Dear Reader,

By 1999 a project of historical proportions is to be completed in the Turkish province of Eastern Anatolia. The mighty Euphrates is to be harnessed, both for hydropower and for a large-scale irrigation programme which will provide water for an agricultural area the size of Switzerland. The aqueducts have an enormous capacity; with 7.6 metres in section they can deliver 3,900 m³ of water per second. Great time and effort went into planning the scheme, which began in 1976. By 1984 Turkey was ready to place its orders for the hydraulic machinery, the generators and the electrical equipment for the pressure pipelines. The Turkish water authorities have been careful to ensure that the project does not get stuck in the planning stage and that it is backed by the Ministry of Finance. Nowadays, larger funds are almost entirely reserved for the energy and transport sectors. Turkey is determined to stop seeing its export earnings swallowed up by its oil imports bill. With the usable water-generated energy estimated at no less than 60,000 megawatts, the project will give Turkey the greatest hydroelectric potential in Europe after Norway. Our article on pages 14-19 tells you more about the billion-dollar investment in the "Atatürk" project.

Our report on the festival of music and dance in the Finnish town of Kuopio looks at something very different. The original organizers, true to the Finnish male character, clearly wanted to lay more emphasis on music than dance. Today the festival is organized by a group of women whose contacts and influence allow them to draw attention to visiting artists from all over the world. The festival has become a meeting point for musicians from all over - Orick Fox, to name just one - all of whom come from a very professional artistic background.

Yours sincerely,
The editors.
The quirks of fate
Forged and genuine paintings

If you follow reports on transactions on the art market, famous names, the titles of certain masterpieces and, above all, record prices stick in the mind. But that's only one aspect. The trading of numerous auction houses, renowned and lesser-known art dealers, junk dealers and all the 'bargains' go unnoticed. Art has to make money - that's the driving force behind it, and a very powerful one. Should a customer turn up and the deal be concluded to everyone's eternal satisfaction, that would be the end of the story. But fate is fickle. The apparently humorous comment of a friend well-versed in art - 'a good buy' - is from now on always viewed with some anxiety. If you present the work of art to a dealer, an auction house or even a museum, this can often lead to embarrassment. Even producing a guarantee of originality provided at the purchase, which convinced you at the time, often provokes a shrug of the shoulders. A world of elusive values.

Help from natural scientists
That's what this article is all about. Not the art market in general, not this dealer or that valuator, but about art as fritsam and jetsam. Explosive enough, but nevertheless nothing more than a subject of peripheral importance. Our fritsam and jetsam: works by a master of Baroccelli, a Guardi, a Spitzweg, a Rodin or a Mignon. At least that's what we thought, what we hoped. Sometimes we're right, sometimes we're wrong.

Since the end of the last century assessing works of art has not been carried out solely by art historians; the observations and knowledge of natural scientists have begun to play an increasingly important role. The natural scientist, also a sort of Sherlock Holmes figure in art, nummages through the fritsam and jetsam and reaches different conclusions from those produced by the art historian. Often crucial information which rounds off the picture in a joint effort to assess a work of art. This information is of great importance when it allows the attribution, the dating or the artistic verdict on this object to be disproved by way of the materials used, which can be clearly identified, or other technical features. And if this doesn't succeed, which cannot be foreseen and is fairly frequent, then it still complements the other facts.

Processes such as optical emission spectroscopic analysis, micro-chemistry, X-ray diffraction analysis, thin-layer chromatography, gas chromatography/mass spectrometry, infra-red reflectography and X-ray radiography might mean something to the experts, but in the end it is the results that count. Nevertheless, these results normally require a huge amount of time-consuming, costly effort. Despite this (or maybe because of it) the results are often formulated very succinctly. Truths seldom need lots of words: forgery, copy, free imitation, reproduction, incorrect attribution, replica.

Maria is examined
The first example is 'The Annunciation', a very common subject in this form. Maria receives the message from the angel. A composition which can be interpreted as iconographical to the last detail, in good condition, appearing at first sight to be a very tempting buy because of its good quality. Sold as 'around 1500', attributed to a Baroccelli master. This safe little world is shaken by an X-ray, which shows up the piece of wood on which the picture was painted, the composition itself and, most importantly, the signs of woodworm which have been filled with primer (see markings on X-ray). For the expert this points to an old piece of wood having been re-used - generally with the intent to forge. Another inconsistency is the crepitude (fine cracks) with its uncharacteristic evenness.

These are all observations which help along the decision to take tiny samples for analysis, which one is loath to do with authentic paintings. Analysis of these samples provides the proof: some pigment from the 18th century, but mostly from the nineteenth. Therefore it must be a much later work, possibly even a copy.

On the search for a model for 'The Annunciation' we come across a painting in Antwerp. Once attributed to a Baroccelli master and now to an unknown master from Bruges. It is also dated as 'around 1500'. At first glance it seems very similar to our work, yet later this similarity is not so apparent. But it was almost certainly the model. However, it is impossible to say whether our copy is a typical example of the classical style of painting of the 19th century, which was later transformed for obvious reasons into a work from 'around 1500', or whether indeed the use of the old wooden board full of worm holes points to a definite intention to forge.

Venetian adaptation
The second example from our stroll along the beach is a view depicting the lagoons of Venice and the entrance to the Grand Canal. These so-called vedutas have been very popular with the public since the 18th century,
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These so-called vedutas have been very pop-

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showing Venetian symbols as a panoramic background. Because of the demand, artists (in fact whole workshops of artists) work in this style of painting, characterised by masters such as Guardi, Canaletto and Bellotto. The market is full of them and they are as popular as ever. Some questions arise again and again, such as the dating and, in connection with the attribution, the price to be asked on the art market.

