CONTACT WITH A CONTEMPORARY ARTIST: MATERIALS, IDEA AND RESTORATION OF THE WORK OF **EDUARDO SALES ENCARNACIÓN**

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ABSTRACT: This research work is based on the need for not only a study on the technique and materials used in contemporary artistic production, but also for the semantic analysis of works for conservation purposes. This study focuses on the work of Eduardo Sales Encarnación, an artist of international prestige, who produces a representative type of work because of the variety of synthetic polymers he uses. An interview with the artist, the fieldwork in his studio, the compilation of technical data, the restoration of some of his works, and the characterisation of the polymers have established the artistic and restoration intentions, determined the deterioration agents and pathologies present in the works, as well as the appropriate intervention methodology.

KEYWORDS: contemporary art, restoration, conservation, artists, material, artistic intention, polymer

1.-INTRODUCTION

The research we present is a result of the need to study the technique and materials used in the new production of present-day art for the purpose of determining the pathologies which affect works created with synthetic binding agents, as well as the appropriate intervention methodology for each problem. For this purpose, we used the valuable work of artist Eduardo Sales Encarnación as a reference.

This artist uses plastic research as a tool to express his concerns, and incorporates new binding agents as part of the material used into his works, mostly solvents and acrylic or polyvinyl acetate emulsions, among others. Banett, in an optimistic vision of the evolution of synthetic materials, suggested that the:

> Art of the future [...] will be guided down the path of new materials, polymers, and other artificial materials developed by science in its impulse to advance. The new materials will become even more extensive, enable the aesthetic verb and relieve artists of many of the problems resulting from the poor quality of materials that, already out-of-date, will no longer progress or evolve.

(BANETT, 1976)

The fact is works which, technically, have been poorly done is an additional problem to the poor quality of the materials used, is occasionally confused with the concept of ephemeral art (in principle, we would not be talking about ephemeral art if it was not the primary intention of the works).

In general, artists work immersely in the art market and feels obliged to seek a certain level of longevity in their work. Therefore, they must make an effort to know and correctly use the materials, as well as to refine their technique in order to guarantee a certain state of conservation. However, there are artists who are genuinely concerned about the techninical quality of their work who look for the best materials and correctly use them as they intend to accomplish works that will be conserved beyond the artist's actual existence. We include Eduardo Sales in this group of artists who are committed to technical quality. For this reason, and the fact that he strives to provide his productions with a permanent quality, we present the previous studies which will help us to conserve his

2. OBJECTIVES

The research which encompases this study pursues several objectives. Among these, the most significant objective refers to the study of materials and their behaviour by analysing the artist's work. Therefore, the aim is to:

- Study the life and work of Eduardo Sales Encarnación, as well as the new materials and techniques he uses.
- Define and characterise the artistic content of Eduardo Sales Encarnación.
- Perform an inventory of the works in his study.
- Extract samples from a significant number of works.
- Determine the binding agents and pigments used by the artist, by means of analytical techniques, characterising their nature and chemical composition.
- Prepare specimens for the testing of the layers.
- Research the degradation and causes of the deterioration of the resins used.
- Obtain results for the behaviour of the film-forming substances applied by the artist and specify conservation strategies. Inform the artists and restorers.

and specify conservation strategies. Inform artists and restorers. This study must begin with an understanding of the artist's life and work in order to obtain a clear vision of his career in plastic arts, the use of his technique, intentions and stance towards them and in



Figure 1.- Eduardo Sales Encarnación next to one of his works.

relation to the conservation of his work and potential intervention. For this purpose, an interview was conducted on the first occasion we were with the artist in his studio to obtain information about his work standards, artistic intentions and personal evolution over the years. During this first phase of data collection, the fieldwork carried out in the artist's studio was assessed and considered to be a first-hand source of information. As the INCCA working group recommended, information is obtained with this method that will help us to make appropriate decisions by paying attention to the discrepant factors surrounding the conservation of contemporary art.

3. EVOLUTION OF THE STUDY: SOME ASPECTS RELATING TO THE METHODOLOGY

With the aim of achieving the objectives proposed, an appropriate study methodology and the tasks to be performed were studied. To go about this, the following actions were performed:

-A thorough bibliographic review of all of the publications referring to the figure of Eduardo Sales Encarnación.

