

THEMATIC UNIT N°13

TEMPERA PAINTING AND ITS VARIETIES.

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13.1. DEFINITION.

The term "Tempera" is derived from the Latin *temperare* meaning mix. By this principle all techniques except Fresco painting would temperas, as in all of them it is necessary to mix pigments with some sort of binder. In any case, the most rational is to think that the term comes from the action that took place since ancient times when tempering and heating glues before binding with the pigments. The most outstanding characteristics of the temperas passed from its cleanliness, chromatic vibration, and fluidity. Cleanliness because it allows us to work on surfaces in a uniform way. As for chromatic vibration, is very high since the binders used in the temperas do not involve or condition the original color of the pigments to agglutinate, since they are highly transparent and allow the passage of light and color. Respect to the tempera's fluidity, being an aqueous medium leaves hardly margin to appear mordant elements, so that its application has common features with watercolor both its transparency as quick drying.

13.2. A BRIEF HISTORY.

The temperas have been used since ancient times. Generally the more ancient temperas that have survived were painted on wall decorations with arabic gum or glue and gelatin animal techniques, Having found remains on Egypt, Babylon, Greece, China, Christian Catacombs, and Byzantine altars. As the casein tempera, it is considered that some Pompeian wall paintings were made with this particular technique, which in medieval times translated into a glue made of lime and cheese which stands for the modern equivalent of calcium caseinate glue. Moreover, Pliny already mentioned in first century a. c. that the egg yolk was a common binder in the methods of wall and board painting used in classical Greece and Rome. In short, the tempera along with encaustic are the oldest techniques known, except for the prehistoric paintings painted on the rock and were generally performed without binders where the various earth colors are mixed together with water by applying directly on the wall. The fortuitous action of natural water on the rock created a thin layer of calcified stone joined the pigment to the surface, as a natural fresco. But it is logical to think that soon the painters should need some kind of substance that would ensure the pigment attached to the support.

Some of these substances were fat mixed with blood, earth colors and natural oxides, but it is not hard to imagine that the egg, was one of those first substances, because it is a binder that allowed easily mix the pigments besides ensuring drying waterproof.

The first wooden panels painted with egg tempera preserved are the Fayum mummy portraits painted in Egypt between the first century and the fourth. Usually, these paintings are painted in encaustic, but there are also a large number of them painted with egg tempera, and even the combination of the two techniques. As for the type of wood, we found mainly cedar and lesser extent oak.

In Byzantine and Medieval times, most of the paintings were made in illuminated manuscripts and walls. The paintings on the walls, were made with fresco, but illustrations of manuscripts frequently used yolk as this binder was well suited to a surface of parchment.

As for the historical evolution of the egg tempera on altarpieces, we can say that in the Middle Ages reached its peak as most used technique, moving around tenth century to other techniques such as encaustic or other types of temperas such as glue ones. The medieval icons showed some portability in relation to medieval altarpieces. Technically were wax temperas and glue temperas to the areas where fixed golden leafs and egg tempera which only applied color. It was common to add vinegar to the egg yolks as a stabilizer.

At the end of thirteenth century was an increase of religious sentiment that led to the construction of many new churches, and all required altarpieces to exalt of parishioners. This created a great artistic activity, especially in panel painting workshops. This increased demand and the need to streamline the production process, justifies the choice of egg tempera over other types of other temperas, more slow and complicated in its preparation.

Cennino Cennini in "The book of the Art" written in the late fourteenth century, talks about the fish glue and little goat glue, made with skin and cartilage of this animal, so as egg yolk as binders for pigments. The

paintings on wood made in Italy from the end of thirteenth century to mid-fifteenth are the most beautiful ever painted. In that period, we find some concrete examples of artists who reached great definition and expertise working with egg tempera:

- Duccio (1255-1319) *Lazarous resurrection*, 1310.
- Giotto (1266-1337) *Burring*, 1320-25.
- Simone Martini (1283-1344) *Annunciation*, 1333.
- Fra Angelico (1387-1455) *Nativity*. 1430-32.
- Paolo Uccello (c. 1397-1475) *Saint Romani Battle*. 1456-60.
- Fra Filippo Lippi (1406-1469) *The Virgin and the Child between two angels*, 1445.
- Piero della Francesca (1416-1492). *Crist Baptisim*, 1448-50.
- Andrea Mantegna (1431-1506) *Death Crist*, 1475-1478.
- Sandro Botticelli (1446-1510) *The Spring*, 1482.

