PSY-140 H3

Fall 2023

September 14, 2023

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Sensation and Perception Lab

Part 1.

Optical illusion are ways that our brains may be fooled into making interpreting false interpretations by specific manipulation of images, usually involve a variety of known effects with specific shapes and colors and obfuscating information.

Some types of illusions are “moving snakes” and other types were still images appear to be in motion. Other types can make two congruent items to appear not so by projecting them onto a variety of backgrounds.

In one type of optical illusion, two parallel lines can appear curved to human that have developed in some societies, when projected onto a background that indicates a perspective of movement. This is due to our brain presuming the lines indicate parallel lines in three dimensional space, rather than the same lines in two dimensional space.

The human eye perceives a large amount of information and sends it to the brain in constant stream of information delayed approximately 1/10 of a second. Some processing, such as perception of motion, is begun by specialized cells in the back of the eyes before the information is sent to the brain. Our brain, for competitive advantage over our environment, has developed a series of shortcuts in order to lend to rapid processing and reaction to important environmental data. When the presented information is manipulated by design to cause an interpretation other than reality, we call this an optical illusion.

A mirage, is a naturally occurring event were light is diffracted by the heat rising off surfaces in the distance. This will often hover in the distance, perhaps appear as an oasis that never comes.

Part 2.

The first group that I looked at were motion based, including the moving snake that I had mentioned before, I also viewed the “waterfall effect” that was quite disorientating.

I more enjoyed the three dimension images in which the discs would protrude from the background image with motion or even slight visual blur.

Lastly, the camouflaging examples were quite interesting, in that they showed how much motion helps a series of shapes stand out from the background.

Part 3.

A hallucination is a false perception where a delusion is a false belief.

Proximity refers to how close a series of objects are to each other, having more proximity, that is being closer together can amplify some effects.

Similarity refers to how similar two objects are in size, color, or other characteristics. Having more similarity will increase the likelihood of a group of objects being perceived as a single object.

Closure refers to how the brain attempts to complete the processing or interpretation when data may be limited or incomplete. Here the brain tries to ‘connect the dots’ and complete the natural lines that may be hidden in the image.

Part 4.

Prosopagnosia, or “Faceblindness”, is caused by damage to the neural system located in the right fusiform gyrus. Damage to this area from any sort of TBI, such as a stroke, or other physical causes can create this disorder in adults. Also, some people have been known to be born with it.

Bill has been affected most of his life, although for the first portion of his life he did not recognize his face blindness as he had no way to compare how he saw people to how other

people saw other people. In his story he mentions many personal struggles and some odd developments in his life that seemed to stem from his recognition of people based on what they wore for clothing and hairstyles.

Later, he sought out people that were similarly affected which helped him write the content we were now reading. By meeting on the Internet, a group was able to share what they knew about their common ailment and provide more information to the world.