

A BLURRING OF THE SENSES

Jasmin Southgate looks into the world of synaesthesia, exploring what it's like to live with and what it can tell us about the human experience

Synaesthetes are people who experience the combining of senses. This spectacular phenomenon is an example of the wonders of neurological divergence, allowing us to come together and learn through differences. For those who have it, many wouldn't change a thing.

We all perceive the world around us in a way that is unique to us. Have you ever stopped to think about what colour Wednesday is? Does Charing Cross Station give you the taste of apple pie in your mouth?

For James Wannerton the latter is true. President of the UK Synaesthesia Association (UKSA), Wannerton has sound-to-taste synaesthesia, which is when someone experiences a unique flavour attached to a sound. He first noticed his synaesthesia at age four, while doing a writing exercise on his way to school. Wannerton had to write down the Tube stop names, but in doing so he felt compelled to write down the tastes he associated with each station too.

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Like many others who have synaesthesia, individuals often realise they have it through experiencing involuntary perceptions in day-to-day life. However, genes come into it too. Julia Simner, professor of neuropsychology at the University of Sussex and editor of *The Oxford Handbook of Synesthesia*, claims that around 40% of people who have synaesthesia also have at least one family member with it.

Synaesthesia is not a new phenomenon; in fact, it has been referenced in scientific literature as far back as 1812. The word itself derives from the Greek 'syn' for union and 'aesthesia' meaning sensation. From a scientific point of view, it's more common than you might think. Professor Michael Banissy, a >

➤ social neuroscientist and head of the School of Psychological Science at Bristol University, puts its prevalence at about 4%.

When it comes to the brain make-up of synaesthetes, there are differences when compared with the brain of someone without synaesthesia. “People with synaesthesia have more connections in some regions of the brain, and this seems to be part of their normal childhood development,” Simner explains. She goes on to note: “Most theories of synaesthesia talk about re-wiring or extra connections in the brain. White matter, which connects different regions together, in the brains of people with synaesthesia is organised differently and there is more grey matter in some regions of the brain relating to perception and attention.” Brain imaging studies, for example, have shown that sound-to-colour synaesthetes use parts of the brain that detect colour when they hear spoken words. Simner adds: “This suggests that parts of the brain that are normally used to process colour derived from vision are used instead to process colour derived from speech.”

So how many types of synaesthesia are there? Answering that might take a while. “Some people say there are 60 plus,” says Banissy. “Some people say there are 80 plus, from hearing music as colours to even feeling touch on the body when others are being touched.” It’s consistent too with certain individuals tested for decades still having the same neurological responses throughout that time.



LIVING WITH SYNAESTHESIA

For those with synaesthesia, it seems that the neurological condition can make people feel both isolated from the norm, but conversely feel a deeper connection with, and appreciation for, the world.

In terms of general benefits, Simner mentions that “there is growing evidence that synaesthesia may be linked to certain advantages, including enhanced memory, superior perception and being able to think more quickly.” More specifically, Banissy suggests that colour synaesthetes have a better perception of colour and, indeed, a better memory of it. And those with mirror-touch synaesthesia – where people

feel touch when others are being touched – may be able to better identify emotions and have a higher level of empathy.

But Banissy asks us to err on the side of caution here, reminding us that tests are not always

representative of all people, and that we may not have much data from those who really struggle with their synaesthesia. “If you have a negative experience, are you likely to seek out a researcher to take part in an experiment?” he asks.

He goes on to say that, for some people, synaesthesia gives them a sensory overload, disrupting their thought patterns. Mirror-touch synaesthesia, which some believe increases your levels of empathy, is a good example of this. While sharing the emotions of others could be seen as a benefit, it can also contribute to burnout for the individual, personal strife and feeling overwhelmed.

Providing people with knowledge and understanding, however, is imperative. Wannerton notes that once you have been diagnosed with synaesthesia, “things start to make sense”, with more meaning brought to your life as you understand yourself better. This, in itself, can improve personal experiences through deeper personal understanding.

For society at large, there are also benefits to be had from others’ synaesthesia. In a multi-sensory world, those with a blurring of the senses can offer new outlooks. With individuals in the health and social care sector often experiencing burnout, Banissy and his team have created training based on mirror-touch synaesthesia learnings to help these professionals manage their empathy more effectively.

Most importantly, though, “mirror-touch synaesthetes can help us understand empathy better and help us to train others to understand empathy better,” says Banissy. In this respect, the benefits of understanding it reach beyond those who have it.

ENHANCED CREATIVITY?

Popular culture has piqued our interest in the neurological condition. From musicians including Billie Eilish, Pharrell Williams and Stevie Wonder to painters Wassily Kandinsky and David Hockney, the



list of famous creatives with synaesthesia is growing. And some certainly tip their hat to their synaesthesia as at least a factor in their creative processes.

Devontè Hynes (from the band Blood Orange) did a TEDx Talk all about his synaesthesia and how the colours he sees influence the chords he chooses. And according to a blog by the Guggenheim Museum, ‘Synaesthesia, a Visual Symphony: Art at the Intersection of Sight and Sound’, Kandinsky’s paintings were influenced by the “sound of colours”. In Kandinsky’s 1911 book, *Concerning the Spiritual in Art*, he stated: “I saw all my [colours] in my mind; they stood before my eyes. Wild, almost crazy lines were sketched in front of me.”

While tales in popular culture show artists using their synaesthesia in their work, testing for creativity isn’t an easy task. However, Banissy points out that those with synaesthesia often use or utilise their condition when already doing creative things and a study conducted at the University of Sussex revealed that synaesthetes are more likely to engage in the creative arts (especially ones that link to their synaesthesia).

THE IMPORTANCE OF NEUROLOGICAL DIVERGENCE

Synaesthesia is just one example of neurological diversity, and its existence offers us something truly special: to appreciate how differently we all see the world. “These individuals have a very subtle difference in how their brains develop. Because of that, their perception of the world is uniquely different to the person next to them. And I don’t



ABOVE: YELLOW-RED-BLUE (1925),
WASSILY KANDINSKY

LEFT: KANDINSKY, PHOTOGRAPHED
IN 1944, HAD SYNAESTHESIA

think we often stop to think about that,” says Banissy. Having lived with synaesthesia his whole life, Wannerton shares this belief. He believes his synaesthesia has enabled him to better understand human nature. In his words, it “makes you more aware of things”. His work with the UKSA aims to make people more aware of how we are all different and, as a result, become more accepting and tolerant of differences.

Synaesthesia is even paving the way for an improved scientific understanding of empathy. Banissy’s work at the University of Bristol, focusing on mirror-touch synaesthesia, aims to learn more about how empathy works and how we can regulate our own empathy as a society at large.

So while synaesthesia may be a blurring of the senses, it has the potential to bring us greater clarity, making us more understanding of the subtle differences in how we all engage with the world. ●