-An interview with the artist and his studio partner, María José Tornero, who works and shares the same interests as Eduardo and who wrote her Doctoral Thesis on his figure as a plastic artist. This interview was the staring point to guide our study, and was published in April 2005 in the magazine R&R, No. 97.

-At the same time, we made several visits to his studio, during which we observed the artist while he worked. Moreover, aspects with regard to his application technique and the use of the synthetic materials were discussed.

- -Extraction of samples from many of his works.
- -Creating a database to include the technical specifications of the products used by the artist.
- -Restoration of two of his works, which allowed us to determine the way in which he uses pictorial techniques, as well as his stance on the future conservation of his artistic production.

4. THE FIGURE OF EDUARDO SALES ENCARNACIÓN: THE WORK AND ITS CONTEXT 2 .

Eduardo Sales Encarnación began his training in the forties, an age impregnated by an environment of academism, but one forever pursuing a great desire and interest in the renewal of artistic and



Figure 2.- Storage of the materials used by the artist

technical language. He is what is term a complete artist, and has intervened in numerous artistic fields such as painting, murals, stained glass, decorating and university teaching.

He began his artistic incursion in an adverse environment to art as the artistic context of Spain and Valencia was filled with economic privacy and social vetoes. In 1945, he started his Fine Arts studies in the middle of the Spanish post-war era, a time of hardships which did not favour artistic development. The pro-Franco regime, which followed the Spanish Civil War, hindered the renewal of plastic arts, and the painting of this period was limited to that of a decorative nature intended for the middle class.

At the time, realism, typical of academism and impressionism, prevailed in the Schools of Fine Arts. From this time onwards, an escape towards new horizons and a desire for artistic renewal which, above all, was captured in landscape and still life works, although not exclusively, were observed not only rationally or visually, but also emotionally.

In this disturbed environment, some artists had to accept the conditions imposed by society and left their interests aside. Others, who did not except these conditions, faced exile. It was halfway though the fifties when a powerful renewal began. Sales begins to abandon the typical realism and "Sorollism" (of artist Joaquín Sorolla) of the Saint Charles Academy to evolve towards formalist proposals, supported by exhibits, the creation of groups and trips abroad, with which the Spanish and Valencian spirit of modernity began to grow.

Gradually, artistic renewal invaded the Valencia art environment and revealed new plastic possibilities for those artists who, until that time, had been forbidden. Proof of this was the exhibition of contemporary French artists held in Valencia in 1945. Along these lines, Eusebio Sempere was the first Valencian artist to present an abstract art exhibition.

Groups or associations were established by the need to encourage the market, to promote art and to confer it greater social importance. This need was determined by a nonconformity which Sales was captured by and who attempted to overcome all the obstacles from which he began to shape his own language of expression that would slowly achieve great maturity.

In 1927, Eduardo Sales was born in the Sagunto neighbourhood of Valencia in a family of artists. His father, a decorator and restorer, began to present and introduce him to this artistic environment in which Sales had shown great interest since his youth. He started in the School of Arts and Trades of Valencia to be later enrolled in the

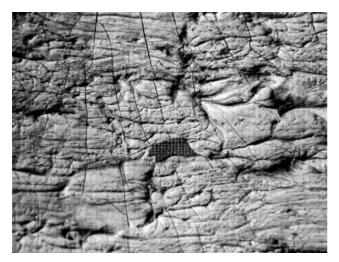


Figure 3.- Detail of the pathologies present

Saint Charles Royal Academy of Fine Arts (1945-1950) where he acquired most of his academic knowledge, participated in exhibits and activities and made great friends . At the end of the seventies, he obtained his doctorate degree and began teaching until the present-day when he continues in the Department of Drawing as an Emeritus Professor.

In the beginning, Sales shared all the difficulties of the post-war years. His origins were based on a generation of artists in which the profound domain of traditional painting techniques and processes dominated, essentially practical training which provided him with a profound knowledge of all the disciplines, and which would contribute to his subsequent wider search for renewal and new experiences.