Giotto's figure, has a prominent role in the evolution of the medieval language into the international Gothic. For descriptions of Cennini, we know that he reinforced egg tempera with fig latex, making the temple more fluid and manageable using rigid and entrapped supports with glue and plaster primer applied in thin layers.

Similarly, Duccio used the technique called Greek, combining white plaster funds with egg tempera or wax-glue paint, later made it brighten by fretting.

Gradually, the temperas are becoming more and more fat, which will result in full fifteenth century in the new technique of oil. This transition from the oil leads to a variety of temperas ranging from egg tempera to semi-fat lean and fat tempera. For the seventeenth and eighteenth centuries, the egg tempera technique was almost forgotten as unique, although that proliferated in the Baroque art the mixed technique that we call historical, and that combined with a grisaille after hardening usually with a leaner tempera with warmer hues superimposed in glazes of oil could eventually be qualified in mordant alternating lean and fat layers. At this moment in history can say that there are no significant developments regarding the technical procedures being the most used oil. In any case, what occurs is an improvement by the painters of the references already learned in their pictorial traditions.

The height of the oil for centuries as a technique can be said to have been absolute until the 50 of twentieth century broke a new family of temperas, polymers, In any case, in the ninth century the traditional egg tempera was refreshed by a number of artists from Prerrafelists and Symbolists currents, among them we mention:

- The British William Blake(1757-1822), Samuel Palmer (1805-1881), Joseph Edward Southall (1861-1944), Edward Wadsworth (1889-1949), Bernard Cohen (1933), Anthony Williams (1967).
- The Austrians Marianne Stokex (1855-1927) and Gustav Klimt (1862-1918).
- The Swiss trained in germany Arnold Brocklin (1827-1901).
- The French Gustave Moreau (1826-1898).
- The Belgian Jean Delville (1867-1953).

Although the egg tempera technique is not widely used at present, is evident as a particular type of finish that certain schools and artistic current trends still appreciate these aspects as bright and raw from its way of making. In that sense the egg tempera but barely used in Europe, has a reasonable continuity in the United States. In fact in that country the egg tempera is available in tube, justifying the existence of a demand. The pioneers of the American Tempera School are: Thomas Hart Benton (1889-1975), Reginald Marsh (1898-1954), Ben Shahn (1898-1969). Thomas Hart Benton rejected the avant-garde from Europe, considering them elitist, neurotic and obscurantist. Hart Benton, aimed to produce a particularly American visual art, steeped in American folk traditions, and far from what he saw as the decline of European high culture. One of his innovations was the mythological representation of the biblical narrative on U.S. types. Along with these narratives adaptations in his work is seen in a committed discourse about difficult times as were those of the great depression and world war. This sense of social commitment, and denouncing injustices common to Reginald Marsh, who also used the egg tempera, but still look more like watercolor. In any case, their technical influence will be felt in other major painters such as Paul Cadmus, who was a student of both Reginald Marsh as Thomas Hart Benton at the Art Students League of New York.

Also in what could be defined as American figurative school, deserves special mention Andrew Wyeth (1917-2009) who apparently introduced

his brother in law Peter Hurd (1904-1984) in the technique of egg tempera. Both were students in the study of the father of Andrew Wyeth in Chadds Ford, Pennsylvania. For these artists, the choice of egg tempera, is well adapted to a uniquely American idea of painting narrative-descriptive character of a rural environment where everything seems to happen slowly. So slow as a process as tempera establishes a sense of stillness scenery very appropriate to describe the characteristic rural surroundings of the deeper America.



Andrew Wyeth (1917-2009)
Christin's World, 1948
Egg Tempera over Gesso primed Wood.
81,9 x 121,3 cm.

This relationship between the choice of a minor technique as the tempera and its association with a spirit of resistance can also be applied to the universe of Jacob Lawrence (1917-2000). We refer to the first African-American painter reached significance in the American art world. For over sixty years and intentionally limited resources (water-based paints on paper or boards), addressed many of the great social issues of the twentieth century, especially those that relate to life and history of African-

Americans. He made visible a part of American history treating the effects of racism and intolerance in American culture.

