

Colour and Culture: Ancient Egypt, Galleries 19 and 20



Key objects: coffin of Nespawershefyt, faience shabti and heart scarab.



The Coffin set of Nespawershefyt, Case 17. Accession E.1.1822

A sycamore fig wood coffin set illustrated left is a detail on the inner coffin lower left side; it depicts a Goddess as a tree of life offering the deceased man's Ba bird (part of his soul) life-giving liquid; in human form behind the bird, kneeling to make an offering is Nespawershefyt.

The ancient Egyptians had access to many natural pigments, mainly derived from earth minerals that create their distinctive and rich earthy palette. It is also worth mentioning the use of precious metals, gold and silver, and gem stones notably jasper, carnelian, malachite.

The colours Egyptians most desired were the lapis blues, gold and a bright green from malachite. Less rare greens and blues were mass manufactured from 'frit', a mix of silica and minerals that included copper dust from around 3,000 years ago. These Egyptians were amongst the earliest paint manufacturers.

The raw pigments were mixed with a binding agent that could have been a plant sap or in some cases egg, that would attach the pigment to the base surface. The artists *usually* applied these paints onto a layer of plaster skimmed onto wood objects such as coffins, or as a wall frieze or architectural decoration/embellishments.



Blue-green 'faience'

Faience winged scarab

Gallery 19, case 19, label 22, Museum no. E.133.1932

Colour as symbols

Blue: 'Irtyu' Prized Lapis imported from the Sinai Desert was used as decorative inlay on death masks and in fine jewellery. Other sources of blue were from the mineral azurite and the indigo plant.

Turquoise: 'Mefkhat' From the highly valued blue-green turquoise stone sourced in Sinai Desert.

Green: 'Wadj' Derived from copper mineral sources. Is thought to be associated with life and 'coming alive again', notice gods painted green.

Black: 'Kem' Represents the fertile soils around the Nile flood plains 'Kemet', the Black land, the source of life, farming and fertility. A carbon based pigment from soot.

Gold: 'Nebw' The colour of the sun, the gods and the divine.

Silver: 'Hedj' A rarer metal in Egypt than gold.

Ochre (Red): The colour ancient Egyptian used to depict themselves.

Red: 'Deshr' Jewellery and amulets of the semi-precious stones, red jasper and carnelian, red is the desert lands 'deshret'. Red pigment is also derived from red lead.

White: 'Hedj' The colour used to paint images of figures wearing linen. Notice how the glaze of white used to paint the robes has a transparency that reveals the painted red ochre figure beneath to great effect. There are plentiful earth minerals of chalk and calcium. White pigment was also made from lead but this has discoloured over time.

Yellow: 'Khenet' sometimes used as a gold substitute, yellow pigment is a toxic lead antimonite but the Ancient Egyptians also used a yellow ochre and an orange yellow we know as orpiment, but this too is highly toxic.

Colour and Culture: Greek and Roman, Gallery 21



Key objects: The Pashley Sarcophagus, Relief carvings and the Greek pots, carved sapphire and gold jewellery, bronze helmets.

Exploring 'invisible colours'



Left shows a detail of The Pashley Sarcophagus, luna marble, no. GR.1.1835

Our perception of Ancient Greek and Roman world is one of a pure white aesthetic of pale sculpture and architecture. But the ancient Greeks frequently used bright paints to decorate significant architecture, such as temples. There is also evidence to support the

research that free standing sculpture may well have been highly coloured, for instance the grave markers such as the palmette illustrated as a colour reconstruction.



But, not surprisingly the Greeks and Romans, like the Egyptians, enjoyed colour. Therefore, most sculpture was originally painted, with human figures given life-like colour schemes and architectural ornaments picked out with vivid colours. These ancient paints are fragile and much was eroded through exposure to weather and the effects of time, in addition, collectors from the seventeenth century onwards have 'cleaned' paint from the surface of Greek and Roman artefacts they collected.

Current research understands that the bright colours on important buildings and sculpture was intended to create a dramatic impact on the viewer. These bright colours, particularly on large buildings, would have been visible from afar and set them apart from other structures.

It was only within the last thirty years that the development of conservation research using modern forensic science techniques revealed the remaining fragments of pigment: brilliant pinks, blues, green, rich browns and gold.