Pictorially, avant-garde art was practically unknown as it was vetoed by the ideologies of the Spanish Civil War. It seemed as if everything was based on French impressionism or the most academic Sorollatype style, studying light, painting landscapes or on the realist copying of models. Father Alfons Roig was a very important figure in the introduction of plastic innovations. He presented avant-garde art through catalogues and created an unprecedented artistic library in that period. Portraits, still lifes and landscapes were the main figures of the different plastic activities of that time which received good reviews from the press. Sales introduced city motifs of Valencia and port motifs with his palette, which were rich in tones, shades and daring colours, that slowly become impregnated by modernity and highlighted the study of light and his fusion of shades, a renewal that was clearly visible from the second half of the fifties.

Therefore, realism and impressionism impregnated Sales' art, while the characters he portrayed seemed surprised and looked at the spectator. He introduced abstract backgrounds that strengthened figures which he achieved by a short brushstroke and by studying light. He enabled the latent evolution towards pictorial freedom to be seen. Little by little, nature gained importance until it became the main theme of his later productions. Light and colour filled the architectural environments with a loose brushstroke and controlled impasting with no attention paid to detail, rather to its essence through the use of chromatic stains.

From 1955 to 1956, he travelled to South America for the International Fair of Peace and Brotherhood of the Free World in Santo Domingo. As a result, he visited Venezuela, Haiti, Puerto Rico and the Dominican Republic. He worked together with Manolo Gil, José Esteve Edo, Ricardo Zamorano, José Benedito, Luis Torres, Jose Abuja, Canajeo and Roa in painting several murals for the Ministry of Public Works and other official buildings. He extended his stay following this work .



Figure 4.- Eduardo Sales working in his studio.

When he returned to Spain, he organised exhibitions, such as the two individual exhibitions in the Sala Mateu, which provided evidence of a new plastic evolution that he acquired during his stay in America, thanks to the contacts he made with muralists such as Orozco, Rivera or Siqueiros. The following year, he organised another exhibition in the Sala Mateu with a large number of works, especially landscape themes, and he participated at the same time in the Arte Actual Association of Valencia from 1959 until the seventies. Their activities included the organisation of several March Exhibitions (Salones de Marzo) (1960-1979) which are well worth highlighting. Eduardo also participated in the I March Exhibition in the Valencian Regional Parliament's Palace and Gardens, whose objective was to introduce the productions of Valencian artists. His last collaboration with Arte Actual was during the XIV March Exhibition of 1970 in the Ribera Gallery. All the avantgarde art visions were brought together during these exhibits: expressionism, constructivism, naïve, surrealism, informalism, pop art, and even the more traditional figurative forms.

The influence of his stay in the American continent was visualised in his change of interest, which went from treating light to serene, clear and orderly painting with cubist influences, reflected by the geometrisation of the elements constituting his compositions, the elimination of unnecessary details, the creation of an architectural background with great compositional synthesis. Yet he maintained his interest in colour and even gave it greater significance. These representations are accompanied with a simplicity that sprinkles them with a certainly naïve nature, a new exotic world plastically represented which would remain until the mid-seventies.

Sales provided his work with a formalist nature, although he later chose a certain level of informalism. He strived for the planarity and bidimensionalism of the elements by representing them as modules. This interest and structural nature led him to create murals, ceramic murals and stained glass (which he had already known from his father). He even combined restoration with his painting. His following works are worth highlighting: the Saint Dominic Cloister of in Valencia (1950), the Peace Fair of Santo Domingo (1955-1956), the Saint Mary Monastery of El Puig (1970), and the Valencian School of Medicine (1984 and 1986), the Parochial Church of Our Lord Jesus Christ in Valencia (1960) and the Bancaja Headquarters in Valencia (1964), among others. Just like his backgrounds and elemental composition, his characters also represented attributes such as sobriety, strictness and stateliness, all of which were typical of analytical cubism, and even of Romanesque painting.

Some ten years later, prior to the seventies, Sales again became involved in the world of painting, and refocused his attention on the world of landscapes with a more material-type painting, an enriched colour palette and compositional rhythm.

He presented numerous exhibitions and showed a tendency to blur the geometrised elements from the previous period, observed with a view to moving on to a denser form of painting in which the borders of the shapes even disappeared. His painting took on a more traditional, more elaborate and pure technique and provided the more everyday environments with greater expressiveness in a more emotive way.

