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PROCEEDINGS OF THE ART MUSEUM OF ESTONIA

Tehniline kunstiajalugu – kunstiajalooh tehnikad?
Technical Art History – Techics of Art History?
Introduction: Looking back at the project “Bosch & Bruegel” and still thinking of technical art history

Greta Koppel

In 2010–2013 the Art Museum of Estonia, Kadriorg Art Museum, carried out an international project “Tracing Bosch & Bruegel. Four Paintings Magnified”. The project focused on four anonymous 16th century Netherlandish paintings in Bosch-like style and with similar composition, “Christ Driving the Traders from the Temple”. In the course of history these pictures were scattered across Europe. Today three of the four are in public collections, in Glasgow (Glasgow Museums and Galleries), in Copenhagen (National Gallery of Denmark), and in Tallinn (Art Museum of Estonia, Kadriorg Art Museum). One is in a private collection. The project involved various institutions in several countries; interdisciplinary investigations were conducted on all four paintings, and the results were introduced at a conference, at an exhibition and in a book. The current issue of the “Proceedings of the Art Museum of Estonia” includes more material related to the “Bosch & Bruegel” project; according to the topic of the issue there are also various articles about technical art history and the techniques of art history assembled.

“Bosch & Bruegel”. Conference

Research results of the project “Bosch & Bruegel” were presented in May 2011 at the 6th international spring conference of the Kadriorg Art Museum titled “Techniques of Art History: Technical Art History”. Together with examining the four Bosch-like paintings, “Christ Driving the Traders from the Temple”, the conference tackled the boundaries of technical art history and its possibilities in a wider context. The questions raised included: What exactly is technical art history? Is it techniques of art history or a set of technical research methods applied to traditional art-historical objects?

Papers at the conference by Mikkel Scharff (Royal Danish Academy of Fine Arts, School of Conservation), Dr Erma Hermens (Glasgow University), Dr Jørgen Wadum (National Gallery of Denmark), Alar Nurkse (Art Museum of Estonia), Hannah Tempest (National Gallery of Denmark), Pauline Smith (Glasgow Museums) all explained how technical research (infrared, x-ray, ultraviolet investigations, material investigations) and the possibilities offered by technology (computer animation, digital visualisation etc) help to
better understand centuries-old artworks. In addition, Dr Matthijs Ilsink (Noordbrabants Museum) and Professor Dr Ron Spronk (Queens University) introduced the international project taking place between 2010 and 2016. “The Bosch Research & Conservation Project” (BRCP) in mention that culminates with the exhibition marking the 500th anniversary of the artist’s death. It describes and differentiates the various artistic handwritings and painting techniques of pictures that have been considered to be authentic works of Bosch.

The special technical art history issue of the “Proceedings of the Art Museum of Estonia” publishes two papers presented at the conference in article form: Ari Tanhuanpää’s “Are we dealing with details or patches? Technical art history from a critical viewpoint” and Hilikka Hiip and Merike Kallas’s “The story of ‘Samson and Delilah’ from the aspect of technical art history”.

“Bosch & Bruegel”. Exhibition

The undertaking that took the project “Bosch & Bruegel” to wider audiences was a travelling exhibition, which started in 2011 in Tallinn, then European Capital of Culture. From the Kadrioru Art Museum it moved to the National Gallery of Denmark in Copenhagen in spring 2012, and finally to the Kelvingrove Art Gallery in Glasgow. The unity of form and content secured the success of the exhibition: the innovative research method of old art was presented to the public in attractive design and via multimedia means. Since research in today’s humanities, despite the help of technical investigations, often yields more questions than answers, the exhibition information was presented in a way that enabled the viewers to participate in the research themselves via touch screens, in order to learn and to arrive at new questions.

Supported by the European Capital of Culture programme, the exhibition in Tallinn was able to get all four paintings together and to hang them side by side. This did not happen in either Copenhagen or Glasgow, which means that the three exhibitions were not identical. They tell the same story, but the emphases are different. In the National Gallery of Denmark, for example, the exhibition was largely designed by young people actively involved in the museum. They were primarily interested in the material side of the artworks and their research, and the display was thus installed in two rooms: a 16th century artist’s studio and a 21st century conservation scientists’ laboratory.