Above is a colour reconstruction a marble palmette from a gravestone. Made in Attica, Greece about 330-320 BC. (Loan Ant.52)

There are mention in historical texts (for instance the historian Pausanlas) about the period that detail the existence of significant paintings on panel. These paintings are described as being fine detailed visual accounts of political and historical events. It is thought that these paintings were displayed in a specific covered building, rather like our understanding of a gallery. At present there is no physical evidence of these paintings due to their fragility none have survived.

The paints were made from locally sourced minerals ground to a fine powder and combined with wax, honey or eggs to bind them. The Mediterranean region also provided indigo plants that create a deep blue dye and madder plant root for a rich pink. Purple from the shells of Mediterranean whelks was also introduced as a dye for fabric, but this was rare and expensive, so reserved for the very wealthy.



Greeks and Romans enjoyed gold, precious stones and gems. Blue sapphire with a carved bust of Aphrodite dated at 50 B.C. no. CG 523

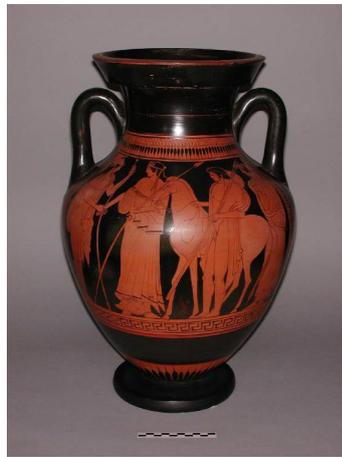
Red and Black figure ware pottery

The orange of the fired clay creates a rich orange brown in contrast to the black slip.

Red-figure ware shows the god/human and animal figures as red whilst black-figure ware depicts these figures as black.

The change from black-figure ware to red figure ware has been explained in various ways; though hardly more realistic than black-figure, red-figure allowed the vase painters to achieve a greater variety of effects. is partly the changes in fashion, red figures were seen as more naturalistic. Compare this black-figure ware jug (G.R.1937) to the Red-figure ware amphora (G.R.21.1937) below. In red-figure ware the painter has more freedom using a brush to apply the coloured slip. As you can see there are more details in the facial features allowing the expression of emotion.

You can find these and other fine examples in the gallery.



Colour on pottery

Some pottery that has traces of its original paint pigments painted on to the pot after it was fired. Modern conservation examination reveal evidence of bright colours, look closely at the ribbons the female figure on this lekythos is offering to this tomb marker or stele. (G.R.33.1937)

Sources of colour:

Red: brown haematite

Yellow: goethite, an iron hydroxide a common mineral.

White: gypsum, chalk or hydrocerussite (found in oxidised lead ore)

Green: malachite and verdigris, copper corroded with acid (wine vinegar) Look at the Greek helmets the copper in the bronze has reacted over time to acid and created a 'bloom' of green-grey 'verdigris'.

Red: cinnabar is a mercury sulphide and has a level of toxicity, mineral is crushed to a fine powder.

Black: Carbon from soot or burnt wood

Pink: A dye made from madder plant root

Blue: A dye made from indigo plants

Purple: New colour, Tyrian purple derived from Mediterranean whelk shell. Purple is used to dye cloth and is a symbol of status.

Colour and Culture: Italian Renaissance, Gallery 6



Key objects: Domenico Veneziano no. 1106, Simone Martine no. 552, Andre di Vanni no.560, Cosimo di Lorenzo Rosselli no. 556.



Domenico Veneziano, active 1438 – 61 *The Annunciation*, c.1445

In Renaissance art pure colours represent the beauty of God and divine creation whereas 'mixed colours' are seen as 'corrupt'.

Often the Saints or figures in a painting are assigned a colour so they are easily identified, along with symbols of their sainthood or martyrdom.

Egg tempera:

Powdered and ground mineral pigments were mixed with egg yolk as a binder.

This medium produces a delicate paint that dries quickly to a matt finish. It was difficult to blend colours on the panel surface or to add much in the way of texture. However, rich colours and glazes combined with embossed gold leaf gilding produced these often ethereal paintings.

Cennini, an Italian artist and scholar wrote in his famous 'Il Libro dell' Arte' in 1390 that a country hen produced eggs with a deeper yellow yolk than those of town hens, so a pale town egg yolk was preferred for creating paler tones for skin.

