

Paintings in Light

There are windows based on the use of coloured and painted glass in buildings right around the world, some dating back more than a millennium. They ‘come to life’ when light passes through. However, the way in which they do so is affected by more than just the nature of the incident sunlight. For instance, in glass is made by traditional methods there will be variations in thickness apart from anything else. Add to that the fact that older glasses, medieval for example, will probably include cullet (waste or recycled glass) of varying provenance, and differences in colour/shading from one part of the sheet to another will almost certainly be apparent. There is a great deal of fascinating archaeological science undertaken on such specimens, and the origins of particular glasses may now be revealed in some detail by studying the material at a microscopic or even at an atomic level.

One of the effects of a stained glass window on the light passing through it, beyond selecting out a particular colour, is associated with the phenomenon of light scattering. We have all seen the effects of light scattering: blue daytime skies giving way to red sunsets, the whiteness of clouds and of milk for example; all due to the way in which light is scattered by suspended particles (dust, water droplets, suspended fat droplets and so on). If through the effects of corrosion, or by the artist’s will, the surface regions of a piece of glass become porous, or perhaps picks up a ‘powdery’ layer through chemical reaction or the accretion of particulates, something similar happens. Viewing such a window when it is back-lit, gives the impression that the window ‘glows’ – the light coming through it is being scattered in all directions, irrespective of the colour of the glass.

(This snippet is based upon one of several blog posts associated with my main-programme sessions on glass art and science: <https://bobreflected.blogspot.com/2017/05/paintings-in-light.html>. The image, of the same section of surface-corroded window viewed from either side, is used courtesy of Canterbury Cathedral, and the title honours a book on the Cathedral’s windows by Martyn Barr.)

