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Intervention Criteria in the Restoration of the Panel Painting *Christ tied to the column* from the Diocesan Museum of Sacred Art in Salamanca, Spain, which was attributed to Luis de Morales

Ir a la versión en español

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Alejandra del Barrio Luna
Diputación de Salamanca, Spain
sdbluna@hotmail.com
ORCID: https://orcid.org/0009-0007-1419-815X

Eduardo Azofra Agustín
Universidad de Salamanca (Usal), Spain
azofra@usal.es
ORCID: https://orcid.org/0000-0002-9518-2374

Tomás Gil Rodrigo
Servicio Diocesano de Patrimonio Artístico y Cultural y de Evangelización de la Cultura, Spain
patrimonioartistico@diocesisdesalamanca.com | ORCID: sin registro

Translated by Fernanda Andablo

ABSTRACT

The following article aims to explain the restoration process carried out during 2021 of the panel painting *Christ Tied to the Column*, an unprecedented work by Luis de Morales. After its discovery in the town of Alba de Tormes (Salamanca, Spain), probably coming from the church of San Juan Bautista in the aforementioned town, this work is now part of the permanent exhibition *Misterio Admirable* (*Admirable Mystery*) at the *Museo Diocesano de Arte Sacro de Salamanca* (Diocesan Museum of Sacred Art of Salamanca), inaugurated in March 2023, in the Episcopal Palace of Salamanca. The intervention carried out on the piece stands out for the application of the scientific method for its attribution, and that the whole restoration process is combined with the theological sense that contributes to the 17th century setting and the iconological meaning.

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KEYWORDS

restoration of panel painting, *Christ Tied to the Column*, Luis de Morales, Diocesan Museum of Sacred Art of Salamanca

INTRODUCTION

The following article addresses the study and intervention carried out between February and May 2021 on the panel painting titled *Cristo Tied to the Column*, an unprecedented work that we attribute to Luis de Morales. It is currently part of thematic unit 4 of the exhibition: *La Pascua del amor eterno* (*The Easter of Eternal Love)*, of the permanent display *Misterio Admirable (Admirable Mystery)* at the Diocesan Museum of Sacred Art of Salamanca (Spain).[1]

The work has the following dimensions: 57.2 x 38.6 cm. Due to the analyzes carried out in the ARTE-LAB laboratory,[2] in February 2021, it was concluded that the wood of the support is possibly oak, and that it was painted on a single tangential cut wood piece, without heartwood or knots. The sizing has a thickness between 60 to 120 µm and is composed of calcium sulfate and organic glue. The pictorial layer is grease, agglutinated with oil and pigments in several strata of approximately 45 µm at the bottom and 150 µm in the rest. The theme of the painting *Christ Tied to the Column* is a passage collected in the gospel stories: Matt 27, 26; Mark 15, 15, and John 19, 14 (*Sagrada Biblia*, 2010). The picture presents a half-body figure with detailed anatomical analysis, next to a tall column of mottled marble to which Christ is tied with ropes at the wrist. The great expressiveness of the face stands out, alongside with the contraction of the forehead and the mouth half-open anticipating the pain and anguish of the punishment he is about to receive. The painting has a later frame, from the late 16th century or early 17th century. The exterior measurement is 62.3 x 48 cm. It follows the *casetta* typology (García & Aranda, 2024), composed of a gilded edge, a gap with black and white text, and a gilded half-round edge.

The restoration process was understood and approached as an ontological review, resorting to the scientific method (Muñoz, 2004, pp. 126 and 135) to explain the common characteristics between the Salamanca panel and other works by Luis de Morales (Ruiz, 2015). The protocol followed in the performance was to car-

[1] Until this publication there is no inventory, cataloging, or documentary relationship with a previous date.
[2] Laboratory specialized in analysis for the documentation and restoration of cultural assets, located in Madrid, Spain (ARTE-LAB, 2024).

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ry out the same stratigraphic and reflectographic tests, in order to create a relationship of fundamental aspects between different entities that would allow confirming or discarding the attribution to the artist (Sandkühler, 2010).

The archaeological criterion was followed during the restoration process (Meluco, 2002). Thus, the approach that has been followed in all processes is that of *minimal intervention*, based on the maximum theoretical historical-philological knowledge of the work that the scientific method provides. A protocol was followed to reconcile research with conservation adjusted to the three fundamental values to be respected: historical, artistic, and theological. For this reason, a historical stratigraphic reading of the constituent materials was used (Harris, 1991), both for old interventions and the original work, all of this alongside with scientific support. This postulate is not commonly used for works from the Modern Age, which follow the principle of visible reintegration (Brandi, 1988 [1963]; Brandi y D´Ossat, 1972; Baldini, 2002 [1978]; González-Varas, 2006, pp. 315-341). However, we consider that Level 0 (*Nivel 0*) creates a level of action in the face of gaps and is more respectful in interventions on cultural assets (Ceballos, 2017, p. 51),[3] since: "It is the criterion that values the most antique works."

Thereupon, the objects of the restoration followed three phases of action in the work. The first one is that of curative conservation. The main point of this phase was the material preservation of the image: ensuring its stability, and respecting its historical and aesthetic integrity. In order to achieve this, it was proposed to conduct an action protocol for the alterations based on the study of all possible treatments and choosing the most appropriate one for the restoration of the physical and mechanical properties with the least impact on the work. The second phase, the restoration, was guided by the elimination of foreign products, non-original varnish and wax, preserving the historical materiality, without hiding the extrinsic and intrinsic damage of the passage of time. In the case of the gaps, only those that affected the materiality were intervened, due to loss or the lack of stability of their edges. Finally, the third and last phase, the purpose of preventive conservation focused on the final protection layer, which functions as a barrier against harmful agents. It was proposed that it should meet the

[3] It refers to point "5.5.2. Chromatic and gap reintegration: Level 0", to the text of the Coremans Project of the I.P.C.E: "Do not reintegrate anything, except if it is necessary to fasten or seal the edge of a gap that could accidentally get caught during manipulation. The work presents the original polychrome in a fragmentary state, and the base of the gap is the color of the wood of the support" (Ceballos, 2017, p. 51).

