Does gender affect optical illusions

Do different genders see optical illusions differently? The goal of this paper is to focus on how gender affects what people see in optical illusions. The differences of male and female brains affect how boys and girls act and perceive the world. If there's a difference in the vision of boys and girls then there will probably be a difference in how they see an optical illusion. Studies show that there are multiple differences in the male and female brain. There are different types of optical illusions, but this paper is mainly about ambiguous illusions because that is what will be used in the experiment.

Ambiguous illusions are pictures with multiple images in them. Evidence from the brain proves that our eyes never actually play tricks on us. It's our brains and how they perceive the information our eyes send to it. To answer the question, do boys and girls see optical illusions differently, the brain's relationship with the eyes, the differences between the male and female brain, the differences in the male and female visual system, and how optical illusions work must be factors to understand the subject completely. Everybody knows that boys and girls are very different. They look different, act different, like different things, perform differently in school and sports, and are just different people! Studies have shown multiple differences in how male and female brains function differently.

One of the most interesting differences is how the male brains process language, estimate time, judge speed, carry out mental math calculations, view the orientation of space, and visualize three dimensional objects better then women. Women are better at human relations, recognizing emotional overtones in others and language, emotional artistic expressiveness, esthetic appreciation, verbal language, and carrying out pre- planned tasks.

Scientists think that this might explain why there are more men mathematician, scientist, and race car drivers then female ones. Scientists at Jon Hopkins University have found that the inferior-parietal lobule (IPL) in the cortex is larger in men.

The left side IPL is bigger then the right side of the male brain, but for women the right side is larger. Past studies have shown that the left IPL is larger in Albert Einstein’s brain and the brain of other physicists and mathematicians. The left IPL is responsible for perception of time and speed, and the ability to rotate three dimensional objects, while the right side is responsible for memory involved in understanding and manipulating spatial relationships, and the perception of our affects and feelings. There are also two areas in the frontal-temporal lobes related to language that is larger in women. Women process language on both sides of the frontal brain, while men process it only on the left side. This might suggest why men are better at things like calculations and estimating time, and women are better with emotions and communicating.

There are many other differences in the male and female brains. There are more differences in men and women then boys and girls. Cultural learning creates an even larger difference! Other studies have shown that more feminine women have a larger straight gyrus (SG) then less feminine women, though the difference hasn’t been shown to change how they act or think. Multiple studies have shown that males have an advantage with the left eye that affect perception of photographed faces, scattered dots, and line orientations. But there are no differences with schematic faces, depth or

color. Women do use the left hemisphere of the brain more often to solve visual-spatial problems then men