Thus, landscapes were a focal point of his plastic research, and with it, his technique, as he introduced polymeric resins (acrylics) and abandoned former abstraction. Due to the density of materials, elements vibrated, blended together, and shapes were merely sensed, and only occasionally, by creating interest in the tactile and the visual senses since he afforded his work with certain expressionism that dissolves the geometry into the density of the pigment employed.

With this neofiguration, Sales introduced the most emotive aspect of representation by means of stains of colour and materials that create a mixture of formalist expressionism of a cubist origin, and abstract expressionism. It is a synthesis of his learning through all the various periods, the creation of a more elaborate, purer work. This new painting allows us to observe a new world of sensations through colour, blending, shades, combinations of materials, superposition, strokes, glazing, etc.

He used large spaces to portray his work, firstly with canvas, and then mainly wood, by covering them completely with an equilibrium of shades and materials to present tremendous freedom of expression. He applied certain plastic resources which enclosed his work in a certain air of mystery, where shapes appeared to be in continuous development and melted together with the background after having removed any unnecessary details.

The shapes broke down, became ambiguous and changed from the objective to the subjective by expanding and undergoing a metamorphosis until they achieved indetermination, all of which was associated with a world of sensations that must attract the spectator from an introspective analysis.

Eduardo Sales is an author whose technical-plastic background is highly extensive and important, one that combines the rational elements of technique with the subjectiveness of expression to provide his compositions with rhythm and life, expressed through shapes, colours, lights, etc., which, although undetermined, offer an equilibrium that does not hinder the study of perspective to capture the essence of the work.

5. STUDY OF THE MATERIAL AND THE TECHNIQUE

During the regular visits to the author's studio, the execution of his work was studied as well as the techniques and materials used. This is extremely valuable information which contrasts with the interviews and laboratory tests.

Eduardo Sales is a visionary artist who is ahead of the time that he was chosen to live, who has evolved from traditional academic painting to an abstract vision of pictorial feeling. His productions range from academic drawings of models, still lifes and oil portraits to the loss of silhouettes in oil. Lastly, he has succeeded in capturing a complete decomposition with new materials, collages, etc.

He possesses good knowledge and takes cares of different techniques (thanks to his father's studio and his fascination for Gothic art). Presently however, mainly due to market supply, he does not tend to use noble materials, but surrounds his compositions with an aura of mystery as a result of not knowing the compatibility of materials and how they age.

He has incorporated board as a support because his taste has grown for an increasingly material painting which employs plaster, alabasters, sand, paper, etc. to contribute more weight and, therefore, needs good support. These boards tend to be made of plywood (DM) and have been reinforced with frames and, on occasion, with the addition of canvas for more resistance. They always tend to be medium-sized and square and, should he decide to produce a larger work, he is inclined to add boards in a polyptic manner.

He prepares synthetic primers or a chalk medium on the boards (at present, he does not always use primers as he may also glue paper with different resins). He also uses vinyl and acrylic binding agents to materialise the paint layers and finishes with touches of enamels, oils and lacquers, and he sometimes protects the surfaces created with polymer gouaches or other protective glosses.

He has gradually abandoned oil for synthetic materials, especially acrylic polymers, given the speed with which work can be performed with them, their quick drying, the possibility of superpositions, reserves and addition of loads combined with the use of a palette of warm, natural colours like siennas, ochres, earth tones, dark reds, blacks, etc.

Acrylic painting is widely known by artists for its technical and aesthetic qualities. However, these resins are still being studied in terms of their behaviour over time. Plastic paints are those composed of a binding agent whose water emulsion offers a high degree of polymerisation. Synthetic polymer resins have been used in America since the fifties where painters, such as Orozco, Siqueiros or Rivera, have used them for large outdoor murals. Nevertheless, some synthetic resins had already been used industrially since the twenties. Thus, their use became more widespread, and emerged throughout Europe at the start of the seventies.