Sources of colour:

Blue: Lapis, a highly expensive mineral mined in Afghanistan. During the Middle Ages it was difficult to import to Europe because of this rugged and isolate source. Lapis lazuli is known as 'ultramarine' from the term '*oltremarine*' mean across the sea. A great deal of mystery surrounds the production of Ultramarine, and medieval recipes include descriptions of grinding the lapis lazuli in a mortar mixing it with oil and honey wrapping the mixture in linen and kneading it before washing the oil, honey and alkali calcite impurities away until you are left with an intense blue-violet pigment. Ultramarine was commonly reserved for the blue paint of important areas of paintings, such as the

Virgin Mary's cloak. Blue paint made from the more common stone **Azurite**, was used for other blue tones in paintings.

Red: Vermillion was another much prized pigment, derived from the mineral, cinnabar. It was also used for the clothes of important figures in paintings such as the Virgin Mary's robe.

Pink: Natural pink dyes were obtained from the female European kermes insect that live on Mediterranean oak and the plant root madder, *Rubia Tinctorum*, which provided the colourant Alizarin.

Black: Carbon black could be made by burning wood, ivory, candles, or lamps. The black carbon created by slowly burning vines, was called vine black.

Gold: Pure gold coins such as a 14th Century Italian florin were rolled and hammered to create a wafer thin sheet of 'gold leaf'. This could then be applied to a carefully finished panel of wood such as white poplar, or to the parchment pages of a manuscript.

Green: Commonly made from the minerals containing copper, such as the naturally occurring mineral malachite, which is a copper carbonate, or verdigris which is a corrosion product formed from copper or copper alloys

The layering behind the painted surface:

Wood panel is planed to provide a smooth surface



Animal size glue to seal



White Gesso (white plaster polished to give a perfectly smooth finish)



Red Bole (reddish brown clay slip) applied to the Gesso for areas of Gold leaf



Gold leaf

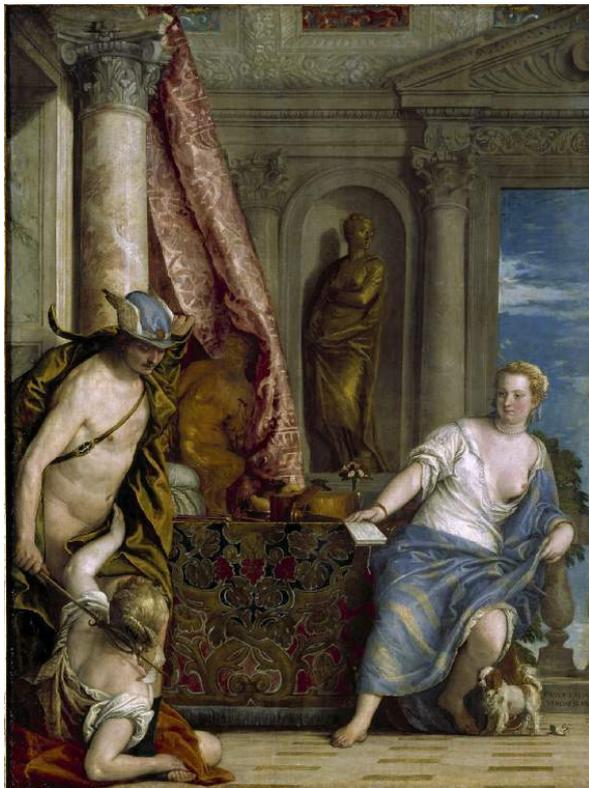


Fra Filippo Lippi, c.1406 – 1469
Triptych, late 1420s

Colour and Culture: Paolo Veronese, 1528 – 1588, Gallery 7



Veronese is much admired for brilliant hues draw the viewer's eye to the main characters in the painting while layers of paints and glaze, especially on skin to give a naturalistic translucency and depth of colour.



Hermes, Herse and Aglauros, after 1576. No. 143

Mixing pigments with linseed oil

The artist Veronese showed off the manufacture skills of his adopted home city of Venice, these included: fine arts and textiles, velvet, silk, glass, musical instruments, book printing, and music scores. These are all shown in this painting in which Veronese used the newest paint pigments.

