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Old Goa Revelations: A collaborative project on the shared heritage between India and Portugal

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Abstract
In this collaborative project, a working group was formed for the integrated study of an Indo-Portuguese shared heritage collection: the Viceroys' Gallery. A Portuguese team with expertise

SHARED HERITAGE CONTEXT

The gallery known as the Viceroys' Portrait Gallery is dedicated to the Viceroys and Governors of the former *Estado da India*, the territories in the Indian Ocean held by Portugal between 1505 and 1961 (Figure 1). It is a unique collection representing the history of both Portugal and India, mostly due to the documental and iconographic value associated with the people depicted in the portraits. In fact, despite their overpainting, these portraits are the only known representations of most of these administrators. As such, they are a reliable source of information on specific Portuguese traditions, especially those related to military uniforms, calligraphy and heraldry, but also on the materials and techniques of Indo-Portuguese painting.

The collection currently consists of 88 paintings on wood panels and 32 on canvas and is under the custody of the Archaeological Survey of India (ASI), an office attached to the Ministry of Culture. A portion of the collection is exhibited at the museum, the former Convent of St Francis of Assisi (Figure 1b and 1c) located in the World Heritage Site of Old Goa, once the capital of Portuguese India. Three portraits, however, are exhibited at the Portuguese National Museum of Ancient Art (MNAA).

Figure 1. Portrait gallery: (a) Pangim Palace, 1939, © AHU; (b–c) ASI Museum. Photos: Fernando Pereira, 2019, courtesy of ASI

In 1547, D. João de Castro requested that the keeper of the archives, historian Gaspar Correia, cooperate with a local painter in portraying the physical and personal features of the 12 administrators who preceded him (Correia and Felner 1864). This portrait gallery was to be included in the main Acts' Room of the Vice Regal Palace with the purpose of glorifying the Portuguese endeavour overseas.

The tradition continued and during the following centuries the best local painters available would be summoned to portray their administrators as the latter reached the end of their tenure. The resulting hybrid production, in

in heritage science, art history, biotechnology, conservation and museology travelled to Goa (India) in January 2019. Using a mobile unit, the team performed in situ analyses (combining physical imaging tools and micro-analytical techniques) of eight paintings with multi-repainted layers. The paintings had been previously selected according to their potential to illustrate issues of interpretation. Participating in the fieldwork were senior and junior researchers from the Archaeological Survey of India, who received training and capacity building in art-historical assessments, scientific methodology and the interpretation of paintings analysis data. The collaboration resulted in the first appreciation of the intrinsic values of this heritage from the perspective of Portuguese and Indian researchers as well as new insights into this collection. As such, it demonstrated the benefits of this approach in the interpretation and preservation of a shared heritage.

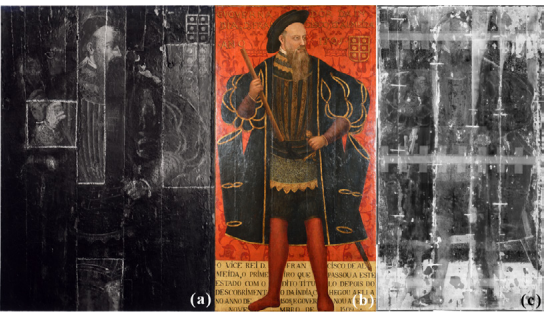


Figure 3. *Viceroy D. Francisco de Almeida*: (a) removal of the repaints, 1954, © DGPC; (b) under standard light; (c) X-ray radiography image, © JFL/HERCULES 2013

which local techniques were applied to interpret the iconography and style of the European models, brought a unique aspect to the artistic production in Goa over the 16th and 17th centuries. The importance of the portraits in the Portuguese diplomatic strategy was no doubt the reason for their periodic restorations to counter the adverse effects of the sub-tropical climate on the wooden structure supporting the paintings.

Thus, the oldest portraits (1547–81) were fully overpainted at least three times, according to reproductions of this collection from the 16th to the 19th century. Figure 2 illustrates the changes in the portrait of *Governor Jorge Cabral* (ca. 1550), in which at least three different stylistic versions overlay the original composition. Among the goals of the project were to find evidence of these primitive layers and to determine their conservation condition, given their centuries of exposure to the adverse climatic conditions.

