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International collaboration looks closely at Rembrandt

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SPEAKERS

Jocelyn Hillier and Dr Abbie Vandivere; Interviewed by Dr Suzanne van de Meerendonk

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TRANSCRIPT

Jocelyn Hillier: I am Jocelyn Hillier. I'm a second-year student at the Queen's Art Conservation Program specializing in paintings.

Dr Abbie Vandivere: I'm Abbie Vandivere. I'm a paintings conservator from the Mauritshuis, in The Hague, in the Netherlands, and I'm here to consult and help with this great Rembrandt project that we're working on together. Obviously, paintings by the artist Rembrandt van Rijn are very popular and well known, but some paintings are less researched than others. And at the Mauritshuis, we started a project looking into paintings that have an unclear attribution, where we're not exactly sure if it's by the master or not. And we wanted to have a great comparison to a painting that's known to be by Rembrandt, and that is the painting from the Agnes.

Jocelyn Hillier: And so, we've been doing technical investigations on this panel painting from Agnes to understand the materials and techniques that Rembrandt used to create it. This has been a very exciting project for me to work on because I did my undergraduate degree here at Queen's and I've been admiring this painting from afar at the Agnes. So, getting this opportunity to apply all of the knowledge I've gained in art history, and being able to come up with these results and fully getting to test my knowledge and my skills, has been an amazing opportunity and I couldn't imagine a project that I would be more excited to work on than this for my thesis.

Dr Abbie Vandivere: For me to come here to Queen's, to Agnes, to have the opportunity to look at this painting together with you and your colleagues has been a great opportunity to sort of make sure that what we are researching at the Mauritshuis collaborates with an authentic Rembrandt, because the questions that we have about our artworks are about attribution and whether or not it's similar. We see similar technical aspects and some of these aspects are very similar and some of them diverge a bit. So, seeing those minute differences with our own eyes and with these different technologies has really been eye opening.

Jocelyn Hillier: So, we've been examining the Rembrandt panel using multiple imaging techniques, looking at it under a microscope very closely, looking at it under x-ray and various other imaging techniques like x-ray fluorescence to produce elemental maps that can help to identify the pigments and various other materials that Rembrandt used.

Dr Abbie Vandivere: It's so important to carry out collaborative research on all sorts of paintings because it really builds our body of knowledge. And different institutions have different paintings, different instrumentation and different background knowledge that we can all bring together and this is what is fantastic about having the opportunity to come see this with my own eyes. There's only so much that you can exchange using digital means or through publications so, really having the opportunity to see the artworks ourselves, compare knowledge, exchange knowledge really sort of brings this to a new level. And the facilities here and the equipment that you have to examine these artworks are state of the art and really coming up with great results already.

Jocelyn Hillier: So, one of the instruments, the Hirox microscope, allows us to see the painting in both 2D optical microscopy but then also start to map it with 3D imaging, where we can really look at the texture of the paint and it really starts— you start to develop sort of a very close relationship with the painting. Once you start examining it so up close, you get to know the cracks and the pigments and it really aids in gathering information about how the things are applied.

Dr Abbie Vandivere: I think also people who appreciate art know that they are three dimensional objects. But sometimes we sort of get lost in seeing paintings as two-dimensional things that we see, for instance, in a book or in a print or on a screen and really looking under the microscope gives us that three-dimensional aspect and seeing the individual pigment particles at 100, 200, even a thousand times magnification really gives you a different view of the master at work.

Jocelyn Hillier: Yes, there's many interesting details that are in this panel, like the deliberate scratches that are used to emphasize the eyebrows and the shape of the beard. It's been very interesting to investigate the layer structure of the painting and how he built up, from a very initial underpainting, to this final polished composition. It's been really interesting to investigate this from a standpoint of a young artist where he's making a lot of changes and is experimenting in his technique.

Dr Abbie Vandivere: Macro X-ray fluorescence scanning is a technology that detects the chemical elements in the pigments that Rembrandt used. So, paint is made up of dry powders, these pigments, and the pigments themselves have different elements like lead in lead white or mercury in vermilion. And this machine scans the surface very, very slowly and detects all of these chemical elements. And not only the elements in the paint at the surface, sometimes it tells us about layers that are beneath the surface. And this technology has been revolutionary in technical examination because it doesn't even need to touch the paint surface. We can find out about the layers at and beneath the surface without ever needing to take any samples or to touch the painting at all.

Jocelyn Hillier: Yes, it's been incredibly helpful with understanding the preliminary process that Rembrandt used and changes to the composition and the different locations and the uses that pigments were used. Scanning X-ray fluorescence has also revealed that there is a preliminary composition that has since been painted over that Rembrandt had abandoned for some reason, showing that he recycled the panel and continued to evolve in his painting practice, even on one individual painting.

Dr Abbie Vandivere: I think that's, you know, we have preliminary results about that but I think that's so exciting to think what we see on the surface is different than how he started off. That maybe there is a portrait underneath of the same person in a different pose or maybe a totally different person and this technology—without macro XRF scanning would never have known this by looking at the surface.

Jocelyn Hillier: We wouldn't be able to tell whatsoever.

Dr Abbie Vandivere: Yeah.

Jocelyn Hillier: It was extremely exciting to watch up the scan comes line by line and to start to see that come to life of this invisible composition, that you can't see from the surface finally start to pop up, was like a very exciting moment.

Dr Abbie Vandivere: And definitely more research needs to be done on this but even just the results we have already really—

Jocelyn Hillier: Are really fun. [laughter]

Dr Abbie Vandivere: Yeah.