

Art Imitation

Forensic Science
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Art Forgery



Most common in famous pieces that offer high prices but is also common in some of the less famous pieces, as not many people know what the piece looks like, making the selling of a forged piece easy. Analysis of a painting is the most accurate method of uncovering an art forgery, as an art piece can be tested to see how old it is.

Using The Microscope



- ★ In a laboratory, oil paintings can easily be tested using the simplest methods of examination.

Microscopes allow scientists to see how old a painting really is. Forgers create old, cracked looking surfaces by rolling the canvas, heating and cooling it rapidly and applying a constricting varnish using a stippling brush to give it a fly-blown look. X-rays can also reveal whether the cracks appear under the surface and on every layer of the painting. In forged paintings, it is quite often found that the forger has only created a cracked appearance on the top layer and therefore, it does not match the bottom layer.

Light



- ★ Depending on the paint composition and the age of the painting, ultraviolet light shows fluorescent blue-green if the varnish is from the 19th century. Infrared light can also reveal whether it is paint or ink used in the painting. If these tests reveal nothing out of the ordinary, scientists take a paint sample from the edge of the painting or a damaged area, placing it in cold-setting polymer and are thereafter able to identify its pigment underneath a microscope.

Colours and Composition



★ Because oil paintings began in the 15th century, certain colours did not exist at that time, for example, Prussian blue was only created in 1704. A painting that contains the Prussian blue colour, therefore, cannot be anymore than three centuries old.

★ The canvas on which an oil painting was painted provides an inaccurate guide to age. The weave composition of the material may however, provide a clue, but a forger may have used an old, cleaned off canvas from another artist. Canvas frames, on the other hand can be dated using the tree ring measurement technique, which can tell how long ago exactly the wood was cut.

Metals and Ceramics



- ★ Fraud metals and ceramics are difficult to spot and require some highly advanced equipment and techniques. Ceramics are hard to copy, as identical clay to the original is required in order to make them look even close to the real thing. Stone statues are almost always an original, as it requires too much time and labor for a forger to consider. Cast metals, on the other hand, are much easier to forge, but only a small handful acquires suspicion.

Ceramics



- ★ Ceramic is dated using a method called thermo luminescence, which unfortunately (to the annoyance of the purchaser) requires the removal of approximately 30 grams of clay for the process to work. The process works by measuring the natural radiation that is absorbed by the clay from the moment the piece was placed in a kiln and fired. Metal objects are dated using a different method. Xray fluorescent analysis involves an art piece emitting an x-ray characteristic of the metal it was made of. This metal characteristic is compared with the x-ray of a genuine artifact that is from the same period.

Questions and Comments

