

Technologies serving ideas and images

The creation of an artistic work requires much more than the inspiration or need to create or admire a piece. During the Viceroyalty of New Spain, artisans were specialized individuals who acquired their knowledge in the workshops of their own trade. By means of a skill based on experience and current ideas around beauty, power, god, liturgy, or daily life, artists manipulated and transformed raw materials in order to turn them into a recipient of their aspirations, beliefs, or desires. Technological traditions were very stable, and visual traditions allowed for changes in taste over time. In Independent Mexico, some were preserved, but there were also substantial changes in the use of materials and themes.

The artists developed their skills little by little, imitating, creating, and innovating the processes of their superiors and peers. Although some of the knowledge was shared among different workshops, each one also had its own formulas, methods, and tools that, like the hand of the master, left traces and imprints.

Since these ways of working were practiced daily, written descriptions of them are very scarce. To identify the materials with which the pieces were created, but also the technologies or techniques with which they were made, we have resorted to historical and scientific studies. The latter allow us to explain what the artists knew from practice, as well as to better understand the particular ways of working, in addition to identifying the best ways to conserve the works when restoration processes are required. In this room we exhibit some of these studies from the Museo Amparo Collection.

Layers

The pictorial system is the set of layers that make up a painting. In the case of a work on an easel, it is formed with a support, a preparatory ground layer, pictorial layers (paints), and varnishes. Its materials are of mineral, vegetable, and animal origin, and coexist in close relationship. All the layers provide a function within the system, perform a mechanical role, and determine the appearance of the work. Understanding this configuration is important to elucidate the aspect of the piece, but also for its conservation.

The pictorial support of a work is the structure on which it is painted, and it affects it in several ways. In New Spain painting, different materials were used as a support, which also had very different costs. Each type conferred a different degree of stability to the pictorial system. Depending on their roughness, smoothness, or absorption capacity, they required the use of different preparation layers or primers and certain binders, as well as a specific way to apply them. The primers or preparatory layers smoothed the surface and allowed the pigments to be received. The binders were the means to adhere the color. Depending on the supports, primers, and binders, the pigments and colorants could slide, end in shorter strokes or form long strokes, and they allowed—or not—the use of more or less pigment, radically affecting the ways of painting. The varnishes protected the image and gave it shine, although with the passage of time they tend to darken.

Types of supports

In the case of a metal sheet, because of its smoothness it was necessary to prepare the surface by making small incisions in the metal to facilitate adhesion. The preparatory layers and paint were thin and subtle to preserve its smooth and lustrous appearance. The brightness of the metal was used in some sections of the construction of the image.

When painting on a smooth stone, a suitable binder was required and the paint layers were also applied thinly. The stones that were used in painting were considered expensive because of their luster, texture, and color, and therefore they used to leave vital sections of them exposed, taking advantage of their appearance.

Wood was a strong support. If the work was on a single element or board, it would have great stability, and the preparation was simpler. If, on the other hand, in order to reach a specific size, different boards had to be joined together, the construction of the board or surface had to take into account the wood's capacity to swell according to humidity, which materialized differently in each element depending on its cut. It was common to glue them together with animal glues and to reinforce them with other wood strips, forged or wooden nails, as well as fibers or fabrics. In some cases, these fibers were applied only on the back, and in others also on the front. Sometimes even a cloth was applied over the entire surface on the front side.

In the case of using a textile support, fabrics made of long fibers were chosen, such as linen, which was practically the only type of textile used for painting in New Spain. With the passage of time, in the nineteenth century cotton fabrics also began to be used. The fabric needed to be stretched on a stretcher to receive preparatory layers that would smooth the weave, although the texture of the yarn was always part of the painting's finish.

X-rays (San Dimas)

One of the techniques which sometimes reveals much information about the pieces is the taking of X-ray plates, exposing the painting to a source of radiation from radioactive isotopes. By interposing an object between the source of radiation and the painting, an image is formed with different tones within a gray scale, inversely to the density of the matter present. This technique makes it possible to detect strokes, corrections, and layers underlying the visible image.

This painting depicts Saint Dismas, the Good Thief, crucified next to Christ; however, elements of a previously painted image can be detected with the naked eye, visible due to the change in refraction of the oil paint over time.

X-rays detected not only one, but two previous pictorial layers. In the one immediately below the saint, the portrait of a knight is visible, and in the opposite direction (upside down), another portrait of a nun. The nun must have been painted first, and at some point the canvas was turned and the portrait of a man was painted above it. Years later, saint Dismas was painted on top of it.

Through observation and other contrasting techniques, it was possible to identify the name of the gentleman: don Ignacio de Echegoyen y Goytia, son of Juan de Echegoyen and Mariana de Goytia. In the remains of another inscription, belonging to the portrait of the nun, the surname Goytia could also be read, so the nun must have been a relative of don Ignacio.

Color

Coloring is one of the main parts of painting. Although Italian Renaissance theory placed it after drawing, many painting traditions gave great importance to color as a tool to create depth and volume. It also reinforced symbolic content by using specific tones to identify characters or character hierarchies. In some periods of the Viceroyalty, such as the eighteenth century, color was primarily a way of expressing emotions. With a harmony of color and shades of light and shadow, they sought to generate empathy between the represented and the spectator.