

*Paul Klee*

'Colour is the place where our brain and the universe meet.'

## The Great Eskimo Vocabulary Hoax

This was a scientific paper which debunked the myth that the Inuit (Eskimo) have a hundred or more words for snow – actually they have no more than the English do for rain. A similar misconception was propagated by William Gladstone, who thought Homer was colour blind<sup>1</sup> because of his meagre use of colour words. Some ethnologists extended his conclusion to include the entire Greek population of that time. They were both wrong.

Names for colours enter language slowly. The ancient Greeks had no word for **blue** and even in the Middle Ages there was still no English word for **orange**. Chaucer referred to it as 'bitwixe **yellow** and **reed**'.

**Orange** has always suffered an identity crisis. [SEE P92]. Today, although we can differentiate millions of shades, our vocabulary still only has about thirty colour words.

Colour words are acquired by cultures in a strict sequence according to anthropologists who analysed 98 widely differing languages.

All languages have **black** and **white**.

If there are three words, the third is **red**.

If there are four, then it is **green** or **yellow**.

If five then whichever didn't make four, **yellow** or **green**.

If six, it is **blue**.

If seven, it is **brown**.

If eight or more, then **purple**, **pink**, **orange**

and **grey** are added in any order.<sup>2</sup>

However, it's not quite this neat. An African desert tribe has no word for **green**, but six for **red**. Italian has three words for **blue**: **celeste**, **azzurro** and **blu**. Swahili doesn't have any, so coined **bulu** from English. Creek and Natchez Indians use the same name for **yellow** and **green**, as do the Highland Scots for **blue** and **green**. French has two words for **brown**: **brun** and **marron**, but there isn't one in Chinese, Japanese, Welsh, or (less surprisingly) Inuit. These, despite the hoax, do have at least seven words for **white**.

And a primitive tribe in the New Guinea Highlands still speak a **black** and **white** language and distinguish colours in terms of brightness.

**i believe  
in warm printing  
and i like vivid colours:  
in particular red and blue,  
sometimes yellow.  
i dislike violet and green  
except for virulent contrast.  
i rarely use brown  
except for tobacco,  
scrap iron  
or wrapping paper.**

WILLEM SANDBERG

On the film set of *Bonnie Prince Charlie*, producer Alexander Korda took aesthetic exception to Scotland. 'I hate it. All that purple stuff, vat's it called? Feather? Then all this green and orange and the blue sky. It makes me sick. It looks like a biscuit tin. And vat are those tings with spikes? Fizzles? He was obviously overwrought.

Associations with colour are emotive, irrational and deep-seated. There is an old advertising story about making up three packs of a detergent in different colours to test market reactions. One was done in yellow, one in blue, and one in yellow and blue. A panel of housewives were asked to try them out. They judged the powder in the yellow pack as corrosive, the blue one as too mild, the yellow and blue just right. Actually the packs all contained the same stuff.<sup>1</sup>

Colour colours our lives. Dr Max Luscher diagnosed personality disorders through colour associations, and his application of the principles to marketing is thought by some to be mildly sinister. Broadly speaking, his conclusions are that dark blue appeals to people motivated by security – a popular

house-colour among financial institutions. Blue-green is associated with constancy and is often used on packaging for intimate products like toiletries. Orange-red seems to be related to activity and is a common choice for those who market leisure and pleasure. As a corporate colour bright yellow is associated with modernity. Not surprisingly, combinations of yellow and red are the corporate colours of Kodak and Shell.

Not that Henry Ford seemed to give a toss – remarking you could have his cars in any colour you liked as long as it was black. He had his reasons – only black enamel dried quickly enough to be used on the conveyor belt. However, he also had fixations, believing that 'machine' blue and 'eggshell' white were beneficial for 'order and morale'. Five thousand men continuously painted in the vast Ford plant in Detroit. Every month they used eleven thousand gallons of both colours. They are still the company colours.<sup>2</sup>

When I was designing an identity for a classy hotel group in the Far East, it was suggested that each manager should have a say in the choice of colour for each hotel because of local cultural preferences. The scenario went like this: the hotel in Hong Kong didn't want blue as it symbolizes death and requested 'Chinese' red. To avoid debate on the precise shade I cut a corner off the red menu of the *China Garden* restaurant behind the hotel. A sample of the saffron orange material worn by Buddhist priests provided the specification for the hotel in Bangkok. The manager in Singapore was keen on the same maroon as his tie (but declined to provide a swatch). San Francisco wanted the same red as the Stars and Stripes. The daughter of the hotel owner in Malaysia suggested a delicate salmon pink.

Not my inclination, but as she was going to marry the chief executive I thought it ungracious to quibble.

