

Colour without Colour

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What we perceive as colour is a small part of the electromagnetic spectrum seen only when it interacts with matter. In the 1670s Isaac Newton stated exactly that: colour is not a characteristic of the object but the result of the interaction between the object and white light, i.e. all cats are grey in the dark. It took another 80 years until Hermann von Helmholtz developed the theory of colour perception by Thomas Young from 1802 further and postulated that the three receptors or cones are sensitive in the red, green and violet/blue spectral range (RGB). The brain then combines the electric signals sent by them to a sensation we call colour. Colour is not only the interaction between the object and light, but also only exists in the brain of the observer. In 1861, based on the RGB model of colour perception, James Clerk Maxwell produced the first colour photographs by exposing black and white film through RGB filters, thus recording intensity patterns, but not colour itself, and recreating the colour sensation by projecting positive slides through the same filters onto a white screen.

Today we are not aware of the essence of colour anymore. Everything is in colour and we have lost all control over it. No standard user knows what filters are in front of the detector in a camera, what the software does to record the signal, whether the display we view the images on comes even close to reality. Going back to Maxwell's recording method and printing the result as lithography in cyan, magenta and yellow allows to explore 'true' colour and empowers the artist to intervene at all stages of the process.

Knowing that three black and white negatives are being created rather than a colour one changes the approach as well as the result. The recording process is slow. The filters have to be changed between each image. Control, direction and choices made in advance of taking the picture change the dynamic between the photographer and the sitter.



Figure 1: Boy, lithography

In Figure 1, in order to sit still, the sitter chose a quite introvert position thus exposing a hidden characteristic normally not seen. In an un-staged scenario, when objects or people are moving during the recording, time is traced by cyan, yellow or magenta ghosts in the final

print, i.e. the passage of time is depicted. Striving for a defined set of process colours at the printing stage rather than manipulating colours in film processing allows the photographer to consciously engage with the subject and visualise other senses, such as smell, noise and mood.



Figure 2: Crissy fields beach, San Francisco, lithography

Figure 2 captures the sunny atmosphere during a Sunday morning on a beach in San Francisco. The 'false' colours represent the smell, the noise and the photographer's mood at the time which can be experienced by an audience not present then and there.