For an experimental artist such as Eduardo, this has become a field filled with appeal, even though he has, at times, done tests with industrial paints which are condemned to failure as they are not intended for artistic work. Acrylic resins are characterised by their strong adhesion to surfaces, their stability to light if they are of good quality, and their thermoplastic properties and ductility. These are the reasons why the generated layers are expected to behave well against cracking; they are water-soluble, film-forming substances but no longer remain so after polymerisation. However, it is after this time that they may be affected by some common solvents as they form softer layers due to their glass transition temperature which has consequences during the conservation process because they are not suitable for the application of high temperatures and pressures, plus the fact that they easily attract dust and dirt, and become brittle at very low temperatures. Synthetic resins are susceptible to attacks by microorganisms (fungi), which has become a growing concern among artists and collectors. In this case, preventive conservation has become the best solution.

In addition to a wide range of paints and binding agents, the way in which each artist understands colour must be taken into account as each artist explores the effects of colour by using all kinds of procedures to achieve the desired effect.

Traditionally, glosses protect surfaces against abrasion, dust and dirt and saturate the paint they cover. It is debated as to whether or not gloss should be applied to acrylic paints. Many artists insist that gloss should neither be applied to acrylic paintings, nor should this process be carried out on these types of works in the restoration field, although Eduardo Sales claims to have applied it on several occasions. Some technical information related to the creation of works is provided as follows:



Figure 5.- Details of the composition of the work of Eduardo Sales

Figure 3 Details of the composition of the work of Eduardo Sales		
LAYER	MATERIAL/ MANUFACTURER	CONSERVATION
SUPPORT	DM and plywood (100x100 cm)	Good, no mechanical stresses
PREPARATION	Chalk medium + rabbit-skin glue Latex/ Isaval, Titan	Temporary, isolates the support and adheres the layers. Good status.
LOADS	Paper, alabaster, white lead, whiting, earth, sand, etc., adhered with latex. (1:6)	Loss of adherence at certain points, cleavage.
PICTORIAL P.	Synthetic resin/ Epomix S.L., Isaval, La Pajarita, Titan	Loss of layers where the load had lifted from the surface, cracks from drying.
PROTECTION P.	Acrylic or vinyl mixtures (1:6)	Temporary, does not alter the work. Good status, be it with some flaking.

Table 1.-- Arrangement of the layers. Technical specifications...

6.- ARTISTIC INTENTION AND RESTORATION INTENTIONS

6.1.-An extract of the interview

When the artist was asked about the type of work he creates, he answered:

I always wanted to try new things, advance. Yet since we didn't have any information from Europe during the post-war period, we were somewhat shut off in our career. The only person who brought us any news was Father Roig, a vanguard intellectual who brought us closer to that world. I have always had an informalist kitchen to research and experimen, which sometimes worked in my favour but failed to bring me good results at other times.

Please, explain the term kitchen:

It stems from my knowledge of traditional techniques which I acquired during my time as a mural painter and restorer in my father's studio. When I say "kitchen", I refer to the many research possibilities for the use of different technical procedures. The problems which arise during technical experimentation always enable you to discover new ways and processes that you adopt to your own expressive intentions.

According to the artist, the essential composition of his work and technique has evolved, in such a way that:

In my first works, the support I used was canvas over frames, which I prepared myself, although I bought the supports to paint under exceptional circumstances. The traditional painting procedure with oils was used. It was after my trip to Santo Domingo in 1955, together with Manolo Gil, when we both learnt the new industrial technique using polymers, which was employed by Mexican muralists, and which we both found interesting. From that point onwards, I incorporated them into my work and explored them. Later, I generally used panels because works are very material. In this way, I made sure that the plaster, alabaster and sands remained fixed; they'd have been weaker on canvas.

Normally I used boards and always prepared them with glue. I am quite fond of Romanic and Gothic styles; I like their preparations and techniques. Now they are latent, that is, they still remain. Now if this is so, it is because they worked well. They were wise back then, which is why I try to use them in more modern work. I use glues, and loads like alabasters, earth, ground colours and other materials that no longer exist, they remain with me and date back to my father's time. Little by little, I have included polymers such as binding agents for colour, and have used diluted proportions ranging from less dense to more dense to avoid cracks, be it intuitively. I rarely use oils. Only as a gloss, perhaps. I use some diluted enamels under gouaches. But whenever I begin with water, I finish with oils because it wouldn't remain fixed if I didn't.