Within the interest shown for Egg tempera in the United States, include the Yale University's School of Arts which was one of the first centers of art in which are taught this technique. Professor Daniel V. Thompson task of translating Cennino Cennini's book of Art into English, began in the early 20s to regularly teach courses on tempera. In 1936 he published in the same Yale University "*The practice of tempera painting. Materials and Methods*", which was a reference for a generation of American artists that became interested in this technique. When Thompson retired in 1933, his student Lewis York continued to teach tempera until 1950, influencing an entire generation of future tempera painters as Saul Levine (1915), Leonard Everett Fisher (1924) and Robert WickRey (1926-2011).

Today, tempera paint still has its followers in the United States, many of them have taken the technique with a anachronistic sense that mimics the Renaissance ways in genres such as portrait or still life. Within this sector we find the universe of Mavis Smith (1956) and Koo Schadler (1962) Others, however being anachronistic as Dennis Harper also assume an aesthetic closer to surrealism appropriating a space construction feature of artists such as Giotto. But not everyone used the tempera to evoke aesthetic of the past, so in the case of Sarah Mc Eneaney (1955), the tempera seems to be associated with a less elaborate type of paint, more primitive and even next to ugliness. In addition to the artists mentioned, we can cite other followers of the technique as Michael Bergt (1956), Fred Wessel (1946), Doug Safranek (1956) and Suzanne Scherer & Pavel Ouporov.

In Europe, interest in the temple in the twentieth century is lower in the U.S., in any case it is fair to mention artists like the Dutch Pyke Koch (1901-1991), the German Otto Dix (1881-1969), or the Italian Giorgio De Chirico (1888-1978), of the latter we can say that after his metaphysic time became interested in dive into the great masters of the past, denying the avant-garde of the French school. So De Chirico develops a different avant-garde language, seeking new ways to understand the world but without neglecting figuration as continuity in the European tradition, assuming a line of discourse that takes as reference the Western cultural memory. Examples are the articles published from 1919 on the need for a

"return to the office", developing a thoughtful speech in defense of the uniqueness of pictorial language, taking advantage of it as a platform from which to vindicate the dignity and originality of their work. De Chirico, therefore, does not break with the above, is not seeking formal break with the iconography of nineteenth century; if not that innovates to propose a new look at the language of painting and its historical legacy. For many critics, the De Chirico's post-1920 became a painter outdated and uninteresting. Precisely in this period defined as the De Chirico's metaphysical Classicist world is transformed. Between 1919 and 1920 he lived in Rome, interested in the great Renaissance painters. Mythological themes appear recurrently: Apollo, the Argonauts, Mercury... is when deepened further in the forms and methods of the old paint, getting to write in 1928 paint a manual entitled: *Piccolo trattato di technique pittorica*. In the treaty speaks of his recipes with egg tempera indicating that he was always looking for a tempera not too darkened after varnish and give him a filling turn stronger and slower drying, for which he devised the following recipe :

- 1 egg yolk.
- 2 tablespoons cherry gum dissolved in water in the proportion 1/3 gum by 2/3 of water.
- 1 teaspoon dammar or mastic varnish.
- 1 tablespoon turpentine or petroleum.
- ½ teaspoon pure glycerin.
- 1 tablespoon of white vinegar.

As you can see, it is a fatty tempera that dries somewhat faster than an oil and having less proportion of oils, the color darkens less than oil. Similarly, Can be seen how De Chirico as old painters, included in the mix vinegar as a preservative of the egg emulsion. In "Speech for art", De Chirico recommended the use fat tempera, used by the great artists of the fifteenth century, to give the work of the lyrical and romantic soul. Another factor that could cause an inclination for tempera technique may have something to do with their training in 1906 at the Academy of Fine Arts in Munich and the influence of the work of Arnold Böcklin (1827-1901) one of the German artists followers of the tempera at the end of nineteenth century. De Chirico's figure, seen in the distance, can be found in his attitude to the review of techniques and aesthetics of the past, certain

advances of the strategies in the late 70s, promoted, the critic Achille Bonito Oliva for the Italian transvanguard. Review of the more specific aspects of the trade of painter, reflected in contemporary artists such as Sandro Chia (1946). But back to the tempera technique in twentieth century's Europe, it is without question, the role of English painting with such prominent authors as Edward Wadsworth (1889-1949), Thomas Lowinsky (1892-1947), Eliot Hodgkin (1905-1987), Bernard Cohen (1933), Antony Williams (c. 1965) and Robin-Lee Hall (1962). In Germany stands the young artist David Schnell (1971) and his novel way of interpreting the landscape of his country from egg tempera. In Spain these exercises of aesthetic and technical revisit of the past, have as a reference to Guillermo Pérez Villalta (1948). Although much more faithful to the tempera technique we find painters like Pepe Morales (1939), Dino Valls (1959) and Maximilian Pfalzgraf (1969).