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characteristics of transparency, original saturation of the tones and light reflection, flexibility, and minimize photochemical degradation.

After this description, we continue to present here the restoration process carried out. The text begins with the description of the painting, and then, we present the theoretical framework that was used. As it has been already mentioned, the scientific study was followed and then the restoration process which was detailed took place in the aforementioned painting. The text details the criteria and alterations that it presented, as well as the treatments carried out, to finally present the conclusions.

DESCRIPTION OF THE PANEL

The work, *Christ Tied to the Column*, is made with a grease technique on gear with priming on a board measuring 38.6 x 57.2 cm, possibly made of oak, and with a single beveled wood piece on the back on its four sides. It can be dated to the 1560s, due to its similarity in formal and stylistic arrangement, with other works by Luis de Morales, such as *Christ Tied to the Column* of the altarpiece of the Bishop's Oratory of the Episcopal Palace of Ciudad Rodrigo (Spain) (Azofra & Ganado, 2001; Nieto, 2000). In addition, it forms an assembly set with a classicist baroque *casetta*-type frame (48 x 62.3 cm), with horizontal pine crossbars and vertical walnut crossbars, identified by optical microscopy, with a box-and-tenon assembly. This frame, placed after the realization of the painting, can be dated between the end of the 16th century and the beginning of the 17th century. It has a gilded water edge, a border with a black background on gear, and a theological epigraphy, an edge with a half-round edge, also gilded in water (Figure 1).

STUDY BACKGROUND

By comparison, the direct application of scientific methods and analysis in the detailed study of the artistic technique validates, not only the stylistics, but also the possible authorship of a work according to its materials and creative process (Del Prado National Museum, 2006; González, 2013; Rodríguez, 2015). At Del Prado National Museum exhibition *El Divino Morales* (*The Divine Morales,* Ruiz, 2015, pp. 213-225), forty nine paintings by Luis de Morales were studied with x-ray radiographs, reflectographies, and stratigraphy. Thus, there was a broad set of data to establish a possible attribution to the works, regardless of aesthetic similarities (Jover & Alba, 2016).

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FIGURE 1. Photograph of the work at the initial moment (Photograph: Óscar García Rodríguez, Diocesan Museum of Sacred Art, Salamanca, Spain).

As carried out at Del Prado Museum, the research process prior to the restoration consisted of the use of non-destructive methods based on visible light reflectography, raking light, UV-light photography, IR light, and X-ray radiographs. Each of the images obtained helped to establish values that can be compared with the rest of the works already studied by the Technical Office of Del Prado Museum and obtain a paragon or difference between them (Ruiz, 2015). Furthermore, to know the chemical composition of the pictorial strata, micro destructive tests were carried out. These were analyzed at the ARTE-LAB laboratory with the techniques of optical microscopy of polarized light, incidental and transmitted, halogen light and UV light, Fourier Transformation Infra-Red spectroscopy (FTIR), Gas Chromatography-Mass Spectrometry (GC-MS), Scanning Electron Microscopy-Microanalysis by X-ray Dispersion Spectrometry (SEM-EDX) and Raman micro spectrometry.

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SCIENTIFIC STUDY OF THE WORK

In the macroscopic study of the board, it can be seen that it is a small work, probably intended for a particular devotion.[4] It has a bevel on the back, a characteristic that was common in oak tables from the Baltic and artistic trade in peninsular ports from Seville and Lisbon through Flanders (Jover & Alba, 2016; Ruiz, 2015, pp. 213-216). Within the production of Luis de Morales's workshop, the use of *wainscotts*[5] was common for one-piece wood works, like the one presented here. Furthermore, from those that are preserved there are some that, made around 1566, have a similar width to the one of the studied work.[6]

The support had two preparation processes. The first one was the delimitation of the area of pictorial execution; this was carried out with an incised line at the bottom, which also served to indicate the place where the length was cut on the board. The second process was the preparation of the board on its back with a bevel on its four sides, following the two longitudinal ones typical of this type of imported boards. It seems that this conservative treatment is common in the works of Luis de Morales. Its purpose is to avoid deformation, due to tension, drying, and contraction of the grain of the wood cut (Nieto, 2000; Azofra & Ganado, 2001).

The gear of the board was prepared with a colloidal solution of calcium sulfate filler and animal glue binder, common in artistic production on board in southern Europe according to treatises (Guevara, 2016 [1560]; Pacheco, 1649). It has a sanded, almost polished finish, to achieve a uniform, fine and continuous layer that served to receive the polychrome in the most stable way possible.

Once the preparation of the support was completed, the artist made a compositional fit with a preliminary drawing immediately under the pictorial film, of thin thickness, between 45 and 150 µm.

[4] The support was categorized with 500X digital microscopy, 60X Enosa optical microscopy and stratigraphy by ARTE-LAB.

[5] Terminology used in catalogs of flamenco painting on board. In European Hispano-Flemish painting, wainscotts are commonly used for oak boards of these dimensions.