“Bosch & Bruegel”. Book

An even more extensive and diversified summary of the “Bosch & Bruegel” project than the conference and the exhibitions, is offered by the richly illustrated catalogue “On the Trail of Bosch and Bruegel: Four Paintings United under Cross-examination”, published in spring 2012 by the London publishing house Archetype Publications Ltd. In addition to the technical investigations of the paintings, the catalogue also thoroughly tackles issues related to their iconography and authorship and aspects of art taste and the market.
Proceedings

Besides the conference, exhibitions and the publication, the project "Bosch & Bruegel" revived a discussion about the question: What, after all, does the term "technical art history mean", which has been increasingly widely used in the last decade in the context of technical investigations of artworks?

Moving from the individual to the general, three general phrases emerge: firstly, technical analysis (one method), secondly, technical investigations and/or technical investigations (a cluster of different technical and material investigations), and lastly, the grandest of the three, "technical art history". Using the first and second terms is quite understandable, whereas for many, including those who actually use this expression, the essence of the third still seems to be unclear (the term is often used in the sense of technical studies of artworks). Is it a method, research field or perhaps even a separate discipline? The latter is supported by the fact that technical art history is taught as a separate subject at university level (e.g. Glasgow University) and that at the conference in May 2012 in the National Gallery of Denmark, Dr Ron Spronk introduced himself as a "technical art historian" (see Kadi Polli and Hilkka Hiipo's overview in the current issue). In both cases, a number of questions immediately arise: How do the two disciplines - "technical art history" and "(plain) art history", within which artworks as objects are also researched - differ? How do the disciplines relate to each other? In the term "technical art history", how do technology, art and history actually relate on one another? How to define the discipline in the first place? Etc.

Other writings in the journal also reflect different interpretations of the term and its usage. In that respect, Ari Tanhuanaata's art-philosophical approach is symptomatic. It warns us not to overestimate the material side of an artwork, emphasising the integration of an artwork's material and non-material aspects, its matter and idea. Tanhuanaata criticises technical investigations rather than technical art history, and opposes conservation science rather than art history.

In order to emphasise the ambivalent usage of the term "technical art history", the special issue begins with an interview with two internationally renowned conservation scientists and members of the Bosch-Bruegel research group: Dr Jørgen Wadum (keeper of Conservation at the National Gallery of Denmark in Copenhagen and chairman of CATS, Centre for Art Technological Studies and Conservation in Copenhagen) and Dr Erma Hermens (lecturer at the Glasgow University and expert of historical painting techniques). The focus was on the question "What is technical art history?" With the aim of explaining the meaning of technical art history from an art-historical aspect, Dr Matthijs Ilsink was asked to take part as well. He is an art historian in the above-mentioned project that examines the art of Hieronymus Bosch with a variety of technological investigations. The interview of the three researchers was, with their kind approval, commented by Professor Krista Ndres from the Estonian Academy of Arts who represented academic art history and theoretical discourse, to which this particular research area seems to largely oppose.
The interview did not provide a firm answer to the question “What is technical art history?”. Still, the idea prevailed that technical art history is to be considered as a collective interdisciplinary research of an artwork, where focus is on the artwork as a physical object. This constitutes the basis for further research; the object and its physical qualities are essential reference materials for the conclusions drawn.

The questions asked of the material and answers provided by interpreting the analyses, link technical investigations with art history. The word “technical” in the sense of technical art history refers to carrying out technical investigations in researching artworks, as well as to the interest of technical art history in the technology and process of making an artwork, just as it indicates an interest in using innovative technology in order to research and interpret art. Thanks to all this we can certainly say that one of the most traditional questions in art history – “Who is the author?” – is now supplemented by another question based on investigations that use these scientific research methods in analysing an object – “How was the artwork made?”. This aspect has significantly expanded our current understanding of art practices of the past.
What is technical art history?
An interview with voices interacting¹

INTERVIEW BY ART HISTORIAN GRETA KOPPEL

ANSWERS BY CONSERVATION SCIENTISTS
DR ERMA HERMENS AND DR JØRGEN WADUM
AND ART HISTORIAN DR MATTHIJS ILSINK

COMMENTED BY ART HISTORIAN
PROF DR KRISTA KODRES

Greta Koppel: To frame the discussion, I would open it from an art historical perspective. In the last three-four decades there have been many changes in art history. The field has broadened extensively: the subjects, objects and phenomena of research have grown explosively. The territory of art history is often considered limited; it has even been questioned whether art history can be seen as a separate discipline anymore, or whether it should instead be considered a research trend (with considerably old traditions) in the huge field of visual (culture) studies. But one thing that usually has been agreed on is that art history traditionally deals with artworks as visual objects. In recent decades, another strand within art history, “technical art history”, has developed that perhaps has even received priority in this kind of research practice.