Years before scientific analysis began, this veduta was presented as one of Francesco Guardi’s (1712–1793), but then rejected as an imitation. It then disappeared into the art trade. Having probably changed hands several times, it was washed up just like a piece of driftwood as a “Guardi son,” presumably meaning Giacomo Guardi (1764–1835). But in the end flotsam and jetsam is nothing more than flotsam and jetsam. Reservations about such an early date were voiced again and substantiated by the discovery all over the world of pigments which could only have been used in that combination after the 1840s. Reason enough to exclude the notion of the painting being by Guardi’s son, and certainly by Francesco Guardi himself. Definitely not intended as an actual forgery, but attributed too boldly and indirectly dated.

The veduta, then, should be classified as an imitation of much higher-quality works by famous painters. Like the Francesco Guardi from the Alte Pinakothek in Munich, seen here opposite the relevant extract from our veduta.

Spitzweg’s idyll deceives

Yet again the scientific-technical analysis turns out to be a stumbling-block. Proving the existence of a white pigment, which was only available from 1916 and only really used by painters after the First World War, proved the undoing of a “Hermit with fishing rod.” The idyll deceives, the hermit is carefree, but the cat is out of the bag.

The rhombus, Carl Spitzweg’s monogram, the signature of “Spitzweg” itself, the back of the painting with the certificate of estate and a typical subject (monk with fishing rod) may make the painting more credible and therefore more expensive for the layman, but this won’t make it more genuine for the expert. Even Spitzweg’s dates (1808–1885) can scarcely be reconciled with the scientific evidence. The combination and characteristic style of the rhombus and signature may at first glance recall a more common certificate of estate, but they never appear in this way in original Spitzwegs. The facts were quickly explained as a clumsy forgery, possibly on the basis of a reproduction available in the trade and at the same time a partial copy of an authentic Spitzweg. It should not be forgotten that this forgery is certainly no isolated case in a market which greedily absorbs anything by Spitzweg.

Dismantling a constructivist

We suspect, but can’t prove, that flotsam and jetsam often remain in the water a good while before being washed up on the shore. An exception to this is a “Constructivist composition”, signed “A. Rodchenko” in Cyrillic

“Hermit with fishing rod” – a 20th century forgery of a Spitzweg. The small pictures show the rhombus and the signature in enlargement and the certificate of estate on the back of the painting
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"Constructivist composition" with the forged signature "A. Rodchenko" painted some time after 1938. Under ultra-violet light, the bottom left hand area of the picture can clearly be seen to have been tampered with. The X-ray (lower right) brings to light a completely different painting underneath. In an extract of the X-ray, the signature "Konst. 35", subsequently painted over, is visible. Special processes even make it possible to read the signature of the underlying painting, "Miako 37".
script and dated around 1920. A quick look in exhibition catalogues of Alexander Rodchenko’s work gives rise to doubts: both the composition itself and the style of the signature seem far removed from the original. A first step towards the truth consists of examining the work under ultra-violet light. The surface of the painting appears to have been slightly tampered with at the bottom left. The X-ray provides an explanation: there was another signature here, “TM 63”, which was scratched into the still wet paint with the other end of the brush. We do not know which artist used this monogram – probably an unknown whose constructivist composition became a popular Russian artist by being turned 90°. The “TM” monogram was quite simply painted over and the signature “A. Rodchenko” painted in. The results of technical analysis, according to which the composition now visible could only date from 1938 at the earliest, and most probably from some time in the fifties, are quite in keeping with this and the figure “63” standing for the year.

But we haven’t quite reached the end of the story. What about the canvas, which has aged and become tarnished? What about the traces of paint at the edge of the canvas in colours which are not visible anywhere else on the “Constructivist composition”? And what about the layered structures which appear on the X-ray? For the expert all this signifies that a canvas has been used again – already painted on, it has been used again to accommodate the composition now visible. Unusually we do actually know who painted the work which has been covered – a special technique process makes the signature and date, “MIARO 37”, visible. The 37 fits with the terminal date, which was revealed after the pigments used in the second painting were analysed – after 1921.

Rehabilitating a still life

A still life of flowers shows that sometimes something worth collecting is discovered among the usual trash and junk, like a beautiful shell or a smooth piece of amber. This painting was classified as originating from the 19th century in a decision by an art historian, and could then no longer be accommodated on the market as a 20th century painting. But technical analysis produced a very different result: the “A. Mignon fe” signature was judged to be quite definitely genuine. Moreover pigments were discovered which were very typical in Abraham Mignon’s lifetime (1640–1679) and were no longer used at all after 1760. So, though it’s been re-touched and partially painted over, it was never a 19th century still life. Misjudged, but a piece of amber all the same.

The Doerner Institute in Munich has been involved in detecting art forgeries with the aid of technical/scientific examinations for decades. The huge archives and enormous stores of the Bayerische Staatsgemäldesammlungen München (Bavarian Art Collection, Munich) offer comprehensive material for comparison; our article is dedicated to their retiring director, Prof. E. Steingräber. The laboratory, currently the biggest and best-equipped laboratory in a museum in Germany, not only investigates the authenticity of paintings, but also deals with painting techniques, investigations into metal corrosion of outdoor bronzes, Far Eastern art and much more. Highly specialized and with hardly any competition.

Only the connoisseur is protected from this sort of thing happening. For the longer you wander along a beach, the more you see. Looking at the ground, picking everything up, turning it round, dropping it and scarcely keeping hold of anything. This picture is very much what a collector should have: patience, do (see) and be or become (some- one with his eyes peeled at all times).

Dr. A. Bumester

A genuine work which was branded a forgery. Extract from “Still life” by Abraham Mignon (1640–1679) (privately owned)