Figure 2. *Governor Jorge Cabral*: (a) reproduction from 1547, © BNP; (b) reproduction from 1565, © CNCDP; (c) reproduction from 1646, © BL; (d) reproduction from 1890, courtesy of Pangim Central Library; (e) standard light photography. Photos: Luís Piorro, 2019, courtesy of ASI

PROJECT BACKGROUND AND DEVELOPMENT

Based on the above-mentioned reproductions collected over the centuries (Resende 1646, Correia and Felner 1864, Roncón 1890, Abreu 1992), the portraits once matched the early descriptions found in Gaspar Correia's chronicles (1864), including the pose of their subjects and how these men were dressed and armed. However, the later reproductions showed that, over time, the general composition of the portraits changed, as demonstrated by the painting *Governor Jorge Cabral*, and by some identified cases wich reused or replaced during their history.

Support for this conclusion came from the restoration reports on seven paintings that had been taken to Lisbon in 1953 for examination and restoration (Mardel 1956, Moura 1960). Figures 3–5 show these paintings before and after the removal of the full overpaints and thus their clear stylistic differences. Moreover, during previous fieldwork in Goa (2002, 2005 and 2011), the remains of outlines and textures under the surface layers of the majority of the panel paintings had been identified by naked-eye observations. These inspections motivated a scientific study aimed at revealing the primitive layers using physical imaging techniques and at making the resulting information accessible to custodians to facilitate the further care of the collection.

In 2002, the first initiatives to develop a joint project came from Portuguese conservators-restorers – the late Miguel Mateus, José Pestana – and from ASI's Deputy Superintended Archaeologist N. Taher. Ten years later, with the availability of HERCULES Laboratory's mobile unit, which is

Figure 4. *Viceroy D. Francisco de Mascarenhas*: (a) the portrait was identified in the inscription as Governor Lopo Soares de Albergaria, which did not match the coat of arms of the Mascarenhas family, © DGPC 1957; (b) the portrait of Viceroy Mascarenhas was under the repaint from the 18th–19th century, © JFL/HERCULES 2013

equipped with non-invasive imaging devices, an initial examination of the three portraits from the MNAA was conducted to provide the ASI with additional data on the expected results of the project.

However, a correlation of the documental and scientific data regarding the primitive layers provided unexpected results which called into question the previously established chronology and authenticity of the paintings as well as the applied conservation measures (Reis 2014, Reis et al. 2014, Reis and Candeias 2017, Reis et al. 2019):

- **Construction techniques related to a specific timeframe revealed discrepancies.** A comparison of portraits attributed to the year 1547 suggested that the one shown in Figure 3c, with a large number of wooden planks and in the worst conservation condition (according to the X-ray image) is coeval whereas the portrait shown in Figure 5b, painted on fewer planks and in better condition, was produced later and the original portrait was probably lost or recycled.
- **Iconographic discrepancies in the coats of arms suggesting the overlap of two different portraits** is exemplified in Figure 4, in which the coat of arms does not match the family name from the inscription in Figure 4a. The person shown in Figure 4b had been reused to paint other person, with the painter having copied the same coat of arms.
- **Repainted layers had been removed but resulted in the loss of documental and iconographic information.** In the portraits shown in Figures 3 and 5, the original layers may have suffered large areas of paint loss. The gradual loss of inscriptions or iconographic elements and their subsequent reconstruction without reliable sources may have led to misinterpretations. This is seen in the portrait of Figure 5, in which the palm leaf crown (an important iconographic element related to that Viceroy) was overpainted, and in Figure 3b and 3c, which compares the results of the retouching process with the damage to the original paint layer, captured by X-ray radiography.

This information was shared with MNAA's curators but it also aided in a proper interpretation of the whole collection. Actively engaging the current custodian in Goa in the process was essential, not only to allow a comparative study of the Goan portraits but also to acquire deeper knowledge of the history of the collection as well as its technical and material features.

This was the main goal of the collaborative project Old Goa Revelations*:* New Insights into the Viceroys' Gallery (OGR), an integrated and multidisciplinary approach created at the transnational level in order to develop tools for the interpretation of these portraits and therefore for their preservation. Following a proposal in 2012 that included the above-mentioned results, the project was approved in 2017 and coordinated on the Portuguese side by the research centres HERCULES Laboratory, CIEBA and José de Figueiredo Laboratory, and on the Indian side by the ASI's Science Branch (SB).