A character in a George Eliot novel explains that colours deeply penetrate her like scent, and author Dorothy Parker went for reds. She painted her living room in nine shades of red: pink, vermillion, scarlet, crimson, maroon, raspberry, rose, russet and magenta.<sup>3</sup> Pianist Glenn Gould's favourite colour was battleship grey, while Matisse is said to have loved 'the delicate transparent pinks of baked shrimp shells'.

Green has always been considered restful. Pliny wrote that 'emerald delights the eye without fatiguing it'. Nero peered through an emerald while enjoying lions devouring Christians. In the Middle Ages engravers gazed into a green beryl to rest their eyes, and since the seventeenth century theatres have had a green room so actors could relax from the footlight glare. Green was Oscar Wilde's colour – decadent, provocative. He told his followers in the Aesthetic Movement to always wear green carnations supplied by his florist, Goodyears: 'They grow them there.' Then of course there was the Emerald City in *The Wizard of Oz* whose citizens saw everything in beautiful shades of green.



Psychologist Nicholas Humphries: 'As I look around the room I'm working in, man-made colour shouts back at me from every surface – books, cushions, a rug on the floor, a coffee-cup, a box of staples – bright blues, reds, yellows, greens. There is as much colour here as in any tropical forest. Yet while almost every colour in the forest would be meaningful, here in my study almost nothing is. Colour anarchy has taken over.'<sup>4</sup>

## colour prejudice

 In 1947 Bugsy Siegel was terminated by fellow Mafiosi. 'The Operation was losing money', Tom Wolfe recorded, 'at a rate that rather gloriously refuted all the recorded odds of gaming science.'

*Note. I've read that the carrot is to return to its roots and go purple. Generations have grown up believing that carrots are orange, but in Egyptian, and later in Roman times, carrots were purple or white. In the middle ages they were also black, red and green. They have only been orange since the 16th century when patriotic Dutch growers favoured the House of Orange. A propaganda vegetable.*

**THE FLAMINGO** In 1945 mobster Bugsy Siegel arrived in Las Vegas, at that time no more than a patch in the desert, with several million dollars to put up a hotel and casino. He called it **The Flamingo**. An iridescent name which, wrote Tom Wolfe,<sup>1</sup> burst upon the scene with 'all the new electrochemical pastels of the Florida littoral. Tangerine, broiling magenta, livid pink, incarnadine, fuchsia demure, Congo ruby, methyl green, viridian, aquamarine, phenosafranine, incandescent orange, scarlet-fever purple, cyanic blue, tessellated bronze, hospital-fruit-basket orange.' Colourful prose which captures the principle in the fixing of names to colours – that of association.

Describing a colour in terms of something else has a long history. Homer wrote of 'wine-dark' seas, Romans called a particular blue from overseas, ultramarine, and a dye produced by a whelk, purple (*Porphyra*). Take a herd of cows, feed them mango leaves, make a purée of the earth on which they've urinated day after day for months. Dry, refine, and you've got Indian yellow. Mummy (now unavailable) was a brown produced from grinding up Egyptian corpses [SEE P60]. Caput mortuum was a purplish-brown made of decomposed brains. Puce is named after the supposed hue of a flea's belly (Latin *pulex*), and the blue of jeans (*bleu de Gênes*) after a shade once associated with the city of Genoa. The dye magenta was invented in 1859 and named to commemorate the Battle of Magenta which occurred the same year. Crimson is derived from the Sanscrit word for the bug which produced the dye – a *krmi*. Like many colour names turquoise is a semi-precious stone and although there is a proposal to call it grue – a combo of green and blue – I doubt it will catch on.

Some old colour terms referred to material rather than colour. In the tenth century *purpura*, or purple, was the name of an expensive silk. In the eleventh century a *scarlet* was a fine woven cloth which was generally an undyed white, or coloured black, blue or green.

1. Tom Wolfe. *The Kandy-Kolored Tangerine-Flake Streamline Baby*. Farrar Straus (New York 1965)

A sign of refinement among the English middle class in the 1930s was to describe outfits in terms of fruit. 'Lemon', 'crushed raspberry' and 'burnt apricot' were particular favourites. The phrasing was important. A two-piece should not be 'lemon' but 'in lemon'. 'In a nice lemon' was even more tasteful. Calling anything a mineral, fungus or building material was unthinkable but fashion eventually came round to anthracite, mould and putty. In the 1950s Joyce Grenfell bought a length of tweed which, she wrote to a best friend, was 'a lovely mud colour'. She could have said taupe or grège. The launch of a new computer offers a choice of tangerine or blueberry and although such associations seem silly it is impossible to convey the sensation of a colour without relating it to something else.

To be more precise you have to resort to an agreed system and give the colour a number. There are several such systems. How would you fancy a tie in Pantone 537? Alvin Lustig, a distinguished American graphic designer who went blind some years before his premature death, had memorized the number references of the Pantone colour system so that he could still work, and specify the hues and shades in his mind's eye.