13.3. AESTHETIC AND PLASTIC CHARACTERISTICS OF TEMPERA.

The most outstanding characteristics of the temperas passed from its cleanliness, chromatic vibration, and fluidity. Cleanness because it allows us to work on surfaces in a uniform way. As for chromatic vibration, is very high since the binders used in the temperas do not involve or condition the original color of the pigments to agglutinate, since they are highly transparent and allow the passage of light and color. Respect to the tempera's fluidity, being an aqueous medium leaves hardly margin to appear mordant elements, so that its application has common features with watercolor both its transparency as quick drying. With the exception of polymers tempera, they are very old techniques within the possible procedures to water. They are lean techniques, in which the pigments are ground very fine and finally consolidate a generally slightly opaque paint layer on the first pass and also doesn't tend to assume much filler. Application are relatively simple and do not require large technical means to be used. The difficulty of handling increases considerably when trying to extract from them the huge plastic potential in that can offer varieties of mixed historical techniques combining alternative procedures such acids. In lean versions, the degree of brightness is always greater than the wax or fatty procedures. Because its lean, with the exception of the fresco, can be used as previous layer after other fatty procedures. As mentioned have a very fast and strong drying, allowing the application of several

layers in a very reasonable time. With fresco painting, are presented as very stable techniques over time, without the colors tend to undergo structural changes, in fact egg tempera has also come to be used in mural painting, in this case, can be used whole egg with its yolk and clear. Even some frescoes are finally retouch with this technique to the egg.

CONSERVATION:

The more time passes the more resistant the emulsion is, in fact colors age infinitely less than in oil. Need not apply varnish although it has been used the clear of the egg as a final varnish for egg tempera, although it is not highly recommended. The egg tempera paintings can get a gloss rubbed or burnished interesting with an agate stone (procedure similar to that of imitation marble on the wall). This operation is done once the paint has dried completely.

SUPPORTS:

We recommend using table, plywood, MDF, preferably rigid support and prepared Crete. Before making the priming, It is desirable sanding the surface. To paint with casein tempera is essential to prime a rigid support to casein.

For lean tempera (with little presence of oil) is advisable the Crete bases because they are more absorbent. In the same way, in the case of using linen cloth we suggest not to work with big formats because it forces us to make half-Crete primers and consequently use more fatty temperas.

PRIMER TO THE CRETE (for 1m²)

- 1 tablet of rabbit skin glue (50-75 oz.).
- $\frac{3}{4}$ of a liter of water.
- 200-300 g. of gesso (So₄ Ca) or white of Spain (Pipeclay) (Ca Co₃), or 200 grams. matte or white plaster of Spain (Pypeclay) (fillers).
- 100 grams. Titanium white (white coloring matter) or 100 gr. red ocher or bolus (if you want a background with red coloring matter)

In any case, within this thematic unit bring an attachment with the detailed process of the primer to the crete.

TECHNIQUE:

The strokes are given without stress (do not pass the brush twice in the same place until completely dry the first stroke) and traditionally applied in short stroke and crossing like a net.

DRYING:

It is very fast.

13.4. TYPES OF TEMPERAS.

For painting on a wooden panel, or on a canvas, a binder is necessary in the case of temperas is linked to an emulsion where a stable way a watery substance is mixed with other fatty substance. Generally, the oil and water do not mix, however some natural substances such as milk, milkweed juice and egg yolk present fat particles suspended in aqueous liquid. For example, mayonnaise is an artificial emulsion, which combines egg and oil. Well, within those combinations can meet a variety of natural and artificial temperas for painting. These include the egg tempera using only egg yolks, other establish emulsions of oil and egg gum emulsions (hardened tree sap), and casein (sour milk curd). But in addition we can find temperas to the glue where the binder should have been heated previously to be in a manageable state to coalesce with the pigment. In short, within the temples may encounter substances from different sources, then we turn to briefly show the composition of the main types of traditional temples.

TEMPERA TO THE GLUE.

- 50 grams. Rabbit Glue.
- From $\frac{3}{4}$ to 1 liter of water to approximately.
- To give elasticity to the emulsion can be added crude linseed oil from 25 to 50 cl. dropwise until creamy.

With linseed oil lose some vibration and light colors. For water-glue this must be coagulated when mixed with the oil.