The ASI sponsored the scientific fieldwork and training of ten of its researchers in the proposed methodology. Senior and junior officials came from different offices and divisions across India: Dehradun, Hyderabad;

Figure 5. *Viceroy D. João de Castro*: (a) before the removal of the repaints; (b) after the removal of all repaint layers; (c) after the integration process, © DGPC 1953–1955; (d) reproduction from 1646 proving the existence of a leaf crown that was painted in the primitive layer but covered during subsequent integration processes, © BL

Indore; Aurangabad; and Conservation Research Laboratory Ajanta. The SB scientific team consisted of nine archaeological chemists and a senior modeller, who were joined by two photographers and the museum's assistant archaeologist.

MAIN GOALS OF THE TRAINING PROJECT

In addition to providing training and capacity building, the aim of the project was to create a long-term network and working group with the ASI's SB researchers and chemical conservators in charge of this collection. This was especially important given the latter's lack of experience in panel paintings of European tradition, a rarity in India. Training would provide the SB team with:

a) new insights into the complexity of these paintings and the historical and material context of the different interventions performed over time;

b) knowledge of the scientific techniques used in the investigations and the advantages of a multi-analytical approach, the use in the respective techniques, interpretation of the data obtained using analytical tools, the context of the artworks and other aspects of the collection;

c) the opportunity to engage with our team in the exchange of historical and iconographic resources (mostly written in Portuguese), as well as in the interpretation of the findings, based on the use of best practices regarding a shared heritage, especially since the collection can be viewed as a complex puzzle requiring the assemblage of its pieces by all stakeholders; and

d) the tools to address the conservation issues identified and discussed during the training, and therefore with a foundation for decisions related to future interventions.

Considering the time available for the fieldwork and the conditions, eight portraits were selected as reference case studies whose results would illustrate the goals of the project and training:

- two portraits restored in the 1950s in Lisbon,
- two paintings with coats of arms that did not match the person depicted, and
- four portraits with clear evidence of underlying outlines.

TRAINING METHODOLOGY

The training covered the four main areas needed for an integrated approach: a) determination of the historical, artistic and physical contexts; b) instruction in the use of the equipment and scientific techniques needed to investigate the paintings; c) practical training; and d) a discussion of the results. The methodology is summarised in Tables 3 and 4.

Historical, artistic and physical context

This component was coordinated by art historian and museologist Fernando Pereira and by conservator-restorer Teresa Reis. The focus was the ongoing research on the collection's history and the interventions performed over the centuries. Topics of particular interest were Portuguese portraiture,

heraldry and costumes, European influences such as Titian's military portraits as well as the influence of Indian artistic tradition, such as miniature paintings. The results from the MNAA's study were also taken into account, together with the expectations of ASI Museum. These topics were further approached during practical training.

Equipment and scientific techniques

The ASI's team technical knowledge mostly involved the equipment in their fixed laboratories but also that derived from examinations and analyses of the mural paintings and archaeological artefacts at a wide range of sites under their custody. The aim of this training component was capacity-building in the scientific tools and techniques available for the study of a rare typology, i.e. panel paintings from European models, and a demonstration of the benefits of a mobile unit laboratory for use in the everyday tasks of the ASI.

Lectures were held by the scientific coordinator, António Candeias, and addressed the technical features of the equipment and the kinds of information that could be expected from the various examination techniques when applied to the material study of easel paintings and other artworks more familiar to the SB team.

Practical training

Different working areas were created bearing in mind the number of trainees, safety from exposure to radiation, the technical requirements for the examinations and minimum handling of the objects (Tables 1 and 2). The examination and analytical techniques used in this project were non-invasive (see Table 2) and followed a methodology similar to that used in other projects by the HERCULES Laboratory (Gomes et al. 2016, Valadas et al. 2016, Reis et al. 2019).