[6] With similar dimensions, we have the devotional pieces: *The Virgin with the Child and Saint John the Baptist*, 1560, National Museum of Decorative Art, no. 333, 47 x 38 cm; *The Virgin with the Child Writing*, National Museum of San Carlos, SGROA 6799, 54.7 x 38.8 cm; *The Virgin of Milk*, Del Prado National Museum, P944, 57 x 40 cm; *Virgin Dressed as a Gypsy*, Museum of Art and Archeology Oxford, A871, 43.5 x 29.5 cm; *Virgin Dressed as a Gypsy with the Child of the Cross*, 1567-1568 Private collection, 39 x 28.5 cm; *Pietà*, 1565-1570, Del Prado National Museum P2513, 42 x 30 cm; *Pietà*, 1562-1565, Villar Mir Collection, 42 x 30 cm; *Ecce Homo*, 1570, The Alana Collection Newark, Delaware, USA, 53 x 37 cm; *San Juan Ribera*, 1566, Del Prado National Museum, P947, 52.3 x 40 cm (documented oak board); *Saint John the Baptist*, 1566, Del Prado National Museum, P950, 52.4 x 39.8 cm (documented oak board) and *Christ Tied to the Column*, Episcopal Palace of Ciudad Rodrigo, 69.5 x 49.6 centimeters.

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By analyzing the images obtained by IR reflectography, it is possible to see the author's drawing technique and regrets (Matteini & Moles, pp. 203-207). To obtain the images, a Nikon D70 camera with 67 mm Delamax Infrared 720 and two 100 W spotlights was used, and Adobe Photoshop CS6 software was used to convert the infrared image to a visible image (Figure 2). In addition, x-ray radiographs were obtained with the Polyvet equipment, by the radiological technician Susana Castellano (Figure 3). Four types of previous drawing can be distinguished. The first one is dry, with very fine and black lines for details. The second is a previous dry drawing, with charcoal, with a thick line to highlight the composition. The third one is a fine dry drawing for details of the composition with epigraphs. Finally, the fourth one is a brush drawing for shading and fitting details with greater precision. In visible pencil lines there are fine dots at the corner of the mouth, around the forearm, and in the area of the ropes.

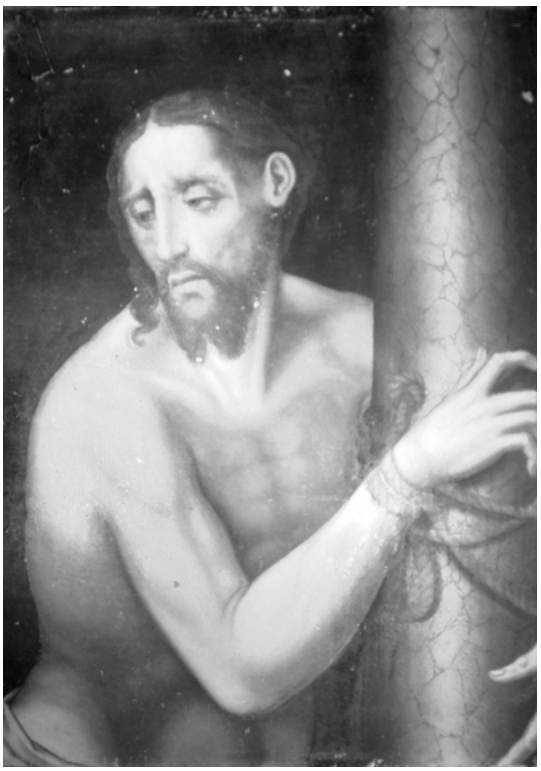

FIGURE 2. IR reflectography performed with Nikon D70 with 67 mm Delamax Infrared 720 and two 100 w spotlights (Photograph: author).

FIGURE 3. Technical Radiography - Siemens Polyvet Equipment (Radiologist: Susana Castellano; courtesy: Clínica Susana Castellano).

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When the x-ray was performed, only the carbon black lines were left visible. An outline was made with a brush to fit the right eye, the nose, the hair design, the line of the forearm, and the knot of the rope. There are two epigraphs made with dry charcoal, whose meaning we cannot identify, although they are discernible within the composition, and some *pentimenti* in the placement of the ropes in the column. In the analyzed works of the production of Luis de Morales[7] this difference in the execution of the drawing —with different creative ways of proceeding within the same work and, with areas in which the drawing is clearly identified and others with its absence—is a constant as workshop mechanics and specialization of trades typical of the distribution of work methods within the union art (García-Máiquez & Gayo, 2016). In short, according to the results already established for the work of Luis de Morales, there is a difference from a delicate and meticulous work until 1555, when it evolved towards a heterogeneous underlying drawing. Therefore, we can specify that this *Christ Tied to the Column* is a work made in the second half of the 1560s, perhaps in the second five years, between 1566 and 1568 (García-Máiquez & Gayo, 2016). The greater profusion of commissions for devotional works to the artist led to the presence of officials who replicated the iconographic motifs already created in the workshop (Figure 4).[8]

The pictorial technique was analyzed with frontal and raking visible light, UV light, digital microscopy, and stratigraphic study. The chromatic process began with a primer to fix the previous drawing, mainly carbon black. A layer of oil paint was applied, noticeable in the scuffs of the black background, predominantly in an orange tone that has runoff on the sides of the board. Microscopically, it has a thickness of 30 µm, composed of white lead and minium (red lead). This type of priming has also been documented in other works by Luis de Morales through this type of analysis (Ruiz, 2015, p. 222).

[7] According to the conclusions of Del Prado Technical Office, (García-Máiquez & Gayo, 2016) in a conference, with great success, the repetition of the versions of the devotional motifs was much insisted on, and two creative moments were differentiated: a first drawing stage very meticulous between 1545 and 1555, and then a second stage with the creation of stylus or pencil drawings for silhouettes (which are perceived with less precision in the IR as is the case of the lines of the hand of the *Adoration of the Shepherds* (Fig. 54 [Ruiz, 2015, p. 217]), alternating with areas without drawing as in the case of the *Purification* that leads to a lack of quality then in the visible and other brush strokes or other lace lines and even the use of tracings (Fig. 38, Exhibition Catalog, *Ecce Homo*, p. 137).

[8] In the technical study of *Ecce Homo* preserved in the *Museu Nacional d'Art de Catalunya* (MNAC), the reflectography shows the absence of drawing in the entire work and the presence of stenciling with charcoal dots using a traced model.

