

A Multispectral Analysis of Eileen Gray

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Introduction

National Galleries of Scotland have a vast collection of modern and contemporary collage works which are due to feature in an exhibition the following year. This project involves a visual survey of the works and collation of data onto the National Gallery Scotland collections management database. Each collage varies in size, materials, adhesive and condition which were identified using observation analysis from microscopy, ultraviolet (UV) light and transmitted light. An example of this analysis can be seen from my work on Eileen Gray's *Untitled* (1940-42) collage including some of information you can find from this.



Eileen Gray. 1940-42. *Untitled*. Paper and card collage with ink and gouache on paper, 46.50 x 31.70cm. © NGS

Artist Background

Eileen Gray (1878-1976) was known primarily as a designer and architect but in her lifetime also made many drawings, collages and photographs. More intimate than her design work the collages are known for being free in her handling and she was even prepared to rip off an element already stuck to the paper for the overall effect. This particular collage *Untitled* is made using paper and card with ink and gouache.



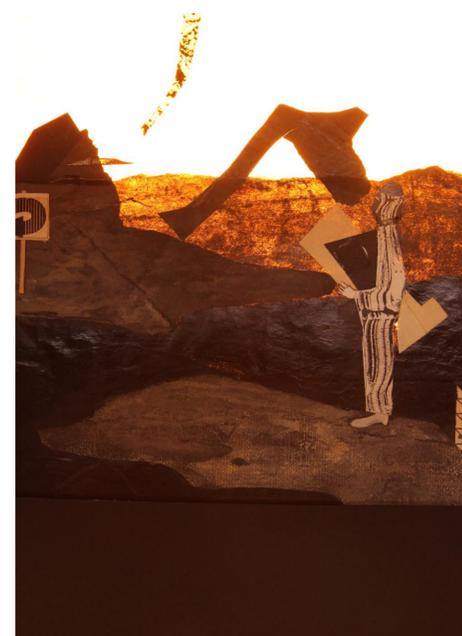
Detail of *Untitled* photographed under UV light.

Ultraviolet Light

Using UV light allowed me to see the areas in the collage that would fluoresce when subject to Ultraviolet radiation. Fluorescence varies in intensity and colour in different organic compounds and also provides information about support and media.

Results

From the use of UV it was clear that Gray used two different types of paper. One type fluoresced yellow and the other purple as seen on the image.



Detail of *Untitled* photographed using transmitted light.

Transmitted Light

For this collage the paper was transilluminated on a light box and photographed. This was to give an idea of the thickness and opacity of paper, variations in sheet thickness, paper structure and possible method of manufacture.

Results

From the use of transmitted light it can be confirmed that Gray was using different opacities of paper. It also allows us to see the overlapping of elements giving us an insight of how Gray assembled her work.

Microscopy

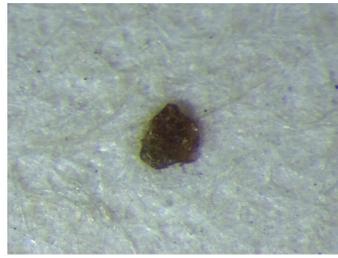
Using microscopy allowed areas of the object that cannot be seen with the naked eye to be visible and were photographed for interpretation. Each image can tell us more information about the collage that we could not have known otherwise.



Detail of *Untitled* at x1.28 magnification.

Analysis

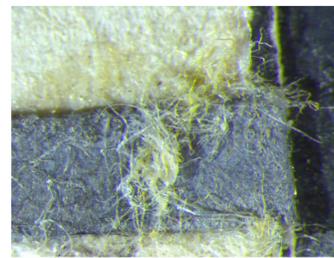
From this image it is clear that the collage element is lifting from the primary support. The application of gouache is also clearly visible.



Detail of *Untitled* at x 8.97 magnification.

Analysis

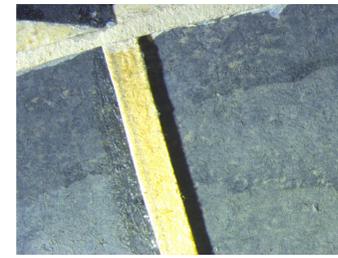
Due to metal in papermaking machines there may be traces of metal dispersed on the paper fibres. This is what can be seen on the image and is referred to as foxing.



Detail of *Untitled* at x 2.96 magnification.

Analysis

Fibres showing in this image have been trapped under the element. This shows the artist's intent was not to seek perfection but to use whatever materials were around her.



Detail of *Untitled* at x1.28 magnification.

Analysis

Evidence of adhesive can be easily seen under the microscope. In this case we can tell it is probably a water-based adhesive due to the lack of colour and applied with a brush due to the markings.

Further Analysis and Conclusion

On further investigation into the types of paper that Eileen Gray used in this collage it was confirmed that it was two different types of manufactured paper. Wove paper which was fluorescing in yellow under UV and more translucent under transmitted light and laid paper which had a purple colour under UV and did not appear as opaque in transmitted light. The observational analysis that I have conducted is only effective for the visual survey if all of the techniques are used. This gives an overall analysis which I will then generate into a Technical Report.