Table 1. Examination chart from the OGR sessions

Techniques / Portraits	Standard light photography	Raking light photography	UV fluorescence photography	X-ray radiography	Infrared reflectography	X-ray fluorescence (handheld)	X-ray fluorescence (2D mapping)
[86] Diogo Sequeira	x	x	x	x	x	x	
[59] D. Francisco Mascarenhas	x	x	x	x	x	x	
[52] Jorge Cabral	x	x	x	x	x	x	x
[61] Matias de Albuquerque	x	x	x	x	x	x	
[154] Miguel de Noronha	x	x	x	x	x	x	
[58] Fernão Teles de Menezes	x	x	x	x	x	x	x
[97] Nuno Álvares Botelho	x	x	x	x	x	x	x
[48] Nuno da Cunha	x	x	x	x	x	x	x
[41] Vasco da Gama	x				x		
[89] D. João de Castro	x				x	x	
[94] Lourenço da Cunha	x				x	x	
[78] Pedro Mascarenhas	x				x	x	
[53] Duarte de Menezes	x				x		
[56] Diogo de Menezes	x				x		
[86] Henrique de Menezes	x				x	x	

Figure 6. OGR sessions: (a) naked-eye technical observations; (b) practical training in infrared reflectography; (c) practical training in X-ray fluorescence 2D mapping. Photos: Mónica Reis, Sara Valadas

Table 2. Examination techniques, equipment and experimental conditions

Technique	Equipment & experimental conditions
Standard and raking light photography	Nikon D2X and Canon EO5 1D 3MK3 photographic camera 2 lighting projectors (tungsten lamps): 30°–45° angle
UV fluorescence photography	Nikon D2X photographic camera + UV filter 2 lighting projectors (UV lamps, Cotelux) 30°–45° angle
IR reflectography	OSIRIS Camera: InGaAs detector; wavelength range: 900–1700 nm; 16 × 16 tile system (4096 × 4096 pixels) 2 lighting projectors (tungsten lamps): 30°–45° angle; acquisition areas: 30–45 cm (DoF F11)
X-ray radiography	Pulsed X-ray source 150 KV; 6 target plates (43 × 37 cm); image processor (Dürr NDT CR3 5SEC scanner) X-ray source: 3.8 m from the painting; 150 kV, 9 mA, 4 × 99 pulses
X-ray fluorescence spectrometer (2D mapping)	ELIO XRF system (Brucker, XGLAB): detector 17 mm^2 SDD with CUBE technology, Rh-target microfocus-X-ray tube and Collimation 1 mm 2D mapping: total travel of around 80 × 80 mm; pixel time: 2,000 s; voltage: 40 kV; current: 20 µA; acquisition time: 5–7 h
Handheld XRF	Tracer III-SD fluorescence spectrometer, Bruker X-Flash® SDD detector, X-ray Rh tube Voltage: 40 kV; current: 30 µA; acquisition time: 30 s

Participants were divided in two groups, each of which was assigned a set of four portraits as described above (Figure 6). The data obtained by the working groups and their observations were recorded on charts previously prepared for each portrait, which documented information such as early reproductions, inscriptions and coats of arms. The charts were continuously updated for use as an interpretation tool for each portrait.

- Area 1: Table for detailed observations of the paintings

Practical training started with naked-eye technical observations of the paintings to collect information on measurements, construction techniques, the materials used, traces from previous interventions, conservation assessments and the selection of areas for in situ analysis. Integration of the information on the historical, artistic and physical context was a constant feature that drew on the different areas of expertise of the team members. Novel insights included incised patterns, marks, numbers and the different construction strategies used in the paintings' wooden supports and frames, which were associated with the probable date of the painting or the date of its restoration. The pedagogic outcome included how to categorise and organise the historical and technical information collected from preliminary observations of these panel paintings.

- Area 2: Full dark room for photographic and radiographic examination

Photographer Luís Piorro coordinated the training sessions on standard light photography, raking light photography (RLP), UV fluorescence photography, X-ray fluorescence (XRF) and X-ray radiography (XRR). The training components focused on the applications and set-up of the equipment, the types of light/radiation sources and their use for documentation, the use of filters, safety procedures, photographic and radiation parameters, the management of files and basic image treatment. Teresa Reis joined the sessions for comments on the conservation assessment information provided by each technique. An example is shown in Figure 7a and f, which demonstrates the use of raking light to reveal different levels of overpaints, outlines related to the underlayer and the losses/paint flakes of the upper layer. Exposure of the paintings to UV allowed the discrimination of recent interventions

such as retouches, fillings and varnish layers, which in turn allowed the SB team to differentiate the ASI interventions from the full overpaints made during the Portuguese period (Figure 8). XRR provided the most rewarding results, as in some cases it revealed a perfect match between the reproductions and the older underlayer (Figure 7b and c, Figure 8) as well as information on the technical construction and conservation condition of the wooden supports (such as fractures, woodborers galleries and the placement of nails). The pedagogic outcomes were the use of different lighting and photographic techniques for the documentation, observation and conservation assessments of easel paintings as well as the benefits of XRR for the study of multi-layered paintings and an interpretation of the results obtained using other methods.