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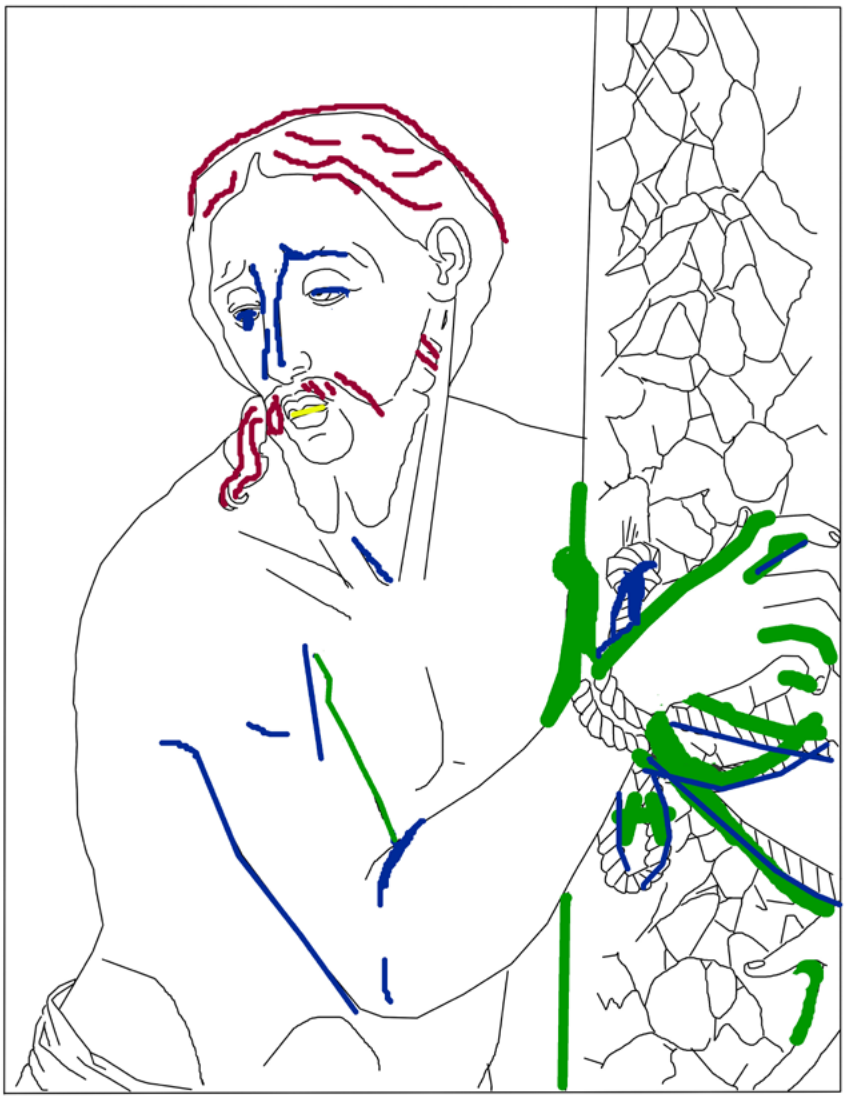

Thick charcoal black	By brush	Pencil fine line	Dry pitting
For boxing	For boxing	For finishing and details	For finishing and details
• Edge of the armpit with the torso and spine • Hand boxing • Two epigraphs on the spine, under the forearm • Petimenti in linear shapes in the column to fit the ropes, which have a different arrangement than the current one	• Outlining of the right eye • Lace and nose design • Shadow of the outline of the flexed right arm • Drawing of the current composition of the rope and the knot	• Outlined details in hair and beard	• Detail of the corner of the mouth

FIGURE 4. Summary of types of previous drawings present in the work (Table: Alejandra del Barrio Luna, 2024).

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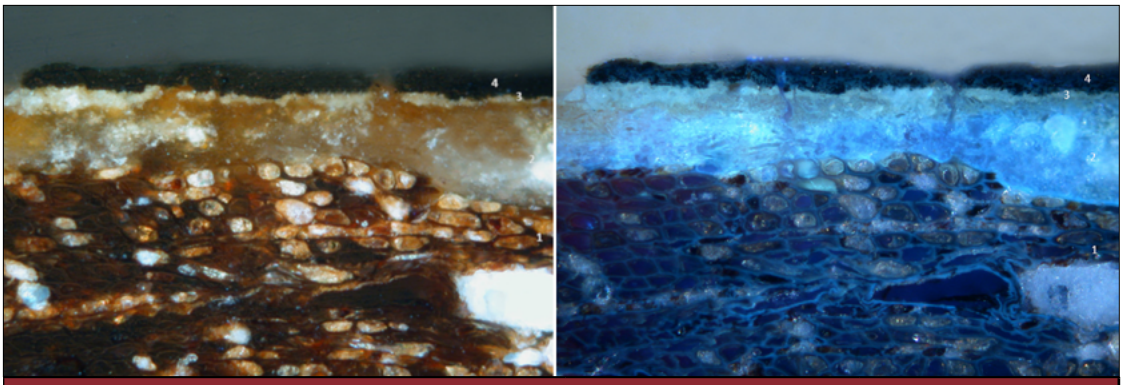
Once the board was prepared, the artist worked in a different way on two areas of the painting, noticeable with visible light and raking light analyses. There is a very fine brushstroke with white feathering for the details, for the figure, while the background is later done in a smooth and very uniform way. This technical process is common in all of Morales's works analyzed (Ruiz, 2015, pp. 88, 184, 220 and 225), which places a figure on a plain background to separate the compositional spaces. This difference in texture and framing of the scene by the background is an illuminating fact on the way to confirming authorship, as the technique of creating the continuous black background was a common feature in Morales' work. According to the studies of Del Prado Technical Office (Ruiz, 2015, p. 224), in Morales' works differential black pigments were used for each layer, which exactly match those present in the work of the Diocesan Museum of Salamanca. A first coat is used with charcoal and a dryer[9] with a finishing coat of bone black (Figure 5).



