

Transcript of the video Framing a panel painting

Video length: 18:17 minutes

Marie-Hélène Nadeau, Postgraduate Fellow, Fine Arts Laboratory, 2016-2017: “We are often asked about the framing of paintings on rigid supports, or have to frame such paintings ourselves. These works of art do present some challenges with respect to framing. They are most commonly thinly cut or constructed and are often highly sensitive to changes in their environment—specifically to low humidity and shifts in relative humidity. Rigid wood-based supports are often referred to as “panel” paintings; but they can also be made of Masonite, composite wood, plywood, artist canvas board or paperboard. The framing method described in this video was designed to ensure the safe display or storage of paintings on rigid supports that are moisture-sensitive (which is hygroscopic), as opposed to rigid supports such as metal, porcelain or glass, that are not hygroscopic materials.”

[Text on screen: Why is proper framing necessary to ensure the stability of a panel painting or other sensitive paintings on rigid supports?]

Marie-Hélène Nadeau: “The aim of the framing is to create a protective enclosure around the wood panel in order to maintain a reasonably stable relative humidity of approximately 45 to 50 percent year round. When received by the CCI, this small oil painting on wood panel by Kathleen Moir Morris, *A Saturday Morning at the Market*, was badly warped and extremely vulnerable to further damage as a result. There are a number of reasons for this warping. These works of art are especially susceptible to movement because of the wood’s response to fluctuating humidity, in particular to low humidity. Because the framer’s nails and points holding the panel into the frame have largely fallen away, especially along the top edge of the panel, this region is free to move in an unrestricted manner in response to shifts in humidity. This is why one edge is particularly warped out of plane, as you can see. Additionally, only one nail remains on each of the two sides and one framer’s point along the bottom edge. The cut of the lumber from which the panel is made also plays an important role in the movement of the final product. Longitudinally, that is, in the direction of tree growth (or along the grain), there is very minimal shrinkage or swelling. Radially, or perpendicular to the growth rings, between 2 and 6 percent swelling and shrinkage can occur. Tangentially, meaning parallel to the growth rings (or cross-grain), swelling and shrinkage is the most severe—from 2 to 10 percent. The vertical axis of this panel painting is in the tangential, or cross-grain, direction, so we can expect warping to occur in the vertical axis of the panel. If one of the panel surfaces is “sealed” by a ground layer and then painted, that side of the panel will be slower to respond to humidity changes. In this case, the painted surface is face-down. The “unsealed,” or “unpainted,” surface will absorb and lose moisture much faster, and movement on this side will be exaggerated in comparison to the sealed surface. Warps result when the humidity is low. As the wood on the unpainted side loses moisture, the wood cells shrink, and the panel takes on a curved (or convex) warp. Even if the panel is later exposed to higher humidity, the warp will never completely disappear. A warped panel cannot easily be framed. In some cases, special custom frames can be designed to follow the warp; otherwise, in the case of thin-cut panels, the warp can be reduced prior to framing. This must be done by a conservation professional. The panel painting by Kathleen Moir Morris was treated at the CCI Fine Arts laboratories, and the warp largely removed. This panel was removed from its frame and has undergone specialized treatment to flatten the curvatures under controlled conditions. The only guarantee that this painting has of staying flat is to remain exposed to the relative humidity at which it was conditioned (which is 47 to 50 percent). One of the most

achievable means of ensuring that the painting remains in a stable environment is to secure the panel in the sealed case provided by the frame. The frame is important to a work of art in many respects: aesthetically, historically, and in terms of physical protection and support. Frames should therefore be preserved and maintained together with the work of art for which they were built. Using a frame as a sealed case will, in most instances, require some modifications to the back of the frame. It is of the utmost importance to ensure that the modifications to the frame do not cover important items, such as inscriptions and labels. If such items are present, they must be removed and placed elsewhere on the frame or photographed, or both. In the case of inscriptions that cannot be removed, any material placed over these must not be secured using glue or screws. In this case, only one small label on the back of the frame required relocation. Labels on the back of the panel itself were removed during the treatment of the panel, and replaced in situ after treatment.”

[Text on screen: How to frame a panel painting]

Marie-Hélène Nadeau: “This procedure is moderately complicated, and requires the use of measuring tools, cutting tools and drills, as well as wood, Plexiglas and other material supplies. Begin by examining the frame: ensure that the surface finish is in good condition, as some handling of the frame during its modification will be required. Also check to make sure that the corners of the frame are tight and secure. Check that the frame rebate is not cracked and is level. This image shows the rebate in reference to other frame elements. Gluing may be required to stabilize the rebate area, and a wood filler to achieve a level surface. This is necessary in order to ensure that the glazing layer sits evenly in the rebate. Before proceeding further, check to make sure that the glazing fits properly in the frame rebate: it should not be a tight fit. The glazing can be glass or acrylic. Acrylic has the advantages of weighing less than glass and being unbreakable. In this case, a 1/8 of an inch thick, UV-absorbing, non-glare acrylic sheet was chosen. One disadvantage of acrylic sheeting is flexing; however, given the small surface area this painting represents, flexing should not be an issue. Never glue the glazing into the rebate, as this would cause glass, in particular, to break as the wood undergoes small dimensional changes in response to changes in relative humidity. Once it is confirmed that the glazing fits properly, set this aside. Pad the rebate so that the glazing has cushioning. The padding should be a stable, compressible material. In this case, black felt was used, cut to the width of the rebate and attached to the rebate using 3M double-sided tape. With the glazing in place, the padding provides a good seal at the opening of the frame. Although the case is not “hermetically” sealed, short-term humidity changes, such as those between day and night, should not have an effect. Seasonal variations in humidity levels within the case should also be significantly reduced. The next step is to prepare the spacer, which will be placed above the acrylic. The painting must be separated from the glazing layer. This is done through the use of a spacer. For larger paintings, this can be an inner frame; for smaller paintings, this can be extruded plastic or wood strips, foam padding, or mat board padding. For a painting of this size, a separation of approximately 1/4 of an inch, or 6 millimetres, should be allowed between the painting surface and the glazing layer. Here, a black painted wood strip covered with a layer of black polyethylene foam padding was used on the painting side. The wood strip is affixed to the edges of the glazing using 3M double-sided tape. When designing the sealed case, you must take into account the additional space taken up by the glazing layer, the padding and spacers, which will likely position the painting above the back of the frame. In order to accommodate the additional materials and to secure the painting, a prefabricated wooden collar planed to a pre-determined depth will be secured to the verso of the frame. Given the presence of a small inner fillet that stands proud of the back of the frame, a narrow lip of wood with a square profile was pre-

