1. Introduction

As the name of the project "Marij Pregelj Up Close" suggests, the main focus of this project was the artist and his art. The project, which we were able to carry out with the cooperation of different institutions and faculties, was a five months project supported by the Slovenian Ministry of education, science and sport and the European Social Fund.

The project ranged from analytical researches of the artists paint layer, methodological and technological studies, conservation-restoration of 14 paintings of Marij Pregelj, to the beginning of the creation of the artist's colour palette.

2. Marij Pregelj

Considered one of the key figures in Slovene painting in the second half of the 20th century, Marij Pregelj (1913-1967) developed a unique idiom of modernist painterly poetics in his oeuvre, introducing world class figurative modernism in Slovenia and Yugoslavia with his autonomous artistic explorations. Since the war had the biggest impact on his art, the main theme of Pregelj’s art is the human figure. Mercilessly thrown into the senseless, violent chaos of a historical moment that
cyclically repeats itself in forever new forms throughout the history of humankind: the violent absurdity of the extermination machine of the concentration camp is the archetypal image of the painter’s countless representations of human evil, aggression, (self-) destruction, pain, suffering and death. However, on the other hand, Pregelj’s man is marked by his rebellious attitude, his will to revolt and fight, to survive, and to preserve his individual life and that of the community. Characteristic of Pregelj’s figures are an epic pathos and the scream, be it in self-portraits, enigmatic images of grim companies at table, or in a modernist rendering of the national myth of the Battle of Sutjeska (mosaic in the Palace of the Federal Executive Council in Belgrade, 1962).¹

His early artistic path started under the influence of his studies at the Academy of Fine Arts in Zagreb (1932-1936), with color realism (portrait, landscape, self-portrait, and still life). In the World War II, the artist was brought face to face with the true nature of man, which was reflected in his art by the human figure in the spotlight. In the post-war period, Pregelj’s exploration of the pictorial field went from moderate realism to the modernist formal analysis of the painting. However, Pregelj’s best artistic output was created between 1957 and 1967, when he produced the masterpieces that are now seen as iconic works of Slovene modernist heritage (this part includes all the main motifs of Pregelj’s personal artistic iconography: companies at table, self-portraits, human figures, female figures, and architecture).²

3. Organization and distribution of work

As I mentioned on the beginning of the article, the project, for the time allotted to us, has been quite broad. Therefore, a proper distribution of work was needed. The team, which consisted of eight students and two mentors, was divided in two groups.

The first group, situated in laboratories³, consisted of two students (Domen Kranjc and Ana Penko)⁴ and a work mentor PhD Irena Kralj Cigić⁵, was responsible for analysis of pigments, binders and fillers.

² SARTORI, Erica, Priloga h končnemu poročilu o izvedenih projektnih aktivnostih, Ljubljana, unpublished source, June 2018.
³ Department for Natural Science Research of the Restoration Center (ZVKDS) and Chemass d.o.o.
The second group, situated in the Museum of Modern Arts, consisted of six students\(^6\) and a work mentor Tamara Trček Pečak, was involved in the conservation and restoration of the Marij Pregelj’s artwork. However, due to better organization in the second group even further division of tasks was needed:

- Jan Legan and Katja Tomšič were responsible for making the conservation-restoration plan, to keep tabs of the progress we made on artwork and to communicate and have consultations with the head restorer Nada Madžarac\(^7\) of the Museum of Modern Art.
- Klavdija Koren was in charge of the stratigraphic analysis of the taken samples, communication with the chemistry students and shared responsibility for technological studies of the artist paintings.
- Erica Sartori was in charge of the events concerning the project, making the final report and shared responsibility for technological studies of the artist paintings.
- One student Nika Maltar was responsible for the video documentation, shared responsibility for photo documentation and creating a short video about the project.
- I was responsible for work documentation, conservation-restoration reports, organizing the data on the computer and shared responsibility for photo documentation.

During and after the project "Marij Pregelj Up Close", which was also a part of the preparation for the Marij Pregelj’s retrospective exhibition that is being held in the Museum of Modern Art Ljubljana, we also presented our work on several different occasions.

4. Preparation for the conservation and restoration

Our work began with the close inspection of the fourteen paintings and filling out the condition report sheets, which we supplemented by using photography and

\(^4\) From the Faculty of Chemistry and Chemical Technology.
\(^5\) She is an Associate Professor at the Faculty of Chemistry and Chemical Technology, Department of Chemistry and Biochemistry.
\(^6\) All involved in the conservation and restoration process itself.
\(^7\) While overviewing their proposal of the conservation-restoration plan, she either approved or refused their suggestions or helped to look at the work from a different angle.
graphical documentation. Based on the acquired data from the inspection of the paintings a detailed conservation-restoration plan was made.

The plan also included optical microscopy and analytical research with gas chromatography (GC), enzyme-linked immunosorbent assay (ELISA), Fourier-transform infrared spectroscopy (FTIR) and Raman spectroscopy. The results showed us that the artist kept using the same way of painting (multiple color layers) and the same pallet of inorganic pigments. When we were analyzing the binders, we found out that in his early years, he was using colors based on oil and protein.