No. 1 Black background				
Layer	Color	Thickness (µm)	Pigments/Fillers	Observations
4	brown, dark black	30	bone black, white lead (m. b. p.)	paint layer
3	grayish	≈15	white lead, calcium carbonate (m. b. p.), charcoal (m. b. p.)	paint layer
2	whitish	60-120	gypsum, silicates (m. b. p.)	rig
1	brown	-	-	wood support

FIGURE 5. Optical microscope images of the cross section of micro sample no. 1 with Nikon Mplan 20X / 0.45 objective light with polarized light and UV light, as well as stratigraphic according to the chromatography of the chemical composition of each stratum (Arte-Lab Laboratory).

[9] White lead in the case of the Salamanca work, verdigris in the MNAC work. On this background layer, a grease paint with an oil binder was applied in an area delimiting the contours of the figure and the column. A difference is noted in the texturing, due to greater thickness and, through the reflection of the pigments, previously confirmed by reflectography.

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The pictorial representation of the figure is also very specific. The flesh has a layer of preparation, typical of the Italian pictorial tradition, with a *verdaccio* made with a base of white lead, charcoal and verdigris, which is textured by the direct application of the brushstroke that creates the volume. We see this pictorial technique very clearly in the X-ray where the white lead brushstrokes create an anatomical volume based on the human skeleton, tendons, and muscles. It is a very specific way of painting, which denotes great humanistic knowledge and is typical of the work of a great master. This lace is made on the face, neck, and arm while the torso lacks these brush strokes.

Furthermore, as a definitive application of the flesh tone and the final volume of the board, a pink color was used, a product of the mixture of red lacquer pigment,[10] vermilion, verdigris, and white lead.[11] This layer is the final layer of the work, before receiving the glazes, and it has a very smooth and delicate texture.

There are also glazes for the final details. It is a brush work characteristic of Morales, and for which the works are usually attributed to his authorship. This technic consists of a very fine brushstroke for the highlights in the hair and attributes on the already finished figure (Mena, 2010, p. 78). In the painting analyzed here, this technique is found on the ropes, the wrists, and on the column, and it can be seen both with the naked eye and in the IR reflectographies (Figure 6).

Finally, the analysis of the painting, according to reflectographic means, provides several *pentimenti* of the author, which have modified the final appearance. When analyzing the arrangement of the right hand on the column and the placement of the thumb, it is noticeable that this is a typical characteristic in other works by Luis de Morales from 1565 onwards, such as those on the theme of *Pietà* (Mena, 2015, pp. 160-168).[12] A change in the placement of the hand and thumb was observed, which changed downwards and, above all, the right armpit, which was initially designed to be visible (as seen in the x-ray and reflectography) and which was covered

[10] This technical process is common in all of the analyzes works by Morales (Ruiz, 2015, pp. 88, 184, 220 and 225), which places the figure on the smooth background to separate the compositional spaces, although at first glance they can merge with the characteristic *sfumato* of the style.

[11] The color palette analyzed in the stratigraphy is typical of 16th century painting, but perhaps the most notable thing that is mentioned in Del Prado Museum studies is the habitual use of red lacquer, by Luis de Morales, for flesh, as pigment to provide its color, and that its origin may be from chermes and then cochineal from the sixties.

[12] The use of Luis de Morales's palette in the men's painting is white lead, vermilion in greater quantities than in the women's, red lacquer, black pigment, red earth, and verdigris (Ruiz, 2015, pp. 222-223).

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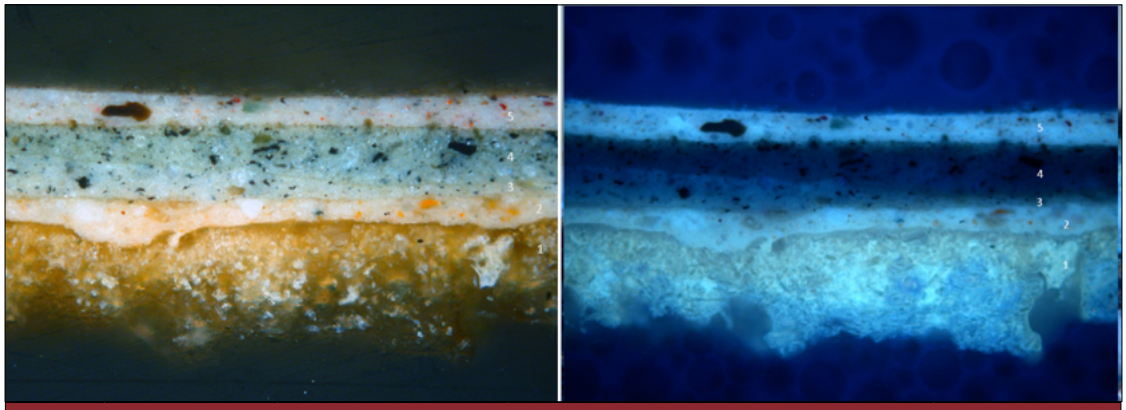

No. 2 Incarnation				
Layer	**Color**	**Thickness (µm)**	**Pigments/Fillers**	**Observations**
5	pink	30	white lead, vermilion (m. b. p.) verdigris (m. b. p.) red lacquer pigment (m. b. p.)	paint laayer
4	grayish	25-50	white lead, charcoal (b. p.), verdigris (m. b. p.)	paint layer applied with two hands
3	grayish	oct-25	white lead, charcoal (b. p.), verdigris (m. b. p.)	
2	very light orange	30-45	white lead, minium (b. p.)	paint layer
1	whitish	95	gypsum, silicates (m. b. p.)	rig

FIGURE 6. Image obtained under the optical microscope of the cross section of micro sample No. 2. Nikon Mplan 20X/0.45 objective with polarized light and UV light, as well as stratigraphic according to the chromatography of the chemical composition of each stratum (ARTE-LAB).

by the veil of a rope. Also visible in the X-ray is the presence of other oblique brush strokes under the left elbow, and a trace of rope on the column that does not correspond to anything visible in the work and cannot be related to the composition. In addition, it is worth mentioning that, at the beginning, the painting was created with another symmetrical lock of hair on the other side of the face with a curved end and that is present in other works by the author such as *Christ Tied to the Column* and San Pedro of Gravelines (Romero, 2020). In this case, this undulated loop that would go over the left shoulder was eliminated from the composition (Figure 7).