So could you explain what technical art history is?
Jørgen Wadum (JW): It’s interesting to see this change in the teaching of the study of art history that has been reflected by this question you are posing. In Denmark, we have two universities teaching art history and they are becoming increasingly theoretical in their

¹ Interview with Dr Erma Hermens and Dr Jørgen Wadum took place in May 2012 in Copenhagen where the international conference “Copying, Replicating & Emulating Paintings in the 15th–18th Century” (21–22 May 2012) in the National Gallery of Denmark was held. Dr Matthijs Ilsink added his written thoughts later. Prof Dr Krista Kodres from the Estonian Academy of Arts was asked to comment as a representative of an academic institution who sets a high value on art theoretical aspects in her research and teaching.
approach. The focus is not so much concerned with the physical object as with the perception of the image seen in a cultural context, rather than looking at the material aspects that probably could explain how the image was initiated.

The genesis of an object has an impact on how you interpret it and if you lose that interpretation you might create theoretical notions about its meaning, the compositions and the colours, and this might extend to an analysis that takes you philosophically further away from what the intention of the artist actually was. As I see it, technical art history is about integrating the materials and choices the artist makes and how he/she uses his/her craft to create an object. That should be a starting point to understand how we can later elaborate on the theoretical part.

**Erma Hermens (EH):** I fully agree with that. I think that traditional methods of art history, like iconography and stylistic analyses are still quite a big part of connoisseurship, and it should continue to be so. However, what is often not considered is the materiality of the artwork, the actual process between the idea, the invention and the final product, and this process is not straightforward, but is actually a really important part of the original intention and thus should also inform the interpretation of the object. The choices the artist makes (as JW said), the materials that have been chosen but also the limitations of what was available at the time, the relationship between style and technique, and the demands of the market – all these things influence that process. Therefore the final product can only be understood in the theoretical sense if you understand how the initial idea developed and why certain things were done or not done.

I think this is really important and this stays the same throughout the entire art production even today. In modern and contemporary art, these processes are often a key part of the artwork as well, but in a very different way. Sometimes artworks are ephemeral, they disappear, self-destruct, but understanding the processes of their making and/or disappearing, and the meaning of the materials chosen is crucial for their interpretation. The context in which artworks are made changes over time, but the principle of this process, of understanding the process, is a really key/core issue for art history, and the way to study it is through technical art history.

**Matthijs Ilsink (MI):** JW and EH are absolutely right in stressing the importance of the work of art as a "primary source", as an archival document. Technical art history very much revolves around that primary source; it puts the materiality of the art object at the centre of investigations. Technical means and methods, such as X-ray, XRF, Raman, IRR and the taking of samples, aid these investigations. As JW says, it focuses on gaining a better understanding of the (physical) components that constitute the art object (for example wood, canvas, pigments, binding materials and varnish). The study of the interplay between these elements and the changes in (the interplay of) these elements over time also forms an important aspect of technical art history.

In this respect, TA is a method that leads to a fuller understanding of the physicality of an object. This, in turn, can lead to a better understanding of the object as a work of
art, i.e. an object made with exceptional skill, from both a manual/physical point of view (ars) and from a conceptual/mental perspective (ingénium).

To my mind, however, this does not entirely mean that in TA the train of thought is reversed from “theory – object” into “object – theory”. One always brings a theory to the table, whether explicit or implicit (better explicit than implicit, I would say). Theory is our bias, our explanatory model preceding our observations. When we conduct/perform technical art history, we have certain expectations of that performance. We think we can achieve certain things by using this method. For instance, the idea that TA can be regarded as a form of connoisseurship is a part of a theory (I do not think of theory – as some appear to do – as fiction or fantasy). Without a theory (a premise as to what truth is) we are lost, although we constantly have to adjust, discard and replace theories.

Erwin Panofsky’s remark about the relation between theory and history is on the mark: “It is rightly said that theory, if not received at the door of an empirical discipline, comes in through the chimney like a ghost and upsets the furniture. But it is no less true that history, if not received at the door of a theoretical discipline dealing with the same kind of phenomena, creeps into the cellar like a horde of mice and undermines the groundwork” (from E. Panofsky, “Meaning in the Visual Arts”, 1955).