glued to the inside upper edge of the wood collar. This lip lies above the inner fillet and defines the space in which the panel sits. The collar can either come to the edge of the original frame or be slightly inset. Set up the wood collar elements on the frame verso to ensure that they are the right length and that the corners match. The wood collar will define the placement of the panel painting. The wood pieces forming the collar are ready to be glued at the corners and then clamped together for drying. Start by gluing opposite corners before gluing the two remaining corners. The glue used here is a PVA-emulsion, or “white” glue. Once the glue has been applied, clamp the corners at a 90-degree angle until the glue has completely dried. This will take several hours. The outer edges of the collar can be painted to match the decorative finish on the outside of the frame. In this case, the outer edges of the collar were painted black using acrylic emulsion paint. At this point, a final check of the placement of the panel in the frame and the fitting of the wood collar can take place. On the widest surface of the wood collar, a layer of Marvel Seal has been applied. This is a thin, metallicized, heat-set material that provides a vapour barrier. Metallicized contact adhesive tape can also be used for this purpose, and applied to one or all exposed wood surfaces. A pre-drilled backing sheet of Lexan plastic is used as a guide for the placement of drill holes through the wood collar. The marked holes are now drilled through the wood collar. Holes can also be drilled into the frame verso using the collar as a guide. Always choose the thickest possible part of a frame for placing the screws, keeping in mind that the end of the screw should never be closer than $\frac{3}{8}$ of an inch from the face of the frame. Now, the collar can be glued, glued and screwed, or simply screwed, onto the back of the frame. If the verso of the frame is uneven, or if there are inscriptions, gluing is not possible. In this case, a foam padding can be applied to the wood collar, and the collar then screwed into position. Before the painting is placed into the frame, ensure that no dust or other debris is trapped on or around the Plexiglas, otherwise the framing system will have to be dismantled in order to clean this away. One of the easiest ways is to use a can of compressed air. This prevents any potential scratching of the Plexiglas. Once all is clear, place the painting on the padding above the glazing layer. The panel should be provided with enough overall support and restraint to hold it into the frame and prevent any potential unrestricted movement. Originally, the panel was held into the frame with nails and framer’s points placed around the perimeter. We have chosen to secure the panel with means of gentle overall compression. Acid-free mat board is cut to fit over the panel and is squeezed between the Lexan backing and panel painting. The mat board provides a good spacer and also allows for the passage of moisture, to prevent potentially differential humidity zones in the sealed case. The mat board is cut to leave an opening for the labels, which were affixed to the back of the panel. Many frames and paintings have labels indicating the title, the names and date of exhibitions, and the name of the artist or owner. Labels provide critical information as to the history and provenance of the work of art and should therefore be preserved and kept visible. A small humidity test strip has been inserted into the backing mat, under the Lexan, and will monitor the internal relative humidity on a permanent basis. In order to seal the case and hold the panel into position, a $\frac{1}{4}$ -inch sheet of Lexan was chosen. This is a very rigid backing of polycarbonate, which will resist breaking and help prevent moisture loss through the back of the case. Its transparency makes it possible to see inside the framing. The Lexan sheet can now be secured to the wood collar using screws. The screws used to hold the Lexan in place also secure the wood collar to the frame verso. Do not use a power drill to insert screws, as the Lexan could crack if a screw is inserted too tightly. Hangers can be attached at the same time as the backing sheet. In this case, two small D-ring hangers are screwed into place. Once the framing is completed, carefully check the front to make sure that everything is in place and that no extraneous material is trapped. Ensure that the back looks solid and

that there is no movement of the framing elements under the Lexan sheet. The painting can now be displayed, transported or stored safely. This method of framing will protect the painting against short-term daily fluctuations in relative humidity, such as between night and day, and should also mitigate against longer-term seasonal humidity shifts. Over the dry winter months, the interior relative humidity may gradually drop from 50 percent to 40 percent; however, as this drop is very gradual, and the painting is well restrained, there should be little to no movement in the panel. When the ambient relative humidity rises during the summer months, the internal relative humidity will slowly rebound, to return the internal humidity to the desired level.

For more information on framing paintings be sure to check out CCI Note 10/8 on our web site.”

[Text on screen: Disclaimer: this framing method can and should be adapted according to the specific needs of the artwork. If necessary the assistance of a professional conservator should be sought]

[Canadian Conservation Institute signature and Canada wordmark]