

Opposite ends of the spectrum

Tracey Moberly is an artist, activist, author, lecturer and adventurer. During a prolific career spanning over 20 years she has exhibited at Tate , co-founded the Foundry arts venue in Shoreditch with Bill Drummond of the KLF, engaged in activist campaigns with comedian Mark Thomas and published Text Me Up! containing every text message she'd received since 1999. Here she tells us about the rare sight condition which has literally coloured her view of the world and her work.

TEXT
Tracey Moberly

IMAGES
All courtesy Tracey Moberly

Her Edit

Colour is my first language. My colour vision lies somewhere on the tetrachromatic scale. A tetrachromat possesses four types of colour-sensitive cone cells in their retina instead of the usual three. While I lack full-blown tetrachromatic vision, I can see a wider colour gamut than the normal human eye.

In a tetrachromat the sensory colour area is four dimensional - their visible spectrum is composed of four primary colours. Most mammals had this condition in the past, but a genetic condition caused a majority of species to lose one or two of their four cones. Tetrachromacy is still prevalent in birds, amphibians, fish, reptiles and insects.

I was first aware that I had developed a strong language of colour definition when I was very young. My mother was always saying, 'If she has her father's artistic ability and my sense of colour then I'm sure she will follow a career in the arts or fashion world.' I had totally made up my mind up that I would do this by the age of seven - if not before, maybe due to my mother's belief and encouragement as a parent or maybe because what she was saying made sense and the way colour and form used to make me feel (and still does).

My mother's complete certainty over hues and shades of colour was always correct. I first realised this with her decisiveness on the mauve vs lilac debate: I knew I saw more colours within a spectrum than she did when discussing colour with other people especially across the range of blue and red hues. I instinctively knew that I saw colour the same way as my mother did.

'I had totally made up my mind up that I would do this (follow a career in the arts) by the age of seven.'

My dad heralded a different story. My teetotal parents loved dancing: a social norm of the post war era which grew from when they first met at The Cafe Ballroom in the Welsh Valleys. Both parents enjoyed the clothes they wore as part of the dance culture paraphernalia.

My father wore colour combinations that I had never seen a man wearing until recent years. Whenever I questioned him on his choice he seemed to not know any language for colour apart from black and white. He would reply saying he'd never been taught them by his parents or in school: I grew up accepting this of him.

I only questioned this in later years when I had my own children. At some stage I become aware that my mother was advising him on his sartorial colour palette. The response he would receive from people when he wore those unusual combinations afforded him another way of using the language of colour. Perhaps dressing by choosing those garment combinations was most likely to provoke comment amongst his peers.

By the age of seven I had made up my mind that I would follow a career in the arts or fashion. I followed a career in art - switching my choice from





Fashion College on the day our degree course selection was to be handed in. At 21 I graduated with a first class honours degree in Fine Art, and have worked as an artist since then. I am now an Associate Lecturer at the University of the Arts London (UAL), most recently at London College of Fashion, but I also lecture across the country in Fine Arts and interactive Art.

Learning about tetrachromacy has led me to speculate as to whether this is what guided me into the career and life choices I have made. It's something that should be celebrated, but can't be as it comes at a cost.

I was first made aware of the condition through my youngest son. The apparent benefit of

tetrachromacy in the mother often bestows a contrasting disability of colourblindness on male offspring, a condition Isaac suffers from. He was very interested in learning more about his condition, and came across a medical research project appealing for colourblind subjects:

'We are particularly looking for males who think they may see colours differently, but have not been able to obtain a definitive diagnosis from an optician.'

The researchers also wanted access to their mothers, to check for tetrachromatic tendencies. We left early one morning for an appointment at the Institute of Neuroscience at Newcastle University. It was here that I learnt that a tetrachromatic mother may benefit by a shift in the genetic code for one

of the colour cones from the male X to the female Y chromosome. Women inherit the extra colour cone, at the expense of their male offspring who suffer a loss.