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FIGURE 7. Detail of the IR reflectography and the x-ray of the face and spine where we can verify the pictorial technique analyzed above (IR reflectography performed with Nikon D70 with 67 mm Delamax Infrared 720 and two 100 w lights; technical radiography: Siemens PolyVet Equipment; radiologist: Susana Castellano; courtesy: Clínica Susana Castellano).

THE FRAMEWORK: TEXT AND DEVOTION

Following up the description of the painting, *Christ Tied to the Column*, the next one is that of the frame. It was created with the purpose of protecting the board from deterioration of the edges and devotionally accompanying the piece. Its size is specifically adapted to the frame itself, in width, height, and thickness. In addition, it has a text related to the cycle of the passion of Christ.

Its technical construction is made with two crossbars of walnut wood and two of pine wood, identified by optical microscopy technique, with a union by means of a box-and-tenon assembly. On the back of the frame there is a witness of a "Ramos" signature and on the obverse, in the gap, there is a symbolic inscription in Latin made with a brush: "*Castigatus sum tot a die dolor invitame a eteritus que ad resurretionem,"* which can be translated as: "I am punished every day with pain in my life and it will always be like this until the Resurrection." Even so, the theological relationship of the frame with the image follows the proposition of Juan de Ávila in his talk number 4: "to remember and imitate the Passion."

The frame is type *casetta*, an Italian typology, which moved to Flanders, from where it spread throughout Europe. In peninsular workshops it was very common to make these pieces since the 16th century, incorporating decorative motifs according to changes in taste. It is one of the most widely used typologies in art from the classic Baroque to the 20th century, because, due to its simplicity, it easily adapts to the works, creating the necessary outer margin, but relegating itself to the background and, by doing this, it does not diminish the importance of the main pictorial subject. In other works by Luis de Morales the same type of frame with theological

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epigraphy is used as in *Christ with the Cross on his Back* from the painter's workshop in the Cathedral of Salamanca (Rodríguez, 1978, p. 76), *Jesus with the Cross on his Back*, attributed to Morales, from the Dominican convent of Plasencia, or the *Penitent Magdalena* from a private collection (Díaz, 2022) (Figure 8).

FIGURE 8. Frame disassembled in the restoration process. (Photograph: Óscar García Rodriguez, Museo Diocesano de Arte Sacro de Salamanca, 2021).

THE RESTORATION

The criteria

The criteria are methodological standards of action that serve to create an intervention protocol established from a legal point of view, in accordance with the Law of the Government of Spain: Law 16/1985, art. 39.3 (Gobierno de España, 1985, p. 18)[13] and the Royal Decree 620/1987, art. 14 (Gobierno de España, 1987, s. p.), and regulated according to international agreements (treaties, letters, recommendations, meetings, and others) and national agreements (Ceballos, 2017; Salas & Porras-Islas, 2018). The entire intervention procedure has been carried out according to scientific restoration (Muñoz, 2004, pp. 127 and 137), based on technical analysis to create a timeline of the historical states of the artistic object. As we saw in the previous studies, we began with the stylistic hypothesis that raised the possibility that the work could be by Luis de Morales. Thanks to the quantitative and qualitative data from laboratory analyzes and reflectographic studies, such authorship can be assured. Hence, the enhancement of the work was

[13] "3. The restorations of the assets referred to in this article will respect the contributions of all existing periods. The elimination of any of them will only be authorized on an exceptional basis and provided that the elements that are being removed represent an obvious degradation of the property and their elimination is necessary to allow a better historical interpretation of it. The deleted parts will be duly documented." (Law 16/1985, on Spanish Historical Heritage).

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proposed taking into account its historical, artistic, and devotional aspects. The fundamental criterion arises at this moment, when all restoration actions must maintain the three axes referred to above at the same level: curative conservation, restoration, and preventive conservation.

The criterion in the cleaning treatment after knowing the materiality is the first aspect, of utmost importance to preserve the commemorative value of the historical past. The restoration process prioritizes the respect and conservation of the historical past in which the work was created and searches the traces that time has left on it. Thus, the stains and chromatic changes in the pictorial film are respected with a cleaning in favor of the conservation of the original varnish. The work was exposed to worship, confirmed by wax deposits. The frame has been preserved in the museum due to its great theological value.

Finally, the treatment criterion was based on the gaps, which are relative, pictorial alterations; that is to say, its chromatic reintegration is not necessary, unless it affects the conservation of the pictorial layer. In this section lies the postulate that establishes difference in this restoration, by classifying it as archaeological, because it adapts to a sculptural protocol (Ceballos, 2017, p. 51), compared to the criteria of easel painting (Salas & Porras-Islas, 2018, p. 75).[14] According to the premise of Philippot (1970), the work is classified in the Level 0 criterion: "Do not reintegrate anything, except if it is necessary to hold or seal the edge of a gap that could accidentally get caught during manipulation" (Ceballos, 2017, p. 51).

