

Carrie Henrichs, Mlitt Technical Art History, University of Glasgow, 2012-2013

Early photographic processes: Examination of the salt prints of Velázquez's *Surrender of Breda* made by Hill and Adamson.

Placement Supervisor: James Berry, National Gallery of Scotland, Edinburgh.

This unique project involves collecting information from observational analysis of 90 copies of salt prints of the *Surrender of Breda* in the collection of the Scottish National Portrait Gallery in Edinburgh. It is clear that each print varies in size, condition, depth of colour and tone. These variations relate to differences in the photographic processes used as well as environmental conditions and history of the prints. The quantity of prints available together allows for a more detailed comparison to be made; accurately recording this information for each individual print is an essential part to the first phase of this project.



Four prints showing differences in size, colour and condition

Early Photographic Processes

Photography in the 19th and 20th c. was a new way of teaching art history. The pioneering role of Sir William Stirling Maxwell and his *Annals of the Artist's of Spain* (1848) presented the first photographically illustrated book making art more accessible through photographic reproduction.

Sun Pictures

During the 1830's, the Frenchman, Louis Jacques Mandé Daguerre and the Englishman, William Henry Fox Talbot were experimenting with a negative-positive process called calotype, or talbotype (aka sun

pictures), making multiple photographic images possible for

the first time. Experimentation led to the first successful portrait photograph in Scotland by Dr John Adamson (1810-1870), who then passed the skill to his brother, Robert Adamson.

A landscape painter, David Octavius Hill (1802-1870) and photographer Robert Adamson (1821-1848) began their working partnership in 1843; by mid 1846 over 3,000 images were photographed by them.

Examination of the *Surrender of Breda*

- Accurately measuring the physical dimensions was the first set of data recorded. Measurement of the image size was completed measuring the distance between 3 distinct points, from this it was determined that there are at least three negative sizes.
- Photography taken of each print individually with colour and grey scales using camera stabilizer.
- No adhesive was present on reverse which confirms that the prints were never mounted or adhered in an album.
- 15 watermarks identified and photographed, all J. Whatman Turkey Mill Paper. The texture is similar to that of watercolour which might give a more painterly effect rather than a polished surface.



Detail of Watermark

Further Examination...

- Pencil markings on 38 of the prints were photographed using a high resolution microscope. The majority of the marks seem to be marked with an 'A'. The inscriptions were compared to the collection of negatives at the National Portrait Gallery but there were no obvious similarities distinguished.
- Evidence of smalt was detected in the majority of the prints under the microscope.
- The images were grouped by colour and three terms were chosen to describe them, "reddish brown", "deep brown", and "lavender grey." This leaves room for individual interpretation under standard lighting and is also affected by the paper as some appear more yellowed while others remain quite white.
- Fading patterns and location were compared and recorded per print, with this information data graphs were made making numerous comparisons. e.g. negative size and colour were looked at in combination with the amount of fading to try and determine a pattern.
- Sharpness was measured using two distinct points on all the prints and recorded under 3 categories, sharp, medium and fuzzy.



Photographing Prints

Conclusion

The Hill and Adamson Prints provide a unique collection of photographs of the same image. The fading on the loose prints is far less than those adhered to albums. The first phase of the project has been to gain a visual understanding of early photographic processes by examining and recording each print alongside one another and comparing the individual components to help understand the photographic process of the past by the current condition of the print. Being able to look at this collection in such great detail will also help inform about the condition of the prints and their relation to those in the published *Annals*.

My experience working in an institution and being part of a research project has been an enriching opportunity. Being able to look at a part of the National Collection and examine it at such close range has been priceless. Special thanks to Dr. Hilary Macartney with the Stirling Maxwell Research Project, Jim Tate, National Museums of Scotland and James Berry, National Gallery of Scotland, for this great opportunity.

References

Dr. Hilary Macartney, "Experiments in photography as the tool of art history, no. 1: William Stirling's *Annals of the Artists of Spain* (1848)." *Journal of Art Historiography* Number 5, December 2011 and H. Macartney, "The Reproduction of Spanish Art: Hill and Adamson's Calotypes and Sir William Stirling Maxwell's *Annals of the Artists of Spain* (1848)." *Studies in Photography*, 2005.