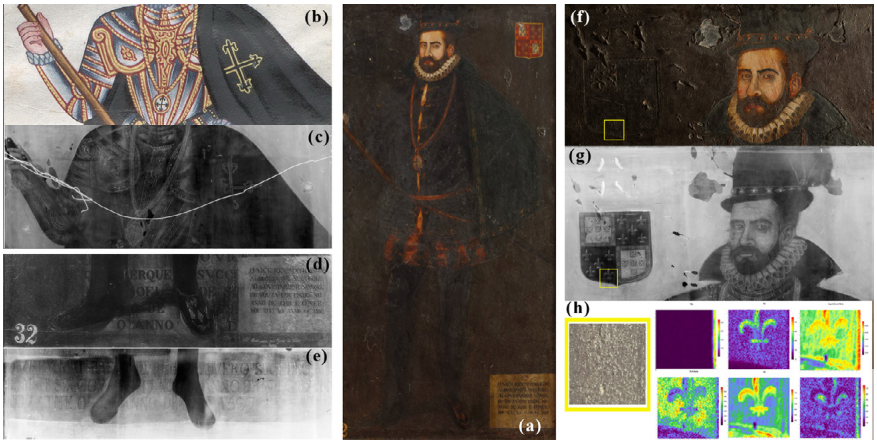


Figure 7. Examination and analysis of the portrait of *Matias de Albuquerque*: (a) standard light photography; (b) detail of an armoured chest from a reproduction from 1646; (c) X-ray radiography (XRR) of the same area revealing a similar composition; (d) infrared reflectography of the lower area revealing an inscription under the surface layer; (e) XRR of the same area revealing another inscription in a more primitive layer, in a total of three overlapping inscriptions; (f) raking light photography highlighting an underpainted coat of arms on the left side of the painting and the area (in yellow) as shown on X-ray fluorescence (XRF) 2D mapping; (g) XRR of the same area revealing the coat of arms; (h) chemical elements detected by XRF in 2D display. © JFL/HERCULES 2019, courtesy of ASI

- Area 3: Infrared reflectography (IRR) examination

Chemists and heritage scientists António Candeias and Sara Valadas coordinated training on IRR examination using an OSIRIS IRR camera, with an emphasis on setting up the equipment and lighting source, adjusting the parameters to the areas of capture and using the OSIRIS camera software. This technique was expected to reveal and discriminate the underdrawings, the outlines of body parts and the inscriptions. However, a comparison with results from XRR was needed to properly distinguish overlapping inscriptions, as demonstrated in Figure 7a, d and e. In total, at least three types of calligraphy were detected in the underlayers, which contributed to the identification of the person and the establishment of a timeline for the layers. The pedagogic outcome was the use and potential of IRR, in conjunction with XRR; to capture information from the intermediate layers in this specific collection.

- Area 4: XRF analysis

António Candeias, Sara Valadas and Ana Machado coordinated training in chemical element analysis using XRF, focusing on the equipment, its use, calibration, handling specificities and interpretation of the results.

Practical exercises involved correlation of the coloured reproductions with the chemical elements found in the pigment mixtures used and their distribution on the paintings' surfaces. The detection of patterns in the colour pallet in the last overpaint and the chemical characterisation of areas already detected by the naked eye were also addressed. There were also training sessions in the software Artax, used in data analysis and in the creation of data-based graphs for a clearer interpretation of the results. The pedagogic outcomes of this module were the use of XRF to identify pigment and pigment mixtures, the formulation of hypotheses about the original painting materials vs. those used in the interventions and the relationship between the interventions and historical sources.