Alterations of the work

The first step to treat the alterations to the work consisted of analyzing it, determining those that were present, and assessing which ones needed treatment, following the archaeological postulate of the work.

The single criterion for cataloging alterations has been unified. At a structural level we have "damage and deterioration" (Muñoz, 2004, pp. 105-107). There is damage in the upper left corner of the

[14] The script of treatment guidelines and scientific examination has been executed according to archaeological criteria. The standards in Spain for treatment and action must comply with the IPCE protocols, which are those of the Coremans Project. Of those published to date, the one that followed was sculpture and altarpieces and NOT easel painting, which is prior to the one stated in this work. This is how the level of intervention of this piece has been structured, adjusting to the archaeological criterion of minimal intervention. In the Coremans Easel Painting Project the postulates of chromatic reintegration do not have a specific reference to follow this archaeological guideline.

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board, caused by a fall, which does not affect its stability, while, in the frame, the deterioration reduces the mechanical resistance with a separation of blocks, fracturing and cracking.

On an aesthetic level, the aging of non-original surface varnishes has a changing effect on the artistic reading of the work. In addition, there is a superficial pit with gaps at the level of the support, due to a minor impact in the lower part.

According to the restoration criteria (Ceballos, 2017, pp. 51-52; Philippot, 1970), the plastic intervention of wear, scratches, and chromatic changes—due to runoff of varnishes and wax embedded in the greasy pictorial film—was far from being considered.

Lightening of varnishes

The protocol for cleaning the pictorial film was created from a constant digital microscopic analysis, after the location of micro cracked areas, in the IR reflectographies and radiographs. There were used gelled dissolution systems and UV lamp illumination and digital microscope. The latter has been applied in areas less than 2 cm^2 to control the total evaporation of the mixtures and to avoid leaching or stagnation. In the stratigraphies, the chemical compositions of the varnishes were not identified, so the Teas method was used (Torraca, 1981). A solution of FD 68, gelation of the DMSFO 45%-WS 55% solution, has been used to eliminate the aged varnish that is identified as greasy. Below there is another very light layer partially embedded in the areas where the granulometry of the pigment, black and tan, is of lower density, with FD 37, 90% ethanol solution–10% benzyl alcohol, natural resin in alcoholic solution (Figure 9). As a criterion, the lower varnish has been maintained, considering that it could be original from the workshop itself and formed part of the pictorial film itself (Figure 10).

The frame, after cleaning the organic adhesives with alcoholic ketone solution and mechanical removal, was dismantled for structural treatment.

Support treatments

In the principle of archaeological restoration, the support is not a matter of treatment except if it affects the stability of the work, because it is understood that the pictorial layer needs a supporting base. The purpose of the action on the support is to ensure the stability of the material while respecting its nature, historical, and aesthetic integrity as most as possible.

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GREASY VARNISH REMOVAL					
	DMSFO (45%)		WS (55%)		FILM VALUE
N	41 (x 45/100)	18.45	90 (x 55/100)	49.5	67.95
D	36 (x 45/100)	16.2	4 (x 55/100)	2.2	18.4
H	23(x 45/100)	10.35	6 (x 55/100)	3.3	13.65

ORIGINAL VARNISH REMOVAL					
	ETHANOL (90%)		BENZYL ALCOHOL (10%)		FILM VALUE
N	36 (x 90/100)	32.4	43 (x 10/100)	4.3	36.7
D	18 (x 90/100)	16.2	15 (x 10/100)	1.5	17.7
H	46 (x 90/100)	41.4	42 (x 10/100)	4.2	45.6

FIGURE 9. Solubility parameters of the protection layers of the piece (Alejandra del Barrio Luna, 2024)

FIGURE 10. Half-cleaning photograph (Photograph: Óscar García Rodríguez; courtesy: Museo Diocesano de Arte Sacro de Salamanca).

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The only areas sensitive to mechanical and volume damage in the board and frame are the fracture of the upper left corner of the painting, the fracture of the frame's mortise and tenon assemblies, and the volume gaps, due to fracturing in the corners.

The treatment carried out on the board consists of the application of an acrylic interface to facilitate the reversibility of the new stabilizing material and the adhesive. The adhesion of the fracture was carried out with strong pressure glue. Subsequently, the joint was sealed and the missing volume that reduced the differential thickness was reinstated with a stable, compatible, inert and long-lasting material, to avoid future deterioration. The volume was reinstated with epoxy resin with an inert charge at a low level with stucco, and it was chromatically toned with a wood tone in the same criteria as the rest of the gaps.

The frame was re-glued, with synthetic glue under pressure.[15] Two types of gaps were distinguished: the frontal ones,[16] treated as support gaps with chromatic reintegration treatment, and the volumetric ones on the back, which, once the frame was re-glued, their volumetric reintegration was not necessary as they had sufficient stability.

Aesthetic legibility

Once the conservation intervention was completed, the artistic value of the work was analyzed with the delimitation of the gaps, separating those that, leaving the support visible, distorted the chromaticism of the whole and those that did not.

In the board, the gaps in the cut, generated mechanically, were located in the flesh and in the black background, producing reading discontinuity. Thus, it was decided to reintegrate them with chromatic abstraction, after the stucco tests (Fuster, Castell & Guerola, 2008) of organic glue and calcium sulfate, which adapt in absorption and texture to the same level as the original work. The material used for the pictorial layer was pigment bound with gum arabic from the W&N A+++ brand, in the colors ivory black, carbon black, natural umber, burnt umber, ocher, natural sienna, burnt sienna, China white, carmine, and green earth.

In the frame, following archaeological criteria (Mercado, 2004), volume and color were not reinstated, except at the edges and in

[15] It was re-glued under pressure to promote the curing of the adhesive, for 24 hours. In this way, no unwanted movements were foreseen.
[16] They affect the volumetric and aesthetic vision and, furthermore, if they were not treated, they would be a source of alteration due to the accumulation of deposits of superficial dirt.