For the field of technical art history, connected as it is to the worlds of, for instance, chemistry, materials science, mathematics and biology, the image of “the double helix of science and technology”, as Sander Bais called it, is clarifying (“In praise of Science”, 2009). The image of a double helix is taken from the structure of a DNA string, formed by two intertwined and interconnected lines. One line stands for knowledge/curiosity/questions/measurements, while the other stands for technology/instruments. One leads to the other and back, with progress over time shaping it like a double helix. Or, even more abstract but maybe more powerful as an image, a spiral staircase.

The question now is: where does this staircase lead us? From my perspective as an art historian, it has to lead to an understanding of the work of art that is meaningful in the history of events. Of course, this is way too theatrical, but what I am hinting at is the use of the word “understanding” in the sense of Wilhelm Dilthey’s Verstehen and a tradition of hermeneutics deriving from Martin Heidegger and Hans-Georg Gadamer.

For me, TA means team work. In practicing TA, conservators, scientists and art historians have to be engaged in constant conversation. And let’s not forget the role of the photographer, who can produce enormously important reference material. Only a combination of strengths will lead to a fuller/broader and meaningful appreciation of works of art and thus civilization. And I believe this is not merely a pastime, and therefore we have the use of big names and words, while running the risk of sounding pompous. In the end, we have to be able to come up with a story that justifies our efforts in conserving historical material. This begins with scrutinizing the objects themselves. (However, the decision of which object to scrutinize requires a preliminary discussion/concept/theory. Therefore the concepts “object” and “theory” oscillate and constantly change places.)
And how is this investigation carried out?

JW: We just had a conference\(^2\) where one of the discussion points was: can the artwork under survey be attributed to a specific artist or rather to his workshop? And one of the aspects that come to play a role, besides the infrared imaging to study the underdrawing, undermodelling of paint layers below the surface that you can visualise only by this method, and the radiography, which also explains how the artist compiled various layers and where there were higher density pigments within painting materials, and the choice of radio-opaque pigments, is the understanding of whether this blue cloak of the Madonna was made of lapis lazuli and not just any cheap blue pigment. Knowing this might have an important impact on how you interpret this painting and whether it might have been commissioned (Michel Pastoureau, “Bleu: histoire d’une couleur”, 2000). It is something you would not consider in a theoretical study of this composition, where you would not have any information on the material evidence.

Understanding materials in an artwork leads you into an avenue of consideration of which environment and for which client an artwork may have been made, whether for an open art market or for a prosperous client. And that’s where technical study with infrareds, x-radiographs, and (non-)destructive technical analysis of the media of the pigments, such as Raman, XRF and cross-sections to see the layer below, aids you in understanding the context in which the object was made, as well as provides an added value to our understanding.

I would argue that knowing the compilation of materials of the object tells you a great deal about the trade routes, the possibilities that art materials were acquired in art centres or in less fortunate regions where you would have to choose different materials, which again would have set the scene for the art market and its environment, including the demands of the clientele, and therefore maybe for the iconography, because the clientele would have different wishes for what type of motifs would be required.

EH: This requires an interdisciplinary approach, where often there is collaboration with conservation scientists, who do a lot of these analyses, and conservators, who of course work on these objects and are very familiar with them (they get “under their skin”), the art historian, who know secondary sources, like archival documents or written texts from the time the object was made and can add also stylistic and iconographical interpretation etc. But also in many cases you can add other disciplines to the team, such as social historians, economic historians and philosophers of aesthetics. Thus, it is important to consider all these different aspects, depending of course on the question you are asking. Most of the time it is a very interdisciplinary approach.

JW: This is the essence of technical art history. It requires, as we saw in a presentation at the conference yesterday, a three-legged stool: connoisseurship, technical research

\(^2\) To be precise, on the day after the conference, on 23 May 2012, there was a workshop on the attribution of the painting “Madonna and Child” and Dieric Bouts (studio). – Ed.
and archival research. Without these three research areas fusing together, you cannot really achieve a full understanding of an object. So I think conservators and conservation scientists carrying out s-c technical art history are continuously on the outlook for art historians who will collaborate, because that collaboration makes it possible to get a full picture.