Paul Auster wrote a detective story<sup>2</sup> populated with colourful people. The private detective is Blue who learned the tricks of the trade from Brown. White is a client who hires Blue to watch Black who lives on Orange Street. To pass the time while trailing suspects, Blue recalls cases he's worked on in the past: the obsessions of Gold, the Gray case – who'd changed his name to Green – the Redman affair, and an encounter he once had with a hooker called Violet. The names Auster picked for his protagonists weren't arbitrary, they echo associations. For instance White is good, Black is bad, Gold is dodgy. Colours used as code names also occur in the movies, *The Taking of Pelham 123* and *Reservoir Dogs* come to mind.

**USELESS INFORMATION** Rose madder was made from the juice of a plant brought back from Palestine by Crusaders. This was so precious that the price was fixed by the French authorities and it was first known as *La garance* (guarantee). Massachusetts is a tribal word for 'the blue mountains'. Malaria used to be rife in East Anglia which is why the Canaries (Norwich City football team) wear yellow jerseys – a relic of the endemic jaundice which killed King James I, Oliver Cromwell and Sir Walter Raleigh. The precise hues of Phoenician purple and *perse* have long been forgotten as have: – Quercitron (or *flavin*) : a yellow dye from the bark of an oak. Celadon : a pale fusty green. *Fulvous* : a dull tawny yellow. *Luteous* : a deep orange. *Carthamin* : a red from the safflower. *Kermes* : a bright red made by tiny bugs. *Sinoper* : a red pigment. *Almagta* : a deep red ochre. *Rubescent* : a reddening. *Turnsole* : a violet/purple. *Smalt* : a deep blue. *Tenebrous* : dark, obscure, gloomy. *Lapis lazuli* : a bright blue. *Murrey* : a medieval word for the colour of mulberry. *Puniceus* : an orange colour derived from a wax used by painters in ancient Greece.

<sup>2</sup>. Paul Auster. *The New York Trilogy*. Penguin (Harmondsworth 1980)



### Colour spectrum :

The system of arranging colours in a circular spectrum running from yellow to green to blue to violet to red to orange to yellow again, demonstrates the principle of mixing two different colours to obtain a third.

For the colour letters opposite the orange was made by overprinting the magenta with the yellow, and the green by overprinting the yellow on the blue, and the purple by overprinting the blue on the magenta.

Medieval physicians used colour spectrums to diagnose disease by keying different colours to different afflictions. Comparing the colour of a urine sample to the chart, the physician would identify what the patient was suffering from.

All colors are products of light.  
Come?

### Colour Terminology :

Hue is the attribute which distinguishes one colour from another – it comes from the Old English for 'beauty'. Tone is the position a hue holds on the scale from light to dark. Tints and shades are variations of tones. Intensity refers to the purity of the colour.

Primary colours are those which can be mixed to produce all other colours. Primaries are not always the same.

Prismatic primary colours are produced by light and come in four hues: red, blue, green and yellow. Project them so they mix together and you get white.

Pigmented primary colours are used in paints and inks, and have three hues: red, blue and yellow. Mix them together and you get black. Printers generally use magenta, cyan, yellow and black inks to print colour pictures in books and magazines.

Psychologists employ specific hues and tones for diagnostic purposes : orange, red, dark blue, blue-green and bright yellow.<sup>1</sup>

### The Bezold Effect :

Butt two colours up next to each other and they can create a third optical hue, or at least create a third in our minds as an after-image. Pointillist artists such as Seurat, who painted with dots, put yellow and blue dots next to each other which optically mix into a green when seen at a distance.<sup>2</sup>

The discovery of perceptual colour mixing by Wilhelm von Bezold led to the 4-colour printing process. Colour printing uses tiny dots of primary colours to mix colours, shades and tints. The picture reproduced on a postcard thus looks just like the scene – or, for that matter, the artwork of the pictures in this book.

### The McCollough Effect :

Look hard at a pattern of vertical red and black stripes. Then quickly shift to look at a pattern of vertical and horizontal black and white stripes. The horizontal lines still look black and white, but the vertical ones appear green – Irish magic.

#### Weber-Fechner Law :

One might assume that to make an equal scale of tones from white to black, one adds an equal amount of black for each step. Wrong. An equal progression requires the amount of black to be doubled at each step. For example, using transparent grey film the first step has one layer, the second needs two, the third needs four, the fourth eight, and so on. It's an interesting concept.

