GCM 110

Inside

Accessbile Graphic Design
In Response to Colour
Vision Defeciency (CVD)

Thomas-Angelo Corpuz
501024164

Submitted to:
Martin Habeskost
1154 words

11.23.2020

VOL NO. 3

Accessible Graphic Deisgn

In Response to Colour Vision Defeciency

Thomas-Angelo Corpuz
November 23, 2020

Ever since light first touched the face of the earth, the world that we live in has been one to conceive an abundance of colourful beauty: the purple and blue hues of the sky during a summer sunset, dashes of pinks and reds scattered over a bouquet of flowers, oranges and greens worn by the animals that share our planet etc. In the world of graphic design, colour becomes renowned as an integral component to any project, however, it is critical to remember that there are many people in the world who do not perceive colour the same as everyone else, which is why the concept of accessible/inclusive design is introduced. The extent of graphic design's effectiveness is truly determined by if the audience can interpret the design as intended, therefore in terms of colour, we have to make certain accommodations out of respect to the colour-blind community to ensure that our message is delivered to them accordingly. Understanding the severity of the struggles that color-blind people face in everyday life, accepting the responsibility as a designer to design with accessibility in mind and implementing special techniques in your creations to assist the colour-blind are significant steps towards designing a world that is visually inclusive.

Colour-blindness, also known as colour vision deficiency (CVD), is the accessibility issue that relates to an individual's inability to distinguish red, green, or blue light because of a mutation in their X-chromosome (Collinge, 2017). Robyn Collinge states that colour-blindness "affects around 1 in 12 men and 1 in 200 women worldwide. This means that for every 100 users that visit your website or app, up to 8 people could actually experience the content much differently than you'd expect" (Collinge, 2017). People with CVD are born with the condition and as a result, are forced to make adaptations to face the challenges that come with being colour-blind.

A general inconvenience that the colour-blind face is having difficulty interpreting traffic lights. Logan H. Lauren, a colour-blind artist, took the opportunity to be interviewed by high-school students about their CVD. When asked about driving, he revealed that it can become a problem distinguishing the red and yellow colours, forcing him to rely on the brightness of the circles to determine which colour is being displayed (Lauren, 2014). In relation to graphic design where colour is a critical component to the field, colour coordination becomes troublesome as graphics that utilize colour to differentiate elements become confusing to decipher (maps, subway lines, graphs, and instruction manuals). To exemplify, in 2017 GCSE and A level exams in the UK contained sections that were inaccessible to students with CVD (Living with Colour Vision Deficiency, n.d.) It is often misunderstood how severely CVD affects people's lives. Luke Rasat, a graduate from Diponegoro University in Indonesia, implores that in his country people with CVD are systematically divided; it is essentially impossible to obtain a job in the fields of medicine, engineering or architecture as they use the Ishihara test to funnel out applicants who are colour blind (Rasat, 2017). This reveals that the world, designers included, have yet to formulate enough attention to encourage the accommodation of the colour-blind and that this universal problem is being silenced more than it is being assessed.

As designers it may seem that we have complete creative control over what we can create which would ultimately aid in nullifying the silence that has been placed unto the CVD community, however at some point in our careers we often learn that this is not the case. A lot of our creations are regulated by the needs of clients and companies equating to the majority of our work conforming to the guidelines laid out in proofs and contracts. In 2015, a research study was conducted to analyze this primitive dynamic between client and designer in relation to accessibility. The survey analyzes, "whether graphic designers and their clients are aware of the importance of visual accessibility in graphic design, and whether previously identified misconceptions about inclusive design generalise to a wider sample" (Cornish et al., 2015). The results revealed, that there is a lack of verbal communication between designers and clients in regards to visual accessibility, for instance, "if the client does not include it in the design brief then they do not allow for the time or money to be spent on its consideration, limiting the attention that the designer can give to it and resulting in inaccessible designs. (Cornish et al., 2015). Furthermore, the study discussed how the client may also assume that the designer will automatically take accessibility into account without it being specified in the brief. So then why don't they? The survey discovers that 18% of graphic designers were not aware of any of the format tools and methods listed that help with creating inclusive designs and that 25% would prefer not to use them at all due to time and cost constraints (Cornish et al., 2015). As a result, graphic designers should always design with accessibility in mind simply because we possess the tools and the skill to make those inclusive changes. Furthermore, the ice between the designer and the client should be broken by thoroughly discussing through accessibility for the CVD community during the proofing stage and insisting on deviating from ideas that are inaccessible. Although it can be tedious to abandon our designs' original aesthetics, it is our responsibility as graphic designers to convey a message. If there is any chance, we give way to the opportunity for someone to be unable to interact with our designs, then we have failed to fulfill our duties.