Red: In the 16th Century, trade with the Americas saw the introduction of a new pigment, Venetian Lake. This pigment was derived from the female cochineal beetle, and was imported from Mexico. This new pigment had better stability and resistance to fading than the European alternatives.

Blue: A common blue colour was made from Woad, a European plant closely related to Indigo. A cheaper blue colour was also made from a mixture of smalt (ground glass) and cobalt, but this can discolour over time (Veronese was not aware of this).

Yellow: The naturally occurring mineral, Orpiment, is an arsenic sulphide created as part of volcanic reaction. It is ground down to make a highly toxic yellow pigment.

Orange: Realgar is another highly toxic pigment, closely related to Orpiment and made from arsenic sulphite or 'ruby sulphur'. It was often referred to as a dark yellow until the fruit orange was introduced to Europe in the Middle Ages, when it was also used to kill rats in England!

Colour and Culture: Impressionist and Post-Impressionism, Gallery 5



Key works: Seurat 'Study for A Sunday on the Island of la Grande Jatte: couple walking', Monet 'Spring Time' PD.2-1953, Renoir 'The Gust of Wind' no.2403, Degas, 'Au Cafe' PDP 2387

The group of artists that were to become known as 'The Impressionists' were inspired in the great Romantic style of Delacroix to represent nature and life. They used a distinctive colour palette and enlivened brush marks and strokes. They often played with colours chromatically, laying two complimentary colours together which created a fresh vibrancy. Their painting style frequently surprised and even shocked viewers. Post-impressionist artists to see in this gallery include Seurat and Cezanne.

Pigment development extended the colours available to artists, 1815 and 1820 with the production of the bright yellows Cadmium yellow and Chrome yellow. Artist such as Monet used a limited palette which included: Cadmium yellow and Chrome yellow, violet, cobalt blue and lead white



Monet 'Spring Time' PD.2-1953

Often referred to as the blue or mauve paintings, here Monet used colour as an emotive response to the countryside and natural landscape around him. Monet painted these two figures so loosely that their faces are hinted at.

The bright green lifts the blue. Monet carefully considered which colours to place alongside each other by using complimentary and opposite colours. Imagine this painting without that bright yellow of the girl's hat.



Degas 'Au Cafe' PDP 2387

Degas was Interested in people and their 'off-stage' lives, here the influence of black and white photography is keenly felt with a monochromatic palette. Degas depicted two girls in a cafe with a suggestion of a background in thin grey and white painted in broad brush strokes. The only real hint of colour, a light orange, draws us around the painting and into the narrative of the moment. The depth of focal range is short, again like a photograph, an effect to suggest intimacy. Consider this in contrast to Monet's 'Spring Time'. Degas didn't associate himself with the Impressionist's Renoir and Monet's habit of painting outdoors, he preferred to work in his studio, and he also choose urban life as his subject rather than nature.

These artists were fortunate to live during an age of manufacturing invention; one in particular, the paint tube, freed them to develop their love of painting nature outside, 'En plein air'.

Previously this was almost impossible as there was so many materials to carry. Painting in oils was messy and unsuited to outdoor working. But if you choose to do so, then pigments were mixed with oils and stored in small pouches of pigs bladder. These often leaked or dried out rendering the paint useless. If artists worked outside it was in watercolour and at the time these were considered a lesser form of painting, suitable as studies for studio paintings.

The invention of the tin can by Frenchman Philippe de Girard around 1810 was used to preserve food, and in 1841 American portrait artist John Goffe Rand developed the idea further as a means of preserving ready mixed oil paints which led to the development of oil paint in tubes.

Renoir is cited as remarking that 'without tubes of paint there would have been no Impressionism'



Renoir 'The Gust of Wind' no.2403

The intensity of the blue and the rich greens reverberate with the hints of red orange and dashes of white. The paint technique of moving the paint on the canvas gives the effect of the movement of wind across a landscape.



Seurat 'Study for a Sunday on the Island of la Grande Jatte: couple walking'

Seurat was experimenting with the science of colour as the eye and the brain process it. He was interested in the new science of neurology and experimented with this in his painting creating lots of small paint marks of pure colour next to each other with the intention that they are 'blended' by the viewer's eye and brain, to create other colour combinations.

Remember that this is a study for the finished painting which is in the Art Institute of Chicago.