The pigment together with rabbit skin glue can be diluted with water as needed for the work or the substrate absorption, although it should check

that the pigment is being fixed properly to the support, in that case is still added only in winter water-glue which coagulates when cooled down, so it is necessary to maintain a water bath if we want to handle it correctly.

WAX AND GLUE TEMPERA.

- 1 Vol. Rabbit skin glue.
- 3 Vol. Wax.

Perfectly mixed can be used with any pigment.

PREPARING CASEIN GLUE.

CALCIUM CASEINATE.

- 50 grams. casein.
- $\frac{1}{4}$ of a liter of water.

This mixture acts as strong glue and has traditionally been used by carpenters and cold glue. This glue should be used in the day since past that margin loses its adhesion properties.

AMMONIUM CASEINATE

- 50 g of casein soaking 3 or 4 hours before mixing with the ammonium carbonate.
- $\frac{1}{4}$ liter of water.
- Stir and add 15 grams. ammonium carbonate or ammonia (padding vigorously to thicken).

This mixture acts as strong glue emulsion that lowered can be used both as a basis for priming tables and cloths as well as temperas.

TEMPERA TO CASEIN:

- 1 Vol. of strong casein glue.
- 3 Vol. of water.

Unlike the tempera to the glue, the pigment is bonded cold. When using a yellow lead, can acquire an orange color by the action of lime and ammonia.

WAX WITH CASEIN TEMPERA:

- 1 Vol. of strong casein glue.
- 1 Vol. of wax.
- 1 Vol. of water.

TEMPERAS OF ARABIC GUM (WATERCOLOR, GOUACHE)

Proportions for Gouache

- 1 Vol. Arabic gum previously dissolved in distilled water.
- 1 Vol. Pigment.

Proportions for Watercolour

- 1 Vol. Arabic gum previously dissolved in distilled water.
- 1/2 Vol. Pigment.

The mixing in these temples is essential to do with a muller.

ACRYLIC, VINYL TEMPERAS:

- 1 Vol. latex (Acrylic-based) or synthetic glue PVA.
- 2 Vol. of distilled water.

This type of hardening is addressed in a more extensive in the Thematic Unit 10. *Acrylic paint and its varieties.*

EGG TEMPERA.

This kind of temple as its name indicates has as its main binder egg. We can say that the most common form of tempera paint is egg tempera, which is water-soluble (soluble in water). The egg yolk is a natural emulsion that, mixed with pigments and distilled water, allows a type of fast-drying paint with a color appearance condition characterized by not only greatly original color appearance powdered pigments. An emulsion with egg yolk consists of a stable mixture or suspension between two fluids that normally do not mix, such as oil and water. Until the fifteenth century, egg tempera was the usual method of painting European table, their transition back into the oil on canvas, means that there are plenty of recipes ranging from pure egg tempera, whose only bond is the yolk, until additional recipes which incorporate fats oils and varnishes. These possible varieties of egg tempera are explained in section 13.6. Elaboration of egg tempera paint.

13.5. TOOLS FOR TEMPERA.

We have already mentioned that the brushstrokes in the egg tempera technique, are given without insisting (not the brush must pass twice through the same place until completely dry the first stroke) This means that even being possible to use Bristle brushes, we recommend synthetic hair brushes offer greater smoothness in the strokes, and hence provide the paint set avoiding scratches on the previous layers in excess roughness. These scratches effects can also be caused and have an expressive purpose so it should not be dismissed using tools allowing us to these effects, however, experience tells us that in the beginning it is better to master the complete set of painting and for this the soft hair offer advantages.

BRUSHES:

Synthetic soft hair brushes are stiff enough to knead with emulsion pigments and soft enough to ensure homogeneous finishes there where needed. Perhaps the most recommended are the flat ones for modeling and the base color, and then use round and tip ones for details, profiles and even for cross lines that mimic the gradient the way engraving does.

PALLETES:

We recommend large palettes to knead the hydrated pigment with egg emulsion. These palettes preferably should be plastic or white melamine, for the ease they offer both to control the mix of colour, as for cleaning. In case of ocher or dark blue primers, you can raise working with color palettes that are as similar as possible to the surface on which to work, today the variety of colors that exist in both plastic and melamine, guarantee us the possibility of choosing one very similar to our support. This question is not trivial and greatly facilitates optical adjustment of mixtures before incorporating the colour on the painting surface.

AGATE STONE.