Regarding concern about the conservation of your work, explain your degree of alteration and interest in restoration:

Nowadays, I am a bit more concerned. I wasn't before because all I wanted to do was to paint. By doing so, I fulfilled my objective. I like the way my works are. But, yes. It's true that there are works such as "The Night Watch" by Rembrandt, that surprised me when I saw it because it looked as if they had "washed it off". They had removed the last layer of the author to blur the most pronounced features, thinking that it was dirt built up over time. They made mistakes that are luckily no longer made today. Obviously, time creates patina. Some degradation can be observed at first sight, especially that of a mechanical nature. It has improved at later stages, say 25 years ago until the present-day. I know the technique well through my father's training in the studio, which was strongly based on traditional elements.

I agree that these interventions must be carried out by specialized individuals. Works cannot be restored as we restored them 20 years ago; we used intuition with no general vision, without certainty. We need to look for people who know what they are doing, and use laboratory tests. My idea of restoration is a neutral tint that doesn't remove any



Figure 6.- Intervention process for the work Portrait (Retrato).

essential information, this being the soul of the work, which is quite the opposite to what was done before when absolutely everything was repainted. Like what was done when restoring the Crucifix of Cimabue following the flood.

6.2. Restoration of some of his works

Given the need to restore two of his works, and his knowing the work that the restorer of contemporary work carried out, the artist himself requested that the Institute for the Restoration of Cultural Heritage took charge of the intervention process. This will be the starting point for all of the research presented.

The first work was a small portrait of great value to the artist. Some general descriptive characteristics of the work are as follows:

It is an oil painting on canvas dating back to 1955, of small dimensions (51 x 69 cm), painted over another painting as the author reused canvases during this period given the lack of economic resources. The work has no large patches of impasto with a predominate palette of earth tones, mainly greens and browns. It is a half-body portrait of his wife, a figurative work with abstract lines, whose details centre on the face.

By examining its state of conservation, we observed that the different paint layers were in good condition, well adhered and stuck together, although they presented slight deformations and superficial dirt had accumulated. A few minor losses were seen on the pictorial layer that did not interfere with the overall viewing of the work. The main problem with this painting was located along the perimeter since the frame had been removed to store the work and the canvas had been kept in a common folder. Having removed the canvas from its support, it underwent strong movements as a result of the hygroscopicity of the cellulose support, which produced severe deformations, numerous folds and wrinkles to the canvas.

After transferring the work to the laboratory, the usual preliminary studies were performed to provide technical information such as the thickness of the layers, the use of impasting or the instruments used to apply paint, surface deformation-type problems, use of glosses, underlying drawing or paint, etc.

Intervention began with a soft mechanical cleaning on the front and back of the work with brushes of varying hardnesses in order to remove the greasy dust deposits found, particularly in the folds that had formed on the perimeter of the canvas. In order to restore the work its planarity to correctly consolidate the pictorial layers, and since shrinkage of the support had not been confirmed, an impregnation process was carried out with Beva®371 in white spirit (1:1) on a layer of Japanese paper. Next, the work was taken to a heated table where the combination of controlled heat and pressure flattened the work, thus removing the deformations on the support. After cooling under pressure, strips were placed on the perimeters (since these areas were the most damaged and weakest that the

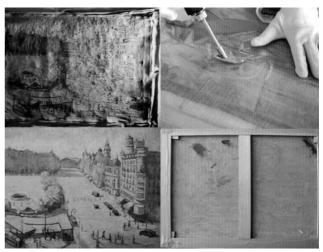


Figure 7.- Intervention process for the work Portrait (Retrato).

work presented) with linen canvas that had been waterproofed with correctly thickened PlextolB-500. Strips were adhered with Plextol B-500 + xylene (85:15) by contact. Finally, it was deprotected with the same solvent used for protection work, and it was finally tightened onto a custom-size frame. The last step was to perform gentle chemical cleaning with 50% alcohol diluted in water in order to remove the greasy dust which had accumulated on the surface, and to reliably plaster and reintegrate the painting.

The second work was the painting of the City Hall Square (Plaza del Ayuntamiento).