EH: There is a lot of data collecting, but the data need a story, and without that story the data remain rather taxonomic. So this interdisciplinary approach is the way to do that.

JW: Hard-core science cannot attribute a painting or an artwork to a specific artist or workshop. It can set a scene for the period in which the artwork could have been made, and therefore again it is essential to have an art historian who bases his/her stylistic analysis on all the tools that art history has available and fuses them with other material knowledge.

It would be such a pity if the art historian wrote a long article about, for example, a wonderful Madonna and Child on a black background, considering how interesting and novel a completely black background was, if it suddenly turned out, with the help of technical investigations, that this black background was in fact a discoloured blue background. Then the whole argument would fall apart. So you need to know the material aspects and their changes over time, which may affect the evaluation of the stylistic approach too in understanding the artwork.

Would it be correct to say that part of technical art history can be considered as modern connoisseurship with technical equipment, analysis that provides us with more reliable information, or perhaps gives a voice to the object?

EH: I think it is really important that traditional connoisseurship, in the sense of stylistic comparison, is a big part of it, because we can identify certain materials and techniques and layer build-up that seem typical for a certain workshop, but of course during certain periods many artists used the same methods of working as you can read about in treatises and manuals. A stylistic comparison is needed as well to make a more conclusive statement, although in many cases it still is a combination of aspects resulting in a probable attribution: authorization in the sense of attribution is really complicated. To combine the interpretation of techniques with an interpretation of style is the best way of working with all these different elements. So yes, connoisseurship is an important part. Dr Maryan W. Ainsworth (the curator of the European paintings at the Metropolitan Museum of Art, NY) has called technical art history the new connoisseurship, but she actually clearly included in that definition the stylistic research the connoisseur would do traditionally. So that is something really important to emphasize.

JW: We should also remember that technical analysis and hard-core facts still require interpretation.

EH: Yes.

JW: So there is a necessary invitation to dialogue here as well. To be able to reach the right conclusions, an underdrawing has to be interpreted, so there is a new sort of
connoisseurship emerging as to how to read and understand an underdrawing and how not to fall into the trap of interpreting whether it was either made by a dry medium, liquid medium or whatever. The correct interpretation has a significant influence on the final verdict of how that painting was composed and how that artist worked. All the materials that compose the ground-layer, or a number of ground-layers, are equally important to understand and distinguish.

MI: To define TA as modern connoisseurship does not entirely do justice to the field. TA has to be more than an instrument in the quest for labelling objects. Especially for Wolfflin’s “art history without names”, TA has a lot to offer. Also, the thinking about workshop practices, something TA is very well equipped to deal with, goes a lot further than connoisseurship in the sense of attributing objects to individual makers.

Another thing that is important to me is that TA can help in “localizing the art in the object”. In other words, it can help us understand the craft with which an object has been made, and eventually to think about how this craft is being used to support the content of the art object (i.e. the form as part of the content).

Very often even this connoisseurship with the help of technical studies does not give us names or clear-cut attributions – what then?

JW: I think that the recent project that we did together (Tracing Bosch and Bruegel) is a very clear example of a group of researchers searching for artists’ names in the 16th century, and we came up with very clear evidence that there was no certain name at that point for any of the four paintings. And I think that doing research into a group of paintings like we did with the four Bosch-Bruegel-type paintings brought us much closer to understanding that specific period in history and its art production.

Names were not necessarily associated with workshop production. A workshop would produce works of art that would look generally very similar but still very different. They were not compared in their time in the way we scrutinize them today. One painting went to decorate a wall in a house in one part of the city, and another went in a different direction, perhaps to another city. They would never cross paths; they would probably be regarded as unique paintings in their own right in their new places. I am convinced that at the time nobody wanted to name them as we do today: they were “labelled” as the workshop of Bosch or Bruegel or Mandijn.

The search for a name is something from (our) last century. We want to know if it is by this or that artist. Is it fully by the master’s hand or is it just 20% by the master, and if only 20%, is it then to be regarded as by this renown master at all? Our fascination with something unique is something very peculiar to Western culture. In Asia you do not have that need, because the uniqueness of an artwork is in its representation or meaning, and is

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not defined by the name of the maker. That is an interesting thing to consider when studying art practices of earlier times.