There are many techniques and resources made available for designers to start to design with inclusion for people with CVD. In 2018, Alex Bigman generates several fundamental techniques to achieve inclusive designs within his blog for 99designs: utilizing a monochromatic colour scheme to avoid confusion caused by multiple colours, incorporating thicker lines as mildly colour blind individuals can perceive certain colours if there is a sufficient mass of it present, taking advantage of texture to differentiate data on graphs and building high contrast as people with CVD can still perceive changes in hue, saturation,v and brightness (Bigman, 2018). Bigman also states to defer from colour combinations such as: green & red, green & brown, blue & purple, and green & blue. ColorADD is also a helpful resource as it is a universal and non-discriminative language that helps people with CVD identify colours by utilizing symbols to address the primary and secondary hues (ColorADD, n.d.). This can become very useful for designers that frequently colour code their information using coloured bullets or subway maps that use colour coordination to diversify the different lines of transit. Finally, Vischeck is a versatile website that can take uploaded documents or photos and simulates them through colour-blind vision and even offers daltonization features (adapting colours for improving colour perception) to render images more accessible.

FIN.

Above is a version of the conventional colour wheel utilziing the ColorADD colour identification system

Remember to

DESIGN

WITH

PURPOSE

References

(n.d.). Retrieved from https://www.wallpaperflare.com/color-pantone-nuance-swatches-close-up-color-swatch-choice-wallpaper-ggvom

-- ColorADD --. (n.d.). Retrieved November 23, 2020, from http://www.coloradd.net/about.asp

Bigman, A. (2018, January 23). Why all designers need to understand color blindness. Retrieved November 23, 2020, from https://99designs.ca/blog/tips/designers-need-to-understand-color-blindness/

ColorADD Colour Identification System. (n.d.). Retrieved from https://www.google.com/search?q=colorADD&tbm=isch&hl=en-GB&chips=q:coloradd+code+coloradd,online_chips:coloradd+code,online_chips:color+identification+system&rlz=1C1CHBF_enCA909CA909&sa=X&ved=2ahUKEwiT6-auy5jtAhWCbqwKHdREByQQ4lYoAXoECAEQGQ&biw=1903&bih=880#imgrc=-du5Lt-AJO-6mM

Cornish, K., Goodman-Deane, J., Ruggeri, K., & Clarkson, P. (2015, August 07). Visual accessibility in graphic design: A client–designer communication failure. Retrieved November 23, 2020, from https://www.sciencedirect.com/science/article/pii/S0142694X1500054X?via=ihub

Lauren, L. H. (2015, August 23). Students interview me about my color-blindness. Retrieved November 23, 2020, from https://scienceslug.wordpress.com/2014/08/26/colorblind-interview/

Living with Colour Vision Deficiency. (n.d.). Retrieved November 23, 2020, from https://www.colourblindawareness.org/colour-blindness/living-with-colour-vision-deficiency/

Rasat, L. (2017, November 21). Is color blindness considered a disability? Retrieved November 18, 2020, from https://www.quora.com/Is-color-blindness-considered-a-disability