- Area 5: XRF 2D Mapping

The same scientific team coordinated training in XRF 2D mapping, specifically, the assembly of the ELIO equipment, the potential of the technique and the proper set-up to achieve the best results. After areas of underpaints visible to the naked eye and using RLP and IR had been selected, such as decorative textures and coats of arms, 2D XRF maps were employed to gain information about the painting materials used for these motifs as well as to reveal the latter's shapes and the chemical elements present in the respective pigments mixtures. Figure 7f–h illustrates the method used to identify a coat of arms outline under RLP, the capture of the same area through XRR and the chemical characterisation using XRF 2D mapping. Lead (Pb), tin (Sn) and mercuride (Hg) were thus identified, suggesting the use of white lead, lead tin yellow and vermillion pigments in the coat of arms respectively, all of which also matched the colours common to the coat of arms of the depicted Viceroy based on comparisons with documental resources. The pedagogic outcomes of this module were to understand the potential of 2D chemical elemental mappings using the ELIO XRF system to reveal the underlying motifs and to formulate hypotheses about the material composition.

Discussion of the results

A final session was organised to discuss the results of the OGR sessions regarding the tools, capacity building in data interpretation and, overall, best practices for the conservation of a shared heritage.

Regarding the results obtained from the selected portraits and the skills gained in their study:

- Paintings restored in the 1950s provided the SB team with a visual appreciation of the former appearance of the portraits and access to the materials originally used during the analysis of the paintings (despite additions/subtractions by the restoration). Additionally, these cases provided an opportunity to discuss the criteria applied to previous interventions and the lessons for modern practice. In fact, removal of all of the overpaints caused large areas of paint loss, especially in the oldest paintings. Difficulties also arose from the reconstruction and chromatic re-integration, which concealed documental information. In addition, over the years exposure of these more fragile layers to an uncontrolled environment had led to paint flaking and paint loss. The remedial interventions more recently used to provide stability

Figure 8. Identification and interpretation of the layers in the portrait of *Jorge Cabral*. Imaging techniques vs. documental sources

proved to be inadequate and needed replacement. The exchange of skills regarding the proper materials and techniques needed to assure reversibility, material integrity and compatibility was very positive.

- Paintings in which the coats of arms did not match the depicted person demonstrated the importance of iconography and its documental value, since the coat of arms is a European tradition associated with the heraldry of ancestors and/or nobility titles (with specific regulations in terms of shapes, symbols and colours), thus serving as a personal signature. In one case examined, it was revealed the overlap of two portraits.
- Portraits with clear evidence of underlying outlines and their capture by all the techniques used in the sessions provided an immediate visual correlation with old reproductions. The experience also proved that without access to this information, misinterpretation would always be an issue. The analyses of the XRR images of the portraits (Figures 7 and 8) raised questions regarding how well these primitive layers had been preserved and the potential visual impact of removing all of the overpaints. Besides the risks highlighted above, the latter procedure would violate ASI's policies, since layers over 50 years are considered antiquities and a 'layer of history' to be respected (ASI, 2014). This project's integrated approach allowed digital revelation of the primitive underlayers without the need for irreversible procedures.

GLOBAL AND PRACTICAL ACHIEVEMENTS

Integrating the ASI's expertise in the multidisciplinary group contributed to the study with respect to topics such as Indian portraits, the local materials used for artistic production and conservation, examination and analytical techniques, and documental resources, among others. The main achievement of this project was the opportunity to create a working group for the study and preservation of the collection that respected the views from both the Portuguese and Indian sides.

While complaints have been raised that the ASI is not properly safeguarding the collection and that the overpaints should be removed, it is clear that the SB stands by its conservation principles, to maintain authenticity by retaining 'the maximum amount of existing historical material' (ASI 2019). This policy, while perhaps controversial, has kept the primitive layers preserved under the repaints for the last 60 years, bearing in mind the museum's lack of climate control system.

Previous work using decision-making simulations to address the question of whether to remove repaints (Reis et al. 2017) suggested that, in terms of cultural significance, the impact of removing or retaining the overpaints (but with visual access to all layers) would be similar, unlike doing nothing, which would yield a negative result.

Work was also initiated on an exhibition of the examined portraits, to be held in the ASI Museum. The exhibition would tell the story behind each different layer through the use of information panels and media resources, which are still under development. Coincidentally, a few months later, a temporary exhibition in the MNAA dedicated to discoveries involving the

museum's collection adopted a similar approach (DGPC/MNAA 2019). In that exhibition, two Viceroy portraits were presented with a media display based on our previous research, thus demonstrating the impact of the results at a transnational level.