It is an oil painting on canvas from 1955, whose pictorial surface It is an oil painting done on canvas dating back to 1955, whose pictorial surface measures 105 x 73 cm. It presents canvas borders of between 4 and 10 cm. This work is also of great value to the artist as the canvas was made by his mother with different twill and cotton taffeta extensions. We find ourselves before a more material painting that lacks gloss with a homogeneous preparation layer. In this work, the artist depicted an aerial perspective of the Valencia City Hall Square in the fifties. He used very vivid and pure colours that, together with a loose brushstroke, filled the work with light and dynamism.

The state of conservation of the work is good if we take into account its technical characteristics. As previously mentioned, the support is highly fragmented, thus presenting different seams and types of fabrics all in different directions. The main problem with this painting was its incorrect storage (it was found tacked onto a plywood board with drawing pins). Therefore, we found rust spots at the fastening points, a large amount of greasy dust in the impasting, and deformations produced by other works that had rested on the front of this work. There were only some cracks from the fast drying of some colours and small specific losses from all the layers.

The intervention process for this work followed the same steps as the previous work. Therefore, preliminary studies to study the quality of the surfaces were performed. These studies confirmed the vast texturising of the paint and its poor preparation layer. Thus, gentle mechanical cleaning was carried out on the front and back of the work with brushes of varying thicknesses to remove greasy dust deposits in order to prevent part of the dirt from setting before proceeding to protect-consolidate the pictorial film with Japanese paper and Beva® 371. After the protection-consolidation steps, the planarity of its surface was promptly restored as using the heated table was not feasible given the possibility of damaging the impasting. As the canvas was thin, had weakened and could be damaged during the tightening process, the borders and small



Figure 8.- Process for the creation and storing of Eduardo's work in his studio

tears were reinforced with fibreglass and Beva® Film. Finally, it was deprotected with the same solvent used for the protection process, and was tightened onto a custom-size frame. Several chemical cleanings were performed to remove the dirt adhering to the impastos which restored luminosity to the painting. Lastly, the areas which presented loss of layers were promptly plastered and reintegrated.

7. CONCLUSIONS

IIn spite of the fact that the artist's works are spread out among various countries, it was possible to inventory the work he had in his studio from studying its material composition and the way in which it had evolved over the years.

In addition, extensive photographic document work on the state of the works was carried out by focusing on the possible pathologies which were already present. Nonetheless, it is worth pointing out that the majority were these were due to mechanical action.

Our research, which began with this work, wishes to highlight the importance of coming into direct contact with the artist, who can provide valuable information about the uses and application procedures applied to the materials used.

We believe that the quality of the figure and work of Eduardo Sales requires and deserves in-depth research as it enables us to prepare the future conservation of his work given his importance in the artistic world.

On the other hand, after having witnessed the execution of his work in the studio, we can conclude that the artist is indeed concerned about the correct use of technique, and he respects drying times, the application of layers, etc. It is necessary, therefore, to broaden our knowledge of the composition of the materials that he uses and to study the behaviour of his work as a collection that was intended to last

The study of materials, conditions and deterioration agents applied in laboratory reproductions will be the starting point to respond to possible intervention requirements.

The author's artistic intention in relation to conservation was determined as he shows genuine interest in longevity. The study of this discrepant factor is the first step towards a correct intervention methodology for contemporary art.

This study focuses on the analysis and determination of the physicalchemical components of the materials used by the artist in his

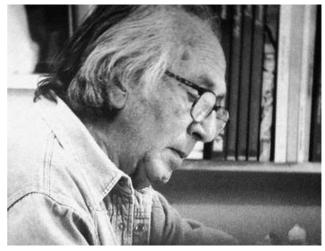


Figure 9.- Eduardo Sales Encarnación

works with a view to subjecting them to different ageing processes, individually and in accurately reproduced test tubes, to observe the potential deterioration of each material employed.