In the university I was shown a painting by a colourblind artist who had described it as a vibrant summer poppy field. All I could see was a canvas full of dull wet straw-coloured grass. The poppies were a hue or two darker, but still the dull autumnal decaying mustard colour of wet straw.

I was shocked that my son or indeed sons and my father would be seeing the world in such a different way to me. It sparked so many questions about my home life and the art world. Questions on Isaac's development from a child due to his colour

perspective were paramount - the things that I took for granted and normal were no longer relevant. I began to analyse details, such as his preference for those bitter types of sweets with their non-vibrant colours such as the reds and purples I would be instinctively be drawn to. Did he prefer those bitter tastes due to their colour? Were the colour of sprouts and olives more attractive to him as a very young child? Did that influence his drift to vegetarianism, gravitating to a love of these types of food? Was colour attracting him before taste?

It's something I would like to pursue further. Then consider Van Gogh's Sun Flowers: I always thought the colour pigments he used were due primarily to the effect of consuming too much absinthe which apparently makes the eyes see in dull muted hues. I am readdressing that painting now believing that he was most probably colourblind. It has left me wondering if a larger part of the colourblind community would prefer a print of Van Gogh's Sun Flowers hanging in their home to colour explosive synaesthete artists Paul Klee or Kandinsky.

Prior to my discovery of tetrachromacy, my earlier Masters thesis was on synaesthesia - the condition where different senses fuse so that one sensory pathway leads to involuntary experiences in a second sensory pathway. Where, for example, a colour or hue would represent a day of the week or a taste a musical note. I chose this because of my interest in colour, sight and the senses.

Toward the end of 2012 I was invited to lecture at Manchester Metropolitan University at the Faculty of Humanities and Social Sciences Research, where we devised a project which would be entered into

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the Manchester Day Parade. The course programme of public events for that year was based on the theme of 'community', celebrating different aspects of local organisation, culture, sport and music. Led by Dr. Annabel Kiernan, the programme wanted to have an interactive, student-lead project which would bring the university out to the communities which surrounded it.

The idea of entering something into the Manchester Day Parade started to take shape. The theme of the parade was 'The Sky's The Limit... A celebration of heroic achievements'. So with the Public Services degree course we set to work on celebrating local Manchester hero John Dalton, the renowned atomic theorist who also studied the condition of colour blindness, writing the first known scientific paper on the subject.

Colourblindness affects approximately 1 in 12 men and 1 in 200 women in the world. In the UK this means that there are around 2.7 million colour-blind people (about 4.5% of the entire population), most of whom are male. Sufferers generally have difficulty distinguishing between red, green, brown, orange, yellow and grey, which appear as varying shades of murky green.

For the parade we made two huge colourblindness test cards sewn together to construct a five by

three metre banner. John Dalton appeared with a url for the passing crowd to tweet what they could see, indicating whether or not they were colourblind - the site gave out more information on where to take the more accurate tests if their result suggested they needed to know more.

In February 2016 I'm setting off on a journey leaving behind the opposite ends of the spectrum to an area of all the colours combined - the saturated white snow and ice scape of the Polar Regions. I embark on an expedition led by Jim McNeil to reach the Northern Pole of Inaccessibility; otherwise known as the Arctic Pole. Defined as the furthest point from land on the Arctic Ocean and therefore its centre, the Northern Pole of Inaccessibility remains the last truly significant place yet to be reached by mankind.

It is over two hundred miles further than the Geographic North Pole and one of four recognised north poles. I have been selected for the position of Artist In Residence for what will be - if we attain it - a world first record. Once again colour is guiding me on this journey to the ultimate white canvas.

Read more about Tracey's work on her [website](#) or follow her on twitter @TraceyTM



'This is a small research graffiti I did looking at natural pigments that won't harm or leave foot print for one of my projects on the expedition- painting directly onto the snow. This is an ancient chinese weather warning symbol used by the peasant farmers.'