Additionally, in the following months, the ASI Museum and SB continued preservation actions (focused on pest control, the stabilisation of fragile materials and protection from dust), protection against UV and temperature excess in the exhibition gallery, conservation assessments and the planning of urgent remedial interventions.

CONCLUSION

The achievement of this project was the development of a joint strategy that respected both stakeholders and provided the custodians of the artworks with specific training in applying an integrated approach to their analysis. The SB team, networking with the Portuguese team to resolve interpretation issues, was provided with the tools needed to employ this training in the field in an approach that can be used in other shared heritage projects (Bruquetas Galán et al. 2011).

This was the first collaboration between a Portuguese team and the ASI in the scientific study of this collection. The project's impact was reflected in the coordinated efforts of the ASI's Director General, from the headquarters in Delhi (who, as the guest of honour, attended the opening ceremony), the SB's Director Dr Vimal Saxena and the Portuguese team, and in the expected outcomes of the OGR project. This partnership marks a new beginning for Portugal and India in terms of heritage conservation and the positive impact of the present and future work of both parties. Moreover, the trainees gained a new appreciation of their role in the interpretation and preservation of this collection. Their institutions would clearly benefit from

Table 3. Goals and concept of OGR project

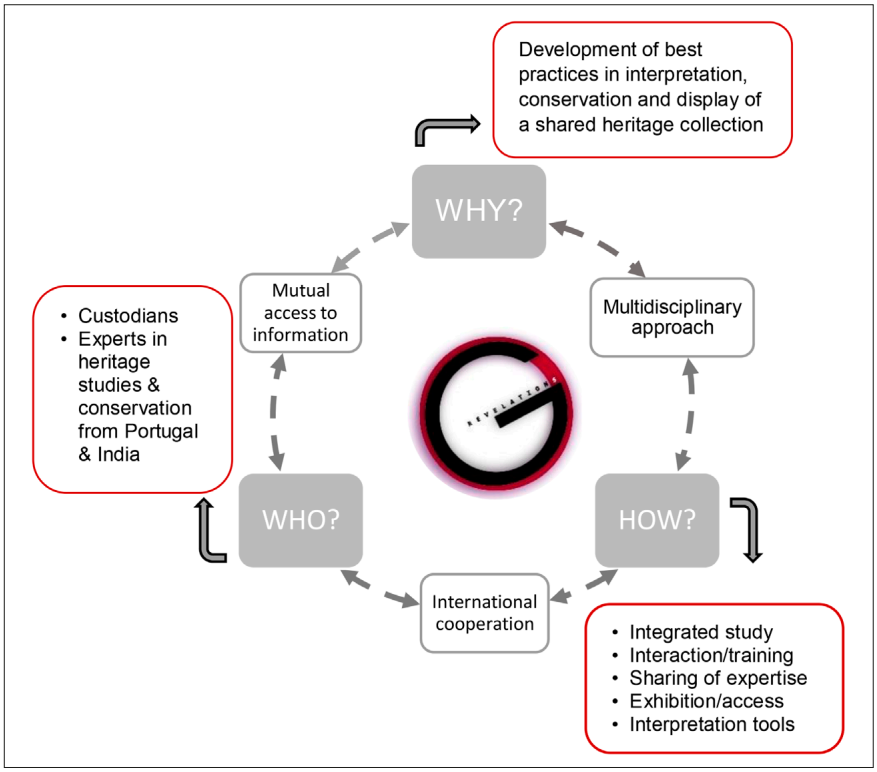
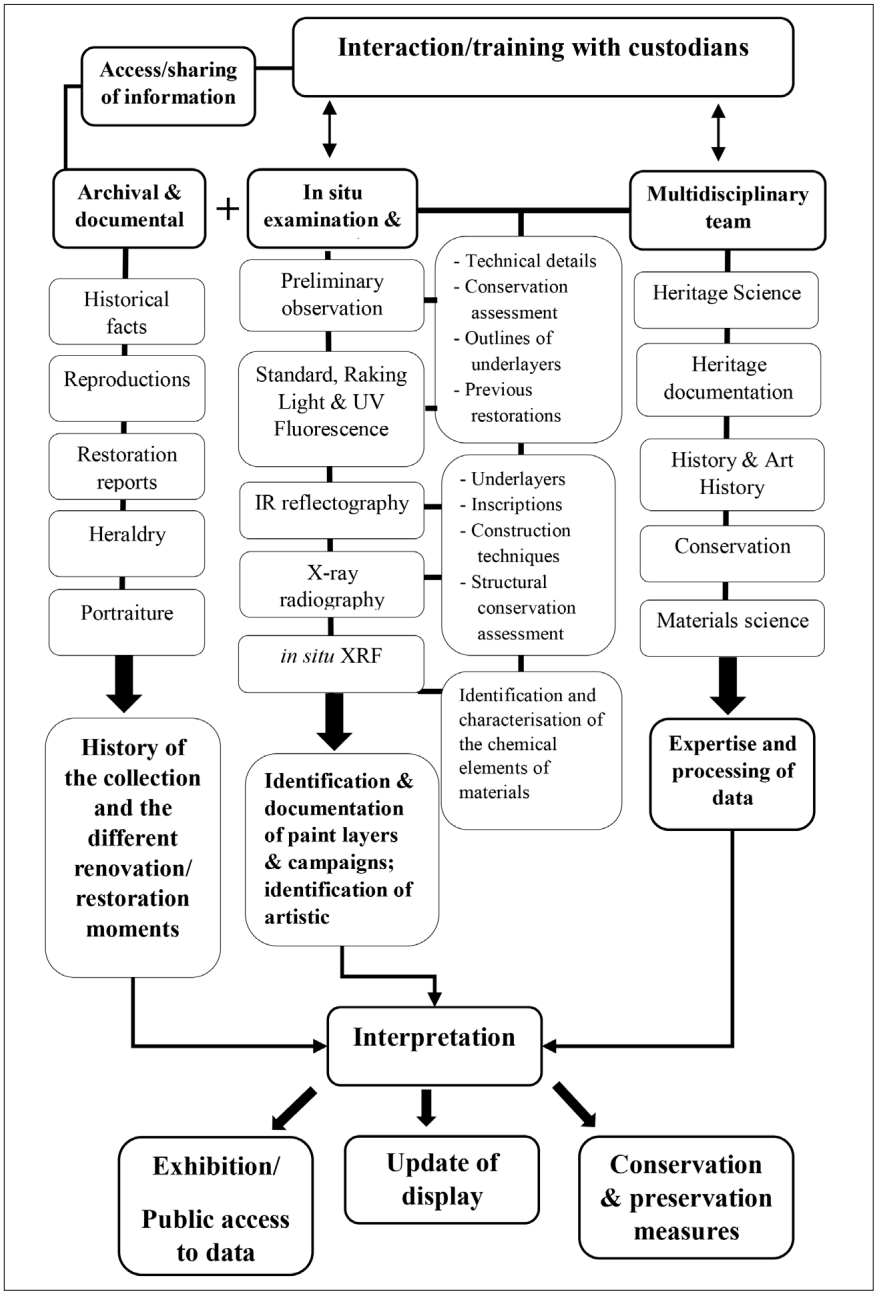


Table 4. Methodology of the OGR project and sessions



further interdisciplinary approaches and more inclusive working methods. When dealing with other shared heritage tasks, the trainees will be more confident and proficient in adapting the tools acquired through this experience.

Implementing this project took almost a decade of commitment from the Indian and Portuguese core members in navigating the institutional and diplomatic protocols. Their efforts finally succeeded in the opening of the ASI's restricted structure to foreign colleagues. Despite the sensitive issues implied by the collection, the Portuguese team was welcomed by the ASI and a friendly working relationship was created that allowed the exchange of expertise in an informal environment.

In the final session, past and ongoing projects were shared between researchers from both teams. New ideas were discussed for follow-up projects in other areas such as biotechnology, materials science and museology. Hopefully, this networking will continue through processes such as fellowships and the development of joint projects.

Based on this experience, key factors in the success of similar projects are respect for local diplomatic traditions and institutions, building trust and open discussions of expectations, results and practical outcomes. It is hoped that this project provides an example of best practices in establishing international guidelines for shared heritages.

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