Before the conservation and restoration started, we created technical and technological studies, which helped us with basic understanding of the way the artist managed to build the image layer. At first, the studies were made based only on our own perception as we were examining the painting, but later we helped ourselves with the results of optical microscopy.

5. Conservation-restoration

Within the project "Marij Pregelj Up Close" we have restored fourteen paintings, which are a part of the Modern Gallery font. The artwork extends from the early production of the authors creative path to the late, the most perfected period. As such, we were provided with an insight in the development of the artist’s creativity.

Each painting was in a different condition and therefor they had different demands for conservation-restoration procedures. As is seen in Figure 1 almost all of the paintings underwent the procedures such as removal of impurities (from the back and the front), reconstruction of the image layer with filling material and retouching of the fill.

8 We wished to find out not only what pigments, fillings, binders and varnishes did the artist use, but also in how many layers did he paint and what technique did he use. The samples were taken from the few selected paintings that covered the time of his creativity or somehow stood out in their built.
9 Such as titanic white, lead yellow, lead red, zinc white, carbon black, cinnabar, emerald green, chrome yellow, ultramarine blue, barite white, chrome oxide green, yellow ocher, Prussian blue, phthalocyanine blue and phthalocyanine green and carmine red, which is synthetic organic pigment.
10 The first-year students of undergraduate studies and first-year students of the postgraduate studies helped in the course of the technical and technological studies.
11 Therefor the paint was layered more accurately.
Out of fourteen paintings, the painting that needed the most intervention was *Lamentating wives (Žaluoče žene)*. Picasso’s influence on this picture is more than clear. The figures are shown in grotesque way; they are deformed, broken and deformed into units, even though the design of the spatial plan does not change. The color composition ranges in dark, dull, grayish tones, which is brought back to life with red, blue and pink emphasis (*Figure 2*). The artist used paint based on oil, which he applied on canvas with spatula and brush in multiple layers\(^\text{12}\). During the closer observation of the painting we noticed, not only that the painting has surface impurities, but also two irregularities (one smaller puncture and a local loss of a paint layer) both located in the upper part of the painting. The sub-frame local deformations appeared due to the inappropriate tension on the textile support. The painting already has a past in the conservation-restoration procedures, which is noticeable with the unoriginal sub-frame, protective paper tape on the edges and a simple wooden frame.

\(^{12}\) With optical microscopy we found out that the artist painted in thin, thick and multiple layers, which gave the painting it’s unique structure.
The conservation-restoration started with removal of the later added wooden frame and continued with the removal of surface impurities from the front and the verso of the painting. Since the results of the water drop test proved that the surface of the painting is hydrophobic and the pH of the surface is neutral, we chose a distilled water as a cleaning agent. The impurities on the back were removed with a soft brush and vacuum cleaner. We removed an inappropriate paper tape\textsuperscript{13} from the tacking edges of the painting with a hot water and scalpel. Before the treatment of canvas deformations, we temporarily secured the areas of a local paint loss with two percent solution of hydroxypropyl cellulose in distilled water and Japan paper. However, after the procedure of the removal of the local deformations on the canvas support, we noticed that, probably due to the long-term humidification, the paint layer started to locally derogate from the textile support and formed bubbles. We immediately treated loosened paint layer by injecting the consolidant directly into air

\textsuperscript{13} Paper tape based on the gelatin glue, was applied not only on the edges, but on some areas also on the paint layer. However, the main reason is that the bond between paper tape and the canvas was severely weakened and it lost its protective function.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{picture2.jpg}
\caption{Marij Pregelj, Žaluječe žene (Lamentating wives), oil on canvas, 1957, 100,5 x 120,5 cm, Museum of Modern Art, Ljubljana (Photo: Nika Maltar, April 1017).}
\end{figure}
pockets\(^{14}\). The areas with loss of the paint layer were filled with 12 percent glutoline-glue-chalk filler and isolated with five percent solution of shellac in ethanol. The filling was then retouched using quality aquarelle colors. The conservation-restoration process on the painting *Lamentating wives* ended by reinforcing adhesive ties of the documentary elements on the wooden sub-frame with four percent of Klucel G in water.

During the process of the conservation-restoration of 14 paintings, the constant communication between participants, updating the work sheets for individual paintings, constant photo documentation and video documentation of the progress and sorting out of all the data was needed otherwise we would have been overloaded by information by the conclusion of the project. At the end of the five-month’s project, we also turned in the report of our work and created a short video.

6. Conclusion

The participation on the project "Marij Pregelj Up Close" helped the participants, not only to understand the importance of team work, cooperation, appropriate organization before the task ahead, interdisciplinary approach, appropriate analysis of the problem, but also the importance of proper communication with other participants in order for the work to run smoothly.

One of our goals during the project was also to make the palette of Marij Pregelj’s colors, with instructions how to reproduce a certain detail of one of his painting’s, but sadly, we did not have enough time, yet we are very keen to see if the palette will ever come into existence.

\(^{14}\) For the consolidation, we used 10 % solution of Plexisol P550 in White Spirit, which was reactivated at 50°C for stronger bond.
Bibliography


SARTORI, Erica, Priloga h končnemu poročilu o izvedenih projektnih aktivnostih, Ljubljana, unpublished source, June 2018.