

Maxwell's Disappointment / Sutton's Accident

Susanne Klein¹ - Paul Elter² - Niamh Fahy¹ - Abigail Trujillo Vazquez¹

¹ Centre for Fine Print Research at the University of the West of England, Bristol BS16 1ZG, UK

² Elter Studios, Chelsea, QC. Canada J9B 1K8

It has almost become somewhat of an urban legend or internet myth that James Clerk Maxwell created the first colour image and had demonstrated this at the Royal Institution in London in May 1861. He did present something, but what? In 'The scientific papers of James Clerk Maxwell' the experiment and resulting colour projection was regarded as a failure and barely mentioned. Thomas Sutton, a well-established and respected photographer, was tasked with carrying out Maxwell's thought-experiment using the latest photographic processes. Sutton, himself author of various books on photography, does not mention the experiment in any of his publications. Move forward to the 1930's and enter the photo-chemist Douglas Arthur Spencer, who gained access to the original lanternslides and made copies of the three colour separations. He made the first and only physical print of the 1861 tartan ribbon and it is this colour print that we now see everywhere as Maxwell's first colour photograph. In 1961, the 100th anniversary, Ralph M Evans published a paper in Scientific American trying to solve the riddle of the famous tartan ribbon. The original glass plate photographs were made using the wet-collodion process which has a very narrow spectral sensitivity centred in the blue light wavelength. Sutton could not have recorded in the green and red part of the spectrum. Evans deduced from an experiment with modern materials that Sutton had possibly recorded the ultraviolet reflection present in the red of the tartan ribbon and "accidentally" presenting itself as the red slide and the resulting image can be considered a 'false colour' image. Now, 160 years since that first experiment, we are exploring and executing some of the material and technical truths about wet-plate collodion and what might have actually been recorded and why is it that both Maxwell and Sutton regarded the experiment such a failure, but the rest of the world did not.