Tempera painting does not need a finishing varnished, but if you wish you whether it is possible to enhance the matte finish so characteristic of the tempera, with a burnished with an object that allows gloss and polishing the painted surface, similar to honing techniques applied to the walls to get glossy faux marble effects. In that sense there are plenty of tools that allow this type of friction, among which we can mention tools tipped with agate stone.

Economic alternative for the honing process can be using a boulder of white marble. We should note that the object we use to burnish, let us not

unwanted marks, or affect or alter the color of the paint, so in principle rule out using metal polishes similar to those used in engraving.

EGG WHITE SEPARATOR.

When we separate the egg white from the yolk of an egg, it's best to use an egg white separator, with that we prevent the bacteria on the rind, which is porous, pass to the yolk and consequently adversely affect the preservation of the emulsion.



THREADED CONTAINER.

It is recommended to make new emulsion in each session, but in any case, we want to always have available unmixed emulsion with pigment so best kept in a closed glass jar which we are not directly mixing with pigment. As for the mixture, it can be helpful to have an egg cup plastic for mixtures intended for flat areas.

Since no incompatibilities arise and in order to optimize use the same recommended to prepare vinyl acrylic and the U. T. 10. Underlined show those who consider essential.

- Cadmium Red.
- Quinacridone Red.
- Naphthol Crimson.
- Red Iron Oxide.
- Azo Yellow.
- Cadmium Yellow.
- Yellow Ochre.
- Sienna.
- Burnt Sienna.
- Natural shade.
- Burnt Umber.

- Phthalocyanine Blue.
- Ultramarine Blue.
- Purple dioxazine.
- Phthalocyanine Green.
- Chrome Oxide Green.
- Titanium white.
- Black ivory.

For clear incompatibility with the egg yolk, white dispense recommend Zinc.

13.6. EGG TEMPERA ELABORATION.

RECOMMENDED RECIPLE FOR EGG TEMPERA.

WE RECOMMEND TO WORK IN THE CLASSROOM WITH A BINDER OF EGG YOLK + DAMMAR VARNISH in the following proportions:

- 1 vol. of egg yolk.
- From ½ to 1 vol. Dammar varnish
- 2 vol. of distilled water.

Obviously there are many other formulas, ranging from lean to fatty temperas. Here we show the one we recommend because of our experience and the little time of our practice classes. We recommend using only the necessary amount of pigment, so that the excess can be used on another occasion. This is possible since the pigment does not incorporate any binder; it does not start its oxidation process and therefore drying.

OTHER EGG TEMPERA RECIPLES.

Old Tempera.

- 1 vol. of egg yolk.
- ½ vol. Dammar varnish or linseed oil.

Add water until getting an adequate consistency.

This is the basic egg tempera as the pigment incorporates only as a binder egg yolk. Such tempera is linked to very absorbent surfaces looked like the wall with plaster or Crete primer oil free.

Lean Tempera.

- 1 vol. of egg yolk.
- ½ vol. Dammar varnish or linseed oil.
- 2 vol. of distilled water.

Mixed or Semi-fat Tempera.

- 1 vol. of egg yolk.
- ½ vol. Dammar varnish
- ½ vol. Linseed oil.
- 3 vol. of distilled water.

Fat Tempera.

When the oil volume equals or exceeds the volume of yolk egg. In the latter case you may need a thinner of turpentine essence.

13.7. EGG TEMPERA APPLICATION: TRANSPARENCY-OPACITY.

It is important to bear in mind the possibility that gives us the tempera of work both on white base areas, as on dark base surfaces. In the first we can enjoy transparencies as bright as watercolor. In such cases we consider it appropriate to dispense with the graphite and charcoal, and make the fitting directly with crayons which can be directly watercolor or tempera paint applied with a brush. Thus the fitting graphic don't determines the subsequent color cleaning, as both graphite and charcoal are very dirty and tempera paint for its high degree of transparency is very sensitive to these materials. To better understand the application of estimate tempera on white base appropriate to demonstrate step by step procedure that follows the London artist Robin Lee Hall (1962).



in a first phase marks the drawing with tracing paper, a previously performed drawing from numerous sketches from life and photography. It is important to assume that even if you use the photographic support at all times have the reference from life. Besides that reference is close because the format support is very small so it is possible to be physically

about six feet away from the model without the support obscure the visión. That short distance from the ground helps to understand better the texture and color of the skin will eventually be one of the salient features of the work. Once past the marks of fitting, a second stage in the drawing with a fine brush face creating the volume for accumulation of lines in an accumulation technique reminiscent dashed pointillist and rayonists painters, and drypoint modes engravings.