That distinction between the unique name and just being made by the workshop of a master seems very important to our culture to identify with greater certainty and that is what also drove our project. I cannot resist referring to an example of the contemporary Danish-Icelandic artist Olafur Eliasson (for example, "Your Rainbow Panorama", on the roof of the Århus Kunstmuseum). Eliasson gets an idea but he has plenty of people who realise the object. We cannot distinguish his hand in the artwork. Is that not the same thing that happened in Rubens's studio? You cannot distinguish one single element in Eliasson's artwork that is by him, but it is still his work.

EH: I also think that by looking more and more into these workshop practices, the emphasis on the big names is starting to shift and this is something that has happened only in recent years – we are starting to appreciate the importance of this layer of production that is not Rubens and Rembrandt but concerns the huge number of paintings that were produced by skilled artists who all worked in big workshops, as especially in the Netherlands at the time the market was extremely demanding. They adapted their methods to be able to turn out these paintings in large numbers to respond to this demand, and now we are starting to increasingly look into that, considering copying practices etc.

But you then move to another sphere where the big masters were not that relevant but it was the public's taste and the demand that really determined the production. Also, that pushed the artist into certain ways of production. But this is really recent, this moving away from the master's hand as the thing to discover. The lure of the master is still there but the sphere is broadening. And I think that is very much due to technical art history, because the growing knowledge of techniques, materials and workshop practices is what stimulated that.

All this knowledge that has been gathered adds another layer to connoisseurship as well and, as Jørgen said, people are specializing in reading underdrawings from IR-reflectograms but also applying IR imaging in areas that previously did not have that kind of attention. For example, there is the recent IR study of old master drawings. The British Museum, for example, found that in many cases these old master drawings had underdrawings, and sometimes more than one layer of underdrawings. This means that the drawings also are the result of a process, that there were several steps before the final result. Which means that as an art historian or connoisseur you have to reconsider how you look at these drawings, as they have often been classified as spontaneous, and typical of the hand of the master, but then it turns out that there are two layers of underdrawing underneath, indicating careful preparation. This kind of information adds another level to one's interpretation and I think that is another big benefit of looking further than just at the surface.

JW: But another intriguing question arises when we are looking at an old master painting and discover that it is not by one identifiable old master, such as Rubens or Rembrandt, but probably a workshop piece. It might still very well be by one of the famous painters who came out of the workshop but who only developed his individual style later.
And, while working in his teacher's studio, he was still emulating his master's technique and style because the work in question was a sales object that was produced for the master, for the survival of the workshop.

So sometimes when we look at an old master painting we cannot assign it to a particular painter, although it actually might have a very interesting name behind it. We shall probably never be able to identify this name because the artist was emulating his master before he later, as a free master, created his own workshop and developed his own style. So we may still be looking at many very unique paintings.

However, having a painting that is no longer by the master we thought it was by does not necessarily reduce the artistic value of that painting. I think that it is really important to remember that if a Rembrandt painting is no longer considered to be by Rembrandt, which it might have been for hundreds of years, it still underscores how very good its creator was and should continue to be cherished as such.

The monetary value should not influence art history, as any art historian would acknowledge, and the value should have no impact on the attribution or de-attribution of an art work. That is an advantage in the museum world contrary to the private market. If a brilliant painting in a museum turns out not to be by the painter we thought it was by, it may still remain an important artistic work to be displayed on our walls. It does not lose its artistic value after all.

**So can we say that technical art history asks art historians to consider the object itself?**

**JW:** Absolutely! One of my good friends, who is a director of a well-known museum in Germany, recently told me that in his opinion art historians like to look at images but not at artworks. They may barely be able to understand or read the surface of the artworks: the brush handling, or the brushstrokes, which tell so much about how the artist went about making the object, or layers brushed up towards other layers and what that tells us about the creativity of that work.

That again leads to new investigations to understand the technique. I think the material culture embedded in these artworks is the key for art historians to return to look at objects as objects and as carriers of information. You can say that each art object is the carrier of a whole range of archival files on top of each other that just need to be opened up, dissected and understood, and then you may have an entirely new story to unravel. Together with all the theoretical art history, the material investigation creates a fuller picture.

