Homework 1

A Report Submitted in Partial Fulfillment of the Requirements for

SYDE 543

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Colour Blindness

The first example being examined is an application called "Trello". Trello is used in order to organize tasks across multiple people. This is done through the concepts of boards and heavily relies on colours to tag the tasks. Due to the heavy use of colour, the company has taken steps in order to imropve their usability for colour blind users. There is an option available that can be toggled to launch the app in a colour blind more. A side by side comparision is shown in Figure 1.
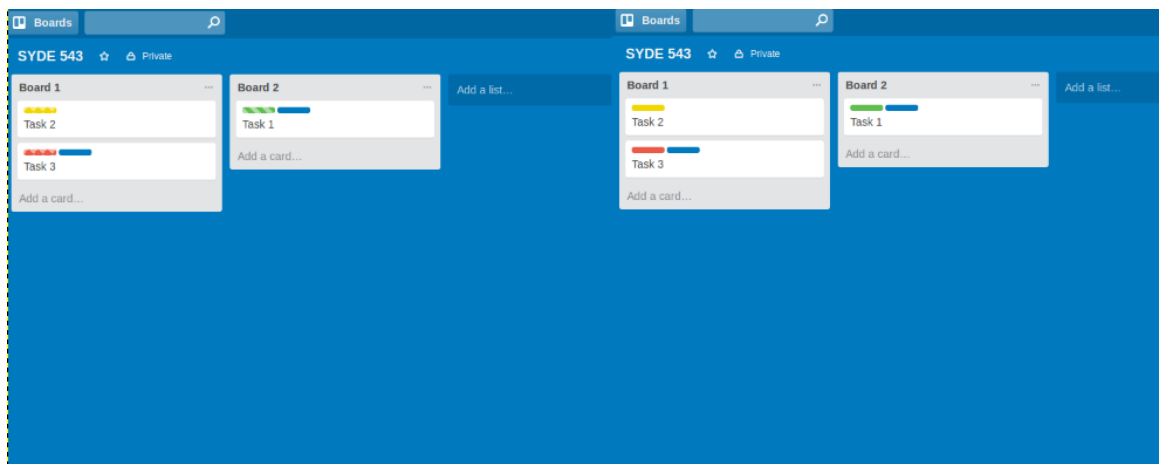

Figure 1: Colour Blind Mode (Left) vs Regular Mode (Right)

As it can be seen in Figure 1 there are subtle differences in how the colours are displayed. Figure 2 shows the difference in more detail.
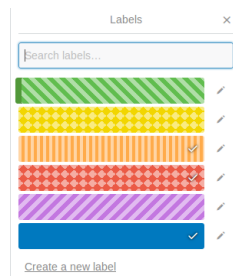

Figure 2: Colour Blind Mode Label Colours

As seen in the two figures during colour blind mode, Trello doesn't only rely on differentiation through colours. Instead Trello uses shapes and textures within the colour to differentiate between them. As an example, the only solid colour used is blue, where as for purple Trello has diagonal lines through it. Similarly unique patterns are used to make the colours/labels differentiable. Trello is an excellent example of using the knowledge (visual senses) from the cognitive ergonomics to make the product usable by a larger population. Due to the high reliance of the application on colours, without the colour blind more it would have been extreamly unusable for people suffering from colourblindness.

2

Sensory Adaption

This section will discuss the "Night Shift" feature on the iOS platform as an example for sensory adaption. Most displays act as an artifical source of lighting but also emit a significant amount of light in the spectrum of the blue wavelength. As per reaearch conducted blue wavelengths are useful during the day because they help boost attention, reaction time and mood. The same wavelegths of light at night are disruptive and can negatively affect sleep. In order to reduce or curb the negative effects of blue light, Apple added a new feature onto their iOS platform called "Night Shift". As the day continues, the phone screen changes the temperature of the light use and starts to use warmer tone after sundown. The aim behind this feature is to reduce the eye strain caused by a bright display especially at night (in darkness). The effect is shown in Figure **??**. This is a good example of the principle of adaption becuase it gives the user time to adjust to the change as its done gradualy throughout the day. I believe that this is good design and utilizes existing reaearch and cognitive ergonomics knowledge to provide the best user experience.
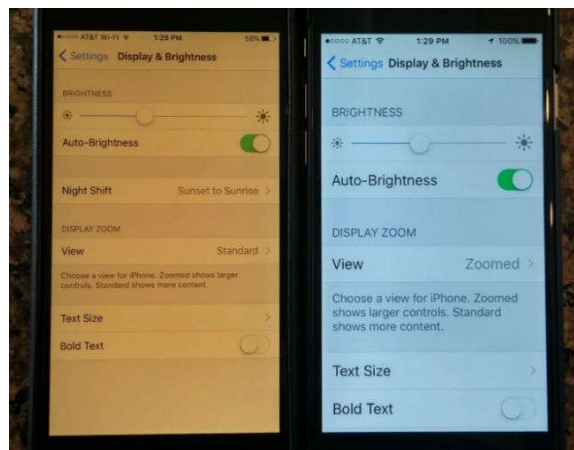

Figure 3: Night Shift On (Left) vs Off (Right)

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Touch & Haptic Senses