Take a sheet of paper, fold it in half. Fold it again (the double fold has now become four) and continue until it's folded fifty times. You probably don't have enough time so estimate the thickness. Most guess anything from inches to feet, or centimetres to metres; in fact the folded paper would just about fit between the earth and the sun. It would be about 100 million miles thick. You don't believe me? Try it.<sup>1</sup>

Vizier Sissa Ben Dahir claimed a humble reward from King Shirham for inventing chess. All he asked for was a grain of wheat to be placed on the first square of a chess board, two grains of wheat on the second, four on the third, and so on. The King graciously agreed, delighted at such a bargain, until he realized he had unwittingly committed all the wheat in his kingdom. This is one of many similar stories.

#### The Greek Jinx Wheel :

This disk has a pattern of different coloured stripes and patches on each side. It is made to whizz around by pulling a loop of string passed through two holes near the centre. Legend tells how the Greeks used these devices to enchant their bored lover – quite how, I can't think – anyway by spinning the disk the colours optically fuse into just one.

#### The Benham Top :

This is a disk with a pattern of black lines on a white background. When spun clockwise (five to ten revolutions per second) the black lines turn blue, green and red, from the centre outwards. Spun anti-clockwise the colour order is reversed. It's not magic. It's flicker. Brain cells can't absorb quickly enough and so give out the wrong reading.

#### Colour instrumentation :

When colours are butted up they change hue. Optically green looks yellower and warmer next to yellow, bluer and colder next to blue.

M.E. Chevreul, in 1839 or thereabouts, received complaints that the colours in his tapestries of classical paintings were inaccurate. He realized that although the colours of the threads were correct, they optically changed viewed from distance.

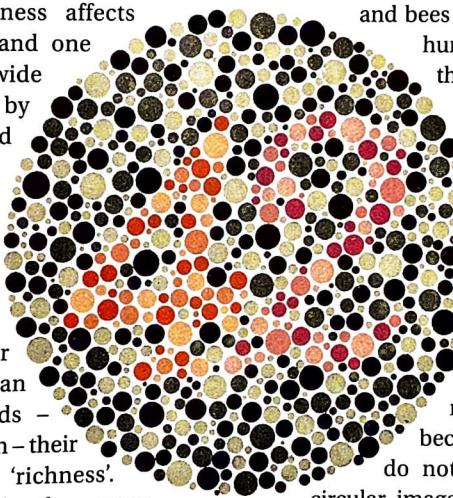
By simplifying the palette of coloured threads from 30,000 to 1,420 – a financial benefit of 95.3 per cent – he converted the discrepancy between physical fact and optical reality to commercial advantage.

The profit and loss diagram for an annual report, opposite, was based on this principle. The two vertical turquoise bars are exactly the same colour, as can be seen by the bottom bar, and only appear different because of the colour of the backgrounds.

**Horses can't see colours but bees and snakes can, and some people can see colours which others can't.** I have a friend who can't tell the difference between brown and green. He is a devotee of *Trivial Pursuit*, a general knowledge board game. You throw a die, move a counter, and end up on a colour. Your fellow player then takes a card and asks you the question keyed to that colour. The answer is keyed to the same colour. When we play I'm never sure whether he actually asks me the right question, or even gives me the right answer.

Inherited colour blindness affects about one man in 12 and one woman in 200. A wide disparity explained by Horner's law: colour-blind fathers have colour-normal daughters who are the mothers of colour-blind sons. The most common defect is red-green blindness. Actually a misnomer since although most can distinguish between reds – crimson, scarlet, vermillion – their problem lies in colour 'richness'.

They identify red with the same enthusiasm most of us greet *khaki*. They also have difficulty with green. Colour defects seem related to habitat or environment. In remote regions, the Arctic and equatorial forests, defective colour vision only affects one in fifty. This disability increases the denser the population and more urban the area. So much for that ikon of colour communication, the London Underground map.



Never mind, we all need something to work against. Paradoxically, colour disability hinders writers more than artists. The painter can use whatever colour he likes. But the author has to be able to describe sunsets, flowers, clothes, or whatever, with a degree of accuracy. Anyway the fact is colours are a product of the mind, not of reality. Who knows whether my red is your red? Even if two colour experts were asked to dress up a Father Christmas, and one asked to pick the coat and the other the trousers you can be sure the top wouldn't exactly match the bottom. Birds

and bees can see colours unknown to humans: colours generated by the ultraviolet wavelengths. A raven, seen by another bird, instead of appearing plain and dark, has a dazzling plumage of blue, violet and purple. And swans, which to us appear kind of white, are seen as a shimmering spectrum.

Not only will we never see these colours, but we'll never reproduce them because for the human eye they do not exist. This dotted colour

circular image is reproduced from a test card used for colour-blind tests. Those with normal colour vision see the number 42. Those with red deficiency only see 2 and those with green deficiency only see 4. At least they do if the colour in this book is accurate. Disadvantage can also be advantage. In World War Two, those with severe red-green colour-blindness were pressed into service as bombardiers, because of their ability to 'see through' camouflage.<sup>1</sup>

PARSING