**EH:** But it requires a bit of a change in approach. In general, how art history is primarily taught in universities is through a theoretical broad framework. Usually one single object, or "object-based research", is not the starting point, while in many cases for technical art history that is what happens. You start your research with one object, but also its context etc, and from there you build up a more thorough understanding of processes, ideas, inventions, collaborations and workshop practices. So you work the other way: you go slowly but surely to the theoretical framework of understanding this type of artwork,
the artist's practice, the market, the context and concepts. The artwork is the core of the research. I think that is a quite different way of working. It is maybe more the way an archaeologist works. I think art history can be very theoretical, removed from the object itself. Although there is an important place for theory, the materiality of the object and everything that is connected with it is also key.

So I think it is important to try to at least introduce technical art history more into the curriculum at the universities where we teach art history. Students should at least know that there is a different methodology that is available and that they can work with that as well.

**JW:** I think materials and techniques in recent decades have been lost in the study of art history, and that it is essential to get them back into the curriculum again, in order to understand that a graphite pen and a carbon pen make different traces on a piece of paper or drawing. Maybe art historians also need to get back to the curiosity about what a certain material might be, before they start on an intellectual survey into what the meaning and reception of that object could have been.

I am very happy to see that SMK joined the Google art project^, which offers the public, as well as art historians, the opportunity to really zoom in and see details in paintings which you would never be able to see in a gallery. This will, in the long run, generate a greater interest in the material aspects of these paintings. People start asking questions: How was that done? How did they do this?

The lack of interest could also be because, in our daily life, we seem to be so remote from real craftsmanship. Everything is made in a factory these days. We very rarely see crafts people in our society. Still, people are fascinated by somebody who can do something with their hands. Museums have galleries full of objects that are made by hand. And I am convinced that people will return to a desire to discover these values again.

And here digitization and public display of our collections, such as with our engagement with the Google art projects, are essential. I personally would also prefer displaying artworks through high resolution photos in slightly asymmetrical light, which would enable us to see the very tactile surfaces of an object. In that way, we could better observe the traces of the hand, for example scratching into wet paint, and fingerprints in painting: all this leaves traces.

**MI:** I could not agree more. We have to take every opportunity to make clear that a painting is not the same as an offset-printed image in a book. Paradoxically, the Internet as well as the printed book are excellent media for that. What needs to be stressed is alterity.

**EH:** I think that the dissemination to the broader audience is really the key. Because I also think that it increases interest in cultural heritage in general: in preservation, the problems with that, and various issues. People are fascinated by cultural heritage: how in

[^]: www.googleartproject.com
the 17th century they managed to paint metal, glass, silver and velvet in such a naturalistic way, and telling a story based on technical art history research is something that fascinates the public. As Jørgen said, informing the public about craftsmanship is really important. So technical art history research has all kinds of extra impacts. A lot of the research also feeds into conservation and conservation practice and is actually initiated by conservators. Research, therefore, could aid collaboration between these disciplines (art history and conservation) and with the general public because indeed there are now incredible visual ways to disseminate this kind of information. So this is not only interesting for us as researchers but also for the general public, and that is essential.

**JW:** That is really essential. Art objects themselves are very complicated structures. That should always be acknowledged, especially by the conservator, who of course needs a lot of scientific studies to understand the work before he/she starts dealing with it, for example extracting varnish layers with solvents or whatever. The conservator needs to know exactly what the material composition is before action is taken. Documentation by conservators should be done unambiguously and in a language that is also understandable to other disciplines within cultural heritage. These other disciplines would then be able to improve the conservation report through new information and novel dissemination for an enhanced understanding of the artwork. In this way, the scientific analysis done to understand the artwork that is necessary for its treatment may also result in very valuable information for dissemination, from an art historical point of view. Scientific information may be "gold" for an educational programme.

This is a very important chain of knowledge transfer and continuously offers the other disciplines new opportunities for understanding and simultaneously creates new ways of communication, and develops new languages for all the disciplines within the heritage arena and their stakeholders.

**EH:** But to increase collaboration and to create this chain of knowledge you need to start very early by teaching art history students to study all these different aspects. Not just the making of objects but also "what conservation is", "the ethics of conservation", and what the problems are in restoring an old artwork as well as contemporary art.