In the third stage covers the entire support, face with ocher and background and eyes green earth, for the blouse uses manganese blue. At this stage still holds the rayonist system, allowing intensify the vibration causes the Gesso primer. Also at this stage could make color washes to allow you start to from a warm base for a yellow ocher face, and another base with a mix of cobalt blue, natural shade and white for the background.

In the fourth step is adding new strokes striped color for the area of the face as vermilion, iron oxide, yellow, green earth, and magenta. Respect the of green earth, is added a black striped ruby. At this stage has not yet been worked with whites. In the fifth phase begin to incorporate titanium white together with ruby black and Indian yellow, with that combination, it is possible to refine the shadows of the face, cooling the base color.



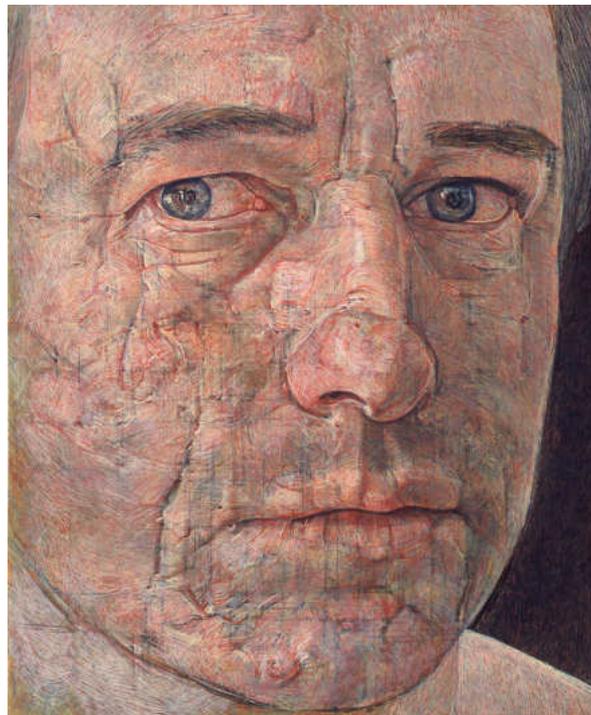
Robin-Lee Hall (1962)

Freddie (2010). Temple al huevo sobre DM, 26,5 x 18,5 cm.

In the last stage, reinforcing light areas incorporating titanium white and indian yellow while add more touches of black ruby, violet and cobalt blue to the shadows. To the intermediate areas, proceeds to make green earth washes help integrate the graphic of the brush. Finally, more emphasis

on certain areas brighter and saturated accumulating a greater number of white and yellow lines.

When on the contrary, works on dark backgrounds, results are especially particular since no hardening opaque to the first pass, thus enabling paint colors qualifying to be saturated with the base color. This approach faces much more an end result where transparency is just overshadowing, but leaving literally incredible translucent parts of the painting. This unique aspect of the tempera is skillfully exploited by the British artist Antony Williams (c. 1965). His painting figurative cutting, assumes postulates other great authors such as Lucian Freud, Euan Uglow and Andrew Wyeth. So, Antony Williams works almost exclusively with egg tempera, material that allows him to express a deep sense of the world's gaze.



Antony Williams (1962)

Selfportrati II (2001). Temple al huevo sobre DM, 40 x 35 cm.

All his work is based on direct and intense observation, occurring as a result, a sense of realism, where every surface detail is present almost equally. The basic colors of the palette are vermillion, yellow ocher, cadmium red deep, Venetian red, green earth, titanium white and ivory black. From this limited palette can create an extraordinary variety color mixing. In that sense the colors economy will approaches to old masters like Piero della Francesca. That interest also reflected in the traditional

technique of applying a sequence of small strokes to create the volume, meaning that draws with color. Once you have transferred the drawing from the study coal provisions primer plate begins to apply paint by washing yellow ocher. After refine the target introduces tone using black paint diluted with the aim of recreate all the tonal variations of the original drawing. Then, in areas of the body, paint flesh tones, starting from a layer Terra Verde, even in areas that will not be flesh colored. In briefly, the color applied in the following order:

- 1st yellow ocher as a base.
- 2nd black ivory diluted.
- 3rd green terra.
- 4th venetian red.
- 5th tone titanium mixed white flesh and yellow-ocher.

Recall that these colors are translucent, and therefore the final effect depends on the sequence of colors, and the order of application.

