Technique

As with other elements in *Woman Holding a Balance*, Vermeer's technique reveals the utmost in skill and care. In the 1660s Vermeer painted pearls in two layers: first a thin, diffused greyish glaze, followed by a thick stroke on top to create a specular highlight. He may have experimented with a camera obscura to achieve these optical effects. Other works by Vermeer also may have been enhanced by this forerunner of the modern camera. Infrared reflectography reveals that Vermeer changed the position and increased the size of the balance.

Vermeer maintained extraordinary control over his paints, working effectively with both dense impastos and thin glazes. The effect of soft light is achieved through subtle modulations in paint handling. Under high magnification, we can analyse how Vermeer represented light on different surfaces.

His sensitivity to colour was equally remarkable. Vermeer used the best available pigments, such as natural ultramarine and lead-tin yellow, and fully understood the optical characteristics of colour. For example, in the woman's costume he applied a thin blue layer of paint over a reddish-brown layer, infusing the cool blue tones with inner warmth.

Mann, Donna. *National Gallery of Art.* Department of Education Publications. Washington D.C. 2000 [online]. Available from: http://www.nga.gov/feature/vermeer/

Light and Color

Reflectography: High resolution infrared reflectography

Infrared (IR) reflectography is used to visualise the surface of the **ground layer** of **ancient paintings**, **hidden by the paint layers.** The technique dates back to the early '30s, and was started as IR photography. In the late '60s a turning point was the introduction of **vidicon-tube TV cameras**. Reflectography makes use of radiation in the near infrared region of the spectrum, that is the range of wavelengths from about 1 up to 2 microns. High-resolution IR reflectography was started in the late '80s by our research group, with the realisation of **a scanning device** capable of recording **high-quality IR images**.

La riflettografia infrarossa (IR) è una tecnica utilizzata per visualizzare, nei **dipinti antichi,** la superficie **della preparazione sottostante agli strati di pittura**. La tecnica risale agli anni '30, ed iniziò come fotografia IR; una svolta si ebbe negli anni '60 con l'inizio dell'uso di **telecamere a tubo vidicon**. La riflettografia si serve infatti della radiazione nel vicino infrarosso, nell'intervallo di lunghezze d'onda comprese tra 1 e 2 micron. La riflettografia ad alta risoluzione è stata introdotta alla fine degli anni '80 dal nostro gruppo di ricerca, con la realizzazione di un **dispositivo a scansione** capace di produrre **immagini IR di elevata qualità**.