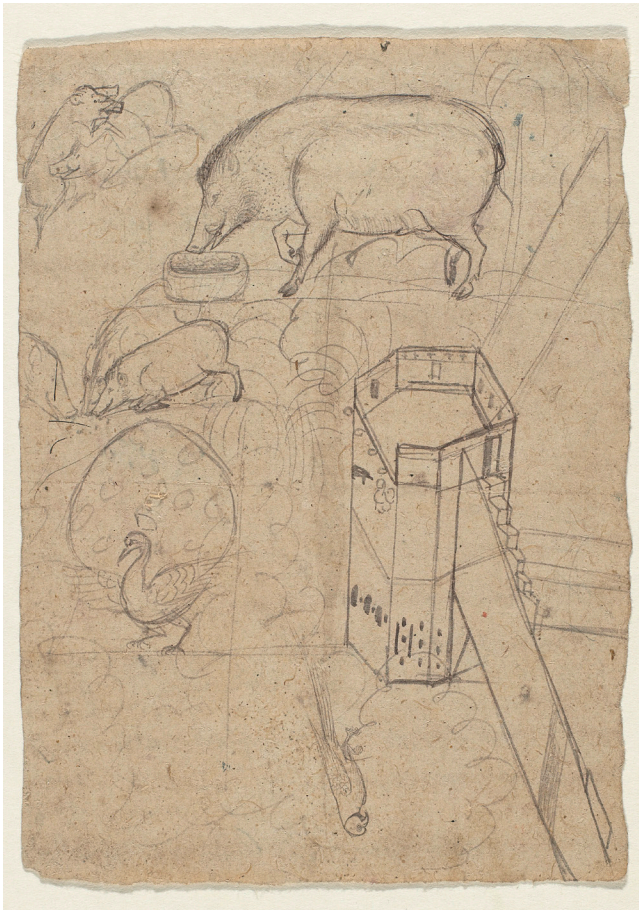


Fig. 9.1 *Study of Boars, Peacock, Parrot and Tower*, recto, Kotah, Rajasthan, nineteenth century, AK-MAK-1409-(R).



Fig. 9.2 Religious (lotus feet) and secular motives (horse and floral arabesque), verso of a *Study for Boars, Peacock, Parrot and Tower*, Rajasthan, nineteenth century, AK-MAK-1409-(V).

supplying workshops and painters. Sialkot was only about 260 km from Kangra, and according to Ohri it is most likely that artists were sourced from this centre.<sup>32</sup>

### Conclusion

If they are not unfinished paintings, the drawings presented are at once working documents, subjects of study and reflection of workshop practices, and also the results of artists' creativity, fantasy or spontaneity. The poor condition of some sheets indicate that these played their role as a didactic material and were extensively used. These objects do not represent challenging conservation issues requiring innovative treatments. Nevertheless, it is important to work (with a minimal approach) to preserve any traces of the past and evidence of usage. Therefore, appropriate mounting systems should be developed to preserve these fragile and damaged sheets, and to allow safe handling for further studies. An important question is how to appreciate these items. Displaying such artworks can be challenging because they are often scarcely legible from a distance or in low lighting, and their condition compromises their viewing. Many drawings are not particularly attractive from an artistic point of view, and contain small details which can only be appreciated close-up. Each detail has a story to tell and allows us to explore their use and function, but also their intrinsic social and historical context.

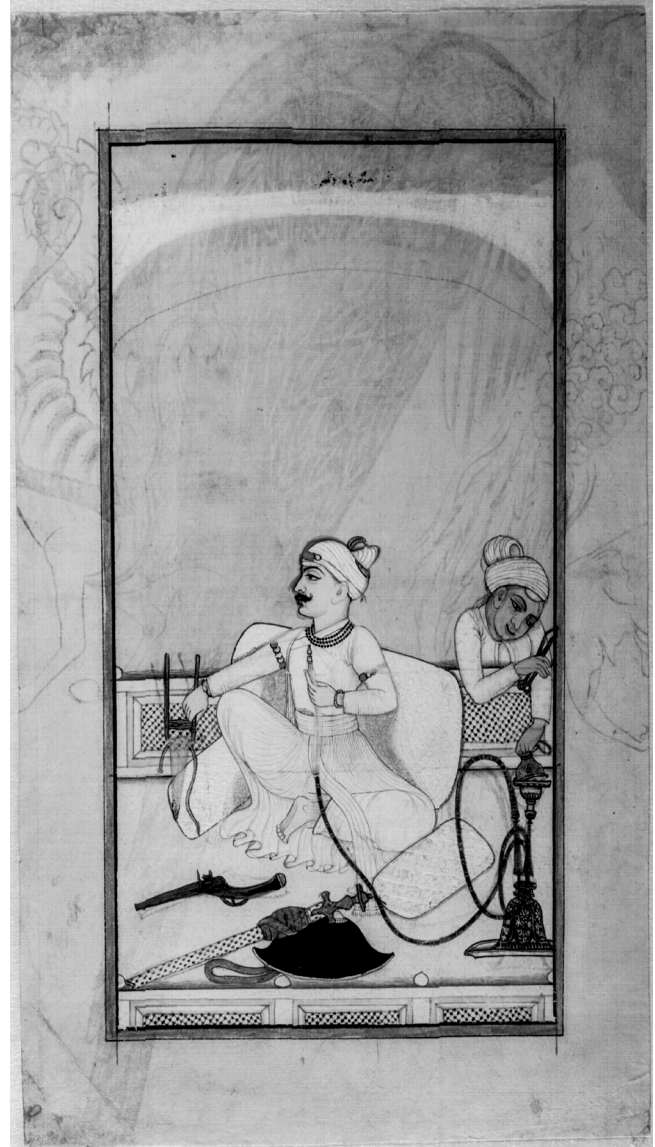
32 V.C. Ohri, 45.

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#### Biography

Amélie Couvrat Desvergnès is a book and paper conservator specialising in Islamic and Indo-Islamic manuscripts and paintings. She worked at the Museum of Islamic Art in Qatar for five years and for more than ten years as freelance conservator in France, then in the paper studio of the conservation department at the Rijksmuseum Amsterdam, and is now in private practice. She has conducted several research projects in the field of Technical Art History and Materiality, particularly on Iranian and Moroccan manuscripts, and she is now focusing her interest on Indian drawings from the Rijksmuseum collection.



**Fig. 10** Infrared reflectography reveals that a sheet of paper used to make the paste-board support of the painting contains several sketches of magical creatures. *Portrait of Sukhjivan Khan*, Jammu- Kashmir, 1660-1760, RP-T-1992-10.

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