13.8. PROPOSED EXERCISES WITH EGG TEMPERA.

The exercises to be performed in class and at home are provided for a period between the 9th and 11th week, with a total of 6 sessions (indicatively is located in the 2nd fortnight of November) Of course, these dates are subject to some slight variations depending on the school year.

WORKS PROPOSAL

EGG TEMPERA WITH MODEL (1 work)

- Support: We recommend rigid type DM, Plywood or Tablex.
- Format: 50 x 70 cm. approx.
- Primer: Crete.

(For the realization of this work the student has three sessions that stand for 6 face hours)

EGG TEMPERA WITH MODEL GRISALLA STYLE (1 work)

- Support: We recommend rigid type DM, Plywood or Tablex.
- Format: 50 x 70 cm. approx.
- Primer: Crete.

(For the realization of this work the student has two sessions that stand for 4 face hours)

EGG TEMPERA FREE (1 work)

- Support: We recommend rigid type DM, Plywood or Tablex.
- Format: 50 x 70 cm. approx.
- Primer: Crete.

In this proposal of free tempera we encourage the students to experiment with the possibility of experimenting with gold leaf technique. See T.U. 14

EGG TEMPERA FREE WITH GRISALLA (1 work)

- Support: We recommend rigid type DM, Plywood or Tablex.
- Format: 50 x 70 cm. approx.
- Primer: Crete.

General questions to take into account.

- Remember that all the supports primer to the Crete should be ready before the start of the works in class.
- To develop all free works available for the period from the 9th week and 11th week. To conduct inside or outside of class time.
- To develop the works with a free theme properly during course will need a continued teacher-student dialogue through tutorials, and keep up to date portfolio-book alternative, where we can assess in advance the chances of success of the various proposals for thematic free.
- The works of egg tempera in Grisaille are thought for further intervention in oil glazes applying historical Mixed (year end). In this regard we must remember that it should be raised 3 or 4 shades of gray scale maximum, contrasting enough to apply glazes of color.

Throughout the six sessions that make this issue work indirectly in the four specific skills of the subject in any case pay particular interest to the next competition:

Encourage personal pictorial language regarding the expressive possibilities are discovered in pictorial experimentation in the various techniques. Specifically with egg tempera.

Objectives

- Acquire the necessary skills and basic knowledge for the development and application of egg tempera.

- Experiment with the expressive possibilities of texture according to the differing number and density of pigment in relation to agglutinate employee.
- Experiment on a practical level with particular color appearance as egg tempera, the crudeness of color and the translucent effect that characterizes him.

This is intended to enable students to acquire basic and necessary skills for proper preparation and application of egg tempera, and to experience the aesthetic and expressive qualities of a technique with a brightness level greater than other procedures lean and fat.

With this proposed exercise of egg tempera is to consolidate some concepts treated with acrylic paint in the thematic unit 10 as the manufacture of paints agglutinating own pigments, now with an emulsion of egg, and the need to continue working with the processes mixing color palette. This is because as in the acrylic, drying is very fast, so the possibilities are discarded by melt mixing.

Another concept that we intend to consolidate, the mixture is due to accumulation of layers of transparent or semitransparent. The temple is not opaque to the first pass so we can develop in another context the concept of color transparency addressed watercolor in the T.U. 12.

Valuation criteria

Each bout of exercise has a score of 0-10 and is taken into account when developing the course average. As already discussed in the Teaching project, is necessary to overcome each of the exercises, to make the average. The following shows the aspects that we consider, and its weighting in defining the final calification.

- Order and cleanness always in the painting process that affects the proper development of the work. (10%)
- Support stable relationship, the primer, the paint layer and the final treatment. (10%)
- Adaptation of the primer to the process of painting. (10%)
- Proficiency in handling the wash technique, and control over color transparency and proper proportion with the diluents. (10%)
- Expressiveness of support, materials and textures of the work. (10%)
- Creativity, originality, and suitability between the aesthetic and the technique developed. (20%)
- Composition. (10%)

- Correct use of color in wealth and diversity of hues, saturation and desaturation, scales light to dark, and the relative transparency and opacity. (20%)

13.6. BIBLIOGRAPHY AND WEB LINKS.

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Here we can see and listen (very well articulated) an English painter making a description of how to make de binder for painting egg tempera. [Accessed: February 16, 2012]. Available at:

<http://www.youtube.com/watch?v=5Ad5JZC1nSQ&feature=related>