

Using X-ray Fluorescence Spectroscopy to verify the authenticity of a portrait attributed to Rembrandt.

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Abstract

The small painting of an old man attributed to Rembrandt van Rijn (1606-1669) was donated to the University of Pretoria by Jacob Abraham van Tilburg (1888-1980). In a 1899 catalogue, Cornelis Hofstede de Groot, the greatest Rembrandt art historian of the time labelled the work, in a note that can be found in an auction catalogue, as “surely original”, as at this stage an invoice signed by Rembrandt was still attached to the work. Historically speaking the work cannot be traced further back than 1885.

As part of the University of Pretoria Museums’ VanTilburg collection, a study into the provenance and re-attribution of the artwork was undertaken, and this paper outlines the contributing data provided by handheld X-ray Fluorescence Spectroscopy as well as an XRF scanner (Bruker M4).

From the provenance studies, the work could not be traced further back than 1885. Examination of the back of the painting revealed a maker’s mark stamped into the wood HVU. Research revealed it to be the stamp of Hendrick van Uylenburgh, Rembrandt’s Art Dealer in the 1650s. Although an exciting and promising discovery, it appeared to have been stamped over and cancelled.

Dendrochronology though confirmed the wooden panel to be 1646 upwards, putting it in the right time frame to be a Rembrandt.

X-ray Radiography showed anomalous results – the paint layer was extremely thin and it was mostly the wooden substrate that was visible.

A handheld XRF spectrometer and a XRF scanner were subsequently used and these results were pretty definite in dating the portrait, and eliminating the possibility that it could have been a Rembrandt on grounds of the paint composition.