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NOTES

- ¹ International working group for the conservation of contemporary art.
- ² Extract by Patuel, Pascual (2002). Eduardo Sales: medio siglo de pintura. Ed. Universitat Politécnica de Valéncia. ISBN: 84-9705-200-5
- ³ Pórtico Group of Artists of Zaragoza (1947), School of Altamira (Cantabria, 1948), LADAC (1950), First Conference of Abstract Art and the Exhibition of Abstract Art (Santander, 1953), Equipo 57 (Paris 1957), the El Paso Group...
- ⁴Disciple of Vicente Beltrán or Salvador Tuset, colleague of Agustín Albalat, Manolo Gil, Juan Genovés or Eusebio Sempere...
- 5 Entering into contact with exiled artists such as $\,$ Alfredo Just or Vela Zanetti.
- ⁶ Noteworthy gallery in the city of Valencia, open from 1892 until 1977, hosting Sales' first exhibition in 1959 with fifteen oil and seven crayon paintings exhibiting his learning from Santo Domingo.
- ⁷ Its objective was to: *Bring artists and art lovers together to protect, promote and stimulate artistic activities with current aesthetic criteria.* The association carried out many cultural activities related to avant-garde art from the Centre of North American Studies.
- ⁸ Landscape has been an object of research throughout his creative life, with techniques such as polymer resins, distemper and oil, enriched with materials that convert them into mixed techniques.
- ⁹ When the binding agent is a synthetic polymer, it is dispersed using an appropriate solvent in such a way that when the solvent evaporates the individual macromolecules come into contact and intertwine. The

solidification is improved through the presence of a polymerisation catalyst in the solvent called a dryer. The synthetic polymers most commonly used as binding agents for paintings are alkyd and nitrocellulose resins. Phenolic resins, acrylic resins, epoxy resins, polyvinyl acetate and polyurethane resins are also used.

BIBLIOGRAPHY

Agramunt Lacruz, F. Calle, R. Peiró, J. Tornero Jiménez (2006). Eduardo Sales. Emprentes de la memòria

Annual book of astm standards. (1999). Paints, related coatings and aromatics. Volume 06.03. Paint – pigments, drying oils, polymers, resisns, naval stores, cellulosic esters, and ink vehicles. ASTM International

Althöfer, H. (1993): *La teoría de la restauración de arte contemporáneo*. Vitoria: Diputación Foral de Álava.

Althöfer, H. (2003): Ensayos sobre modelos. Restauración de la pintura contemporánea: tendencias, materiales, técnicas. Ed. Istmo. España.

Balart Gimeno, R. (2003). *Introducció als materials polimènics i compostos*. Universitat Politècnica de València. Servei de publicacions.

Banett, D. (1976): El arte y los plásticos. Ed. Leda. Barcelona.

Harrison, H. (1995): Enciclopedia de técnicas de pintura acrílica. Editorial Acanto S.A. Barcelona.

Matteini, M., Moles A. (2001): La química en la restauración. Junta de Andalucía – Consejería de cultura IAPH. Ediciones Nerea.

Oliver Rubio, D. (1989): Aglutinantes densos para la pintura artística. Doctoral thesis directed by Luis Arcas Brauner. Universidad Politécnica de Valencia

Patuel, P. (2002). Eduardo Sales: medio siglo de pintura. Ed. Universitat Politécnica de Valéncia.

Llamas Pacheco, R. y Marzá Mars, B. (2005). "Entrevista a Eduardo Sales Encarnación". Revista R&R nº 97.

Rutherford J. Gettens & George L. Stout (1966). *Painting materials a short encyclopaedia*. Dober publications, inc., New York.

Sales, E. (1998): Eduardo Sales, pintura. Caja Rural de Torrent

Tornero Jiménez, M. J.. Reflexiones en torno a la vida y la obra de Eduardo Sales Encarnación. Doctoral thesis directed by Eduard Ibañez Magraner.

Versión españolo

TITULO: El contacto con el artista contemporáneo: materia, idea y restauración de la obra de Eduardo Sales Encarnación.

RESUMEN: El presente trabajo de investigación parte de la necesidad de estudio técnico y material de la producción artística contemporánea, pero también del análisis semántico de las obras en relación a la intención de conservación. Se ha centrado el estudio en la producción de Eduardo Sales Encarnación, artista de prestigio internacional, que elabora un tipo de obra representativa dada la variedad de polímeros sintéticos que emplea. La entrevista con el artista, el trabajo de campo en su estudio, la recopilación de datos técnicos, la restauración de algunas de sus obras, y la caracterización de los polímeros, han servido para establecer la intención plástica y de restauración, así como los agentes de deterioro, las patologías presentes en las obras, y la metodología de intervención adecuada.

PALABRAS CLAVES: Arte contemporáneo, restauración, conservación, artistas, materia, intención artística, polímero.