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two gaps in the central part that affected the understanding of the epigraphy.

Protection layer

The protection layer is a solution of a colorless organic resin that, applied to the pictorial surface, unifies the diffraction of light, creating an aesthetic result along with a protective measure. A reversible matte acrylic touch-up varnish[17] by spraying was applied, with respect for the maximum historicity of the work and while preserving the shellac varnish. The purpose of this first layer is to prevent the stucco and chromatic reintegration from being applied directly to the work and, thus, facilitating reversibility.

After the reintegration intervention, a finishing varnish is applied in order to saturate the colors and protect the work. This varnish is composed of ethyl methacrylate in a 2 percent high volatility aprotic polar solvent.[18]

FIGURE 11. Final photograph after restoration (Photograph D. Óscar García Rodríguez; courtesy: Museo de Arte Sacro de Salamanca).

[17] A touch-up varnish is used because the resin content is no more than 26%, while in finishing dissolution varnishes, the resin percentage ranges between 40 and 50 percent.

[18] A layer of Paraloid B72 at 2% in acetone was applied as a final finish, by spraying, which with the lower layer of touch-up varnish and the original shellac is stratigraphically separated from the original work.

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CONCLUSIONS

The restorations of the 21st century combine the scientific treatment of documentary research and direct action in the work (Matteini & Moles, 2001). The present restoration has maintained this principle to authenticate the authorship of the work, not only in style, but in materiality and to implement the intervention processes themselves (Ruiz, 2015).

The main conclusion of this work is the need to ascribe the scientific method to all actions on a work of art, since each restorative process is irreversible. Becoming aware of the importance of the objectivity of the data that serves to know the work in detail is essential for the preservation of artistic objects understood as primary sources for history and art.

The restoration work described here contributes to add a piece to the catalog of Luis de Morales, through its revaluation and study. With objective data and working memory, exhaustive documentation is provided, and this can serve for new studies on the artist and his work. In terms of criteria, we have opted for breaking this closed line of regulatory proposals, demonstrating that points of view from different fields can be related to the restoration of a work.

The proposal of having three values (historical, artistic, and theological) in the work to be preserved is a condition for the intervention itself. The fact of maintaining the frame, for its devotional value, subtracts part of the aesthetic reading, by leaving the hands hidden in a significant way. It must also be taken into account the risk of valuing the archaeological criterion as a weak point, since the reading of the work by a non-professional public sometimes generates rejection due to the lack of understanding of this postulate in the face of visible reintegrations (Mercado, 2004).

Finally, we consider that this work has provided the opportunity to include the described work, forgotten in time, in the discursive program of the Diocesan Museum of Sacred Art of Salamanca (Spain), giving it a preferential place from now on.

The revaluation of the piece and its public exhibition, together with the dissemination of the studies and its restoration, aim to contribute to delving into the work of Luis de Morales as well as to intensify the support and professional work of other restorers in the painting in board interventions on 16th century pieces. Regarding criteria and purposes, there is a stress on the fact that a restorer is not only an executor, but must also postulate the theoretical reasoning that will guide his or her methodologies. This last aspect is of vital importance because the consensus between the theoretical postulates and the practical execution must be reasoned,

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coherent with each other, and reconciled to achieve the objects and goals in favor of the restored work.

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ABOUT THE AUTHORS

Alejandra del Barrio Luna
Diputación de Salamanca, Spain
sdbluna@hotmail.com
ORCID: https://orcid.org/0009-0007-1419-815X

Sculpture Restorer from *Escuela Superior de Conservación y Restauración de Bienes Culturales* (ESCRBC, Higher School of Conservation and Restoration of Cultural Assets, Spain) and Art Historian from the University of Valladolid. She carries out her professional work as a technician in conservation and restoration of cultural assets for various public and private organizations. Furthermore, she has published academic research and has obtained several scholarships. She is a teacher in several academic courses at the ESCRBC, in the specialty of sculpture and at the *Junta de Castilla y León*. She has published several articles on art history and restoration and is awarded with a scholarship by the Diputación de Salamanca with which she develops the study of *Popular Architecture in the Town of Cepeda*.

Eduardo Azofra Agustín
Universidad de Salamanca (Usal), Spain
azofra@usal.es
ORCID: https://orcid.org/0000-0002-9518-2374

Professor of Art History at Usal. He studies the languages of classicism and the criteria of intervention in Spanish architecture of the second half of the 18th century. His doctoral thesis obtained the Extraordinary Doctor-

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ate Award from the University of Salamanca in 2003, which dealt with the life and work of the architect Juan de Sagarbinaga (1710-1797). Two books were published as a result of this: *Del barroco cortesano a la recuperación de Herrera. La obra del arquitecto Juan de Sagarbinaga en la provincia de Burgos* (2009) and *La obra del arquitecto Juan de Sagarbinaga en la ciudad de Salamanca* (2010). He is the author of several publications, referring especially to the religious silverware of the Diocese of Ciudad Rodrigo and the artistic heritage of the University of Salamanca. His research focuses on the study of the historical use of stone in the immovable heritage of Castilla y León, highlighting his participation as co-editor of the book: *Stone in Monumental Heritage* (Ediciones Universidad de Salamanca, 2022).

Tomás Gil Rodrigo
Delegado de Patrimonio del Obispado de Salamanca, Servicio Diocesano de Patrimonio Artístico y Cultural y de Evangelización de la Cultura, Spain
patrimonioartistico@diocesisdesalamanca.com
ORCID: sin registro

He develops his theological work as a priest of the Bishopric of Salamanca, being responsible for the conservation and restoration of the movable property of the diocese. Among his work, he has coordinated and managed the new museum-process of the Diocesan Museum of Sacred Art of Salamanca in the permanent exhibition: *Misterio admirable*.

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