

## Speculating on the spectrum: Light and colour

When I was writing my book about the sun (*Sunspots, Penned in the Margins* 2010) I studied solar physics, light and colour and found them to be fascinating and suggestive subjects for writing. Have fun with this.

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Colour is a fascinating phenomenon. Once thought to be pure and white, LIGHT is in fact comprised of many different wavelengths and energies, many perceived by the human eye as subtle shades of colour. Further discovery of invisible parts of the electromagnetic spectrum caused much theological and philosophical debate (why would God create light that we cannot see and/or feel?).

Different species perceive colours differently: some see colours that we can't, and access parts of the electromagnetic spectrum that we can only hear (static) or feel (infra-red).

Arguably, colours do not exist per se. We visually interpret wavelengths of light reflected from objects into our eye. The light reflected back to us depends on the energies absorbed by an object and bounced into our eyes. A sheet of paper looks yellow because it absorbs the wavelengths that would cause it to appear as another colour (reds, blues) and reflects back those wavelengths we perceive as yellow. The Sun is actually white but looks yellow (or red) to us because certain wavelengths are absorbed and scattered by Earth's atmosphere.

Colour and wavelength contain information: about temperature, and age (of stars), and chemical elements. Spectroscopy tells us what stars are made of even though they are billions of years away from us. The dark (absorption) lines in a star's spectroscopic profile indicate the presence of specific elements, because elements are known to absorb certain wavelengths of light and block them from the spectrum. This happens at the quantum level of electrons and is fascinating but difficult terrain.

In short, colour and light are fascinating objects of study and contemplation and metaphor. And colour can intensify a poem, whether a poem is addressing the subject of colour head-on, or using colour-based language to intensify the visual detail and experience of the poem.

### Exercises – pick one and write in any form you like (poem, prose, drama, monologue, screenplay, fragments, anything you like ...)

- Write about the visible spectrum: a mini-sequence – one poem per colour (red, orange, yellow, green, blue, indigo, violet)
- Write about a favourite colour
- Write about a world without colour
- Write about a world with only one colour
- What if all colour disappeared for one day of the year, every year. How would we celebrate or mourn that day?
- Write about the colours you can see right here, right now
- Explain colours to a non-sighted alien creature visiting Earth for the first time
- If you are colour blind, explore this: how it looks and feels; the pros and cons
- The rare blue rock lapis lazuli was thought to be a piece of the sky turned to stone and this blue was routinely used to paint The Madonna's clothes in Renaissance art: write from the point of view of a painter using it.
- Does the inside of a rock of lapis lazuli have a colour before it is broken open exposed to light, to the eye?

## Violet (from the collection 'Sunspots')

Violet violent as an 'ultra'  
or inviolate as a saint?

The reverbs from a viola  
playing purple passages.

A Parma Violet on your tongue,  
like the contents of your grandma's handbag,

reminding you that childhood  
is neither sweet nor sour

and never tastes quite right;  
the elusive *umami* of mommy and daddy.

A triolet seems apposite  
but th'imperial cloak

will not be hemmed by this pattern,  
will not colour inside the lines.

Better daub the darkness of caves,  
mumble morosely in mauve,

crack the shells of sea snails,  
extract some unseeable snaily gland

and set its juice in the Sun's rays,  
for UV maybe to make violet.

Who thinks of these things?  
Who knew you could eat a sea urchin?

Violet guards one border of the visible,  
scans your retina, takes your inky prints

and lets you pass.  
I could write a book about violet.