What is really rewarding, and we do this in our master's programme at the University of Glasgow, is that students make reconstructions of old techniques, but are also involved in the performance of a living artist (they do that for a day). So they go from incredibly difficult and elaborate tempera painting reconstruction – preparing panels with gesso layers, then another layer, another, making paint with egg etc and gilding, which takes a huge amount of time and concentration, and an understanding of the materials – to performance, which can be a very quick process and then disappear, it's ephemeral. So going through all these steps, students say, is an eye-opener, because they have never looked at an Early Italian tempera altarpiece and realised that every brushstroke was put on with this tiny little brush, which is the only way you can paint with egg tempera. Things like that. How many hours many people must have worked on these big altarpieces. Just the realization of these things has an impact on how they look at art.
But also it's important to talk about issues such as authenticity: in general, interpretation of that concept, context and material, as well as talking about conservation, the history of conservation, and different approaches. I think this is a crucial element for anyone who is going to work in the cultural heritage sector, and I think that is something that we should more and more integrate into undergraduate programmes.

**JW:** Teaching programmes in conservation studies should interact much more with programmes of art history, art and other specialities and programmes should be developed where you can or have to shuffle around (for a semester, a part of a semester, a course etc) and be exposed to other inputs.

A conservator without certain art historical knowledge cannot initiate substantial research; you need to know where an artwork is situated in time and space. There is a dialogue there that is essential, that can be rewarding for all parties, and that does not jeopardize the possibility of the highly theoretical.

**EH:** And the maker!

**JW:** Yes, the maker too, of course. And so that art can be better preserved for the future.

**MI:** True.

**Comment**

**Krista Kodres:** To start with, I am not a technical art historian, thus the issues addressed in the interview were for me, first, an interesting read, and second, an intriguing read since they presented a set of problems that are without doubt also questioning the state and perspectives of art history as a discipline.

I fully agree with the interviewees that the whole issue of technical art history should be approached from an interdisciplinary point of view. I also agree that the art historical canon – the way we are interpreting art works – has for a long period neglected the visual and material qualities of the object by dealing mostly with the meaning and context of representations. However, the "visual turn" and the "material turn" that characterize the past 20 years of art historical theoretical discourse have changed this path. This is, in my opinion, the broader and more general framework for the rise of technical art history. The Anglo-American picture theory and German Bildwissenschaft underline the need for a "return" to the object and stress the active character of visual and material "languages". The recent CIHA World Congress in Nuremberg5 was titled "The Challenge of the Object" and the accompanying exhibition in the German National Museum was dedicated to works of "early Dürrer". Here Albrecht Dürrer's production was presented with a truly interdisciplinary attitude: the exhibition opened up the complex nature of his oeuvre, including not only the presentation and explanation of the iconography of works and the broader context of Dürrer's activities, but also the display of his working materials and methods which

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used the results of their careful technical investigation. Of the twenty sessions of the CIHA congress, many were directly dedicated to the issues that are at stake in the interview, such as “Exploring the Object: Art Technology and the Object”, “Objects on the Move: Histories of Provenance and Preservation”, and “Dürer’s Life and Work – The Object as a Key to the Subject”.

Thus, one can argue that the technical art history has been already “approved” as a part of the complex of art history. Without doubt, technical art history gives us yet another set of “archival files” as JW figuratively puts it. As a result, it adds new pieces of knowledge that, in return, start to reconfigure understanding about our objects of study.

For me the most intriguing parts of the interview were the sections where the relations between “theoretical art history” and technical art history were addressed. I fully sign up for the keywords “dialogue” and “collaboration” being between the two branches of the discipline. However, in my reading, the interviewees at some point still oppose a theoretical approach to the technical investigation of the artefacts. In my view they are inseparable since we always experience any material “thing” with our cognitive apparatus as well as with a certain “package of knowledge”. That configures our “seeing” of the “thing”, thus making it for us to appear as an “object” that is, in turn, already unavoidably (unconsciously or not) conceptualized. Moving on from this Heideggerian philosophical model we have to ask: from where does that knowledge come from, how truthful is it and how is it bound to our cognitive apparatus? These questions lead us to consider the time and place of knowledge, with respect to the interpreting person. What I am trying to argue here is that this sort of fluctuation between the thought and the object takes place at every moment when we as human beings are “meeting the world”; in fact by constantly expounding it for ourselves, this is our way of being in the world. Thus, and finally, the rising knowledge about materiality, visuality and production methods of art works without doubt enhances our ability to see them as physically conditioned objects. Technical art history attracts new knowledge to the complex of art history but also forces us to reconsider the methods and concepts of art history, in order to become more aware of the complexity and breadth of its objects and their being in the world, both at the time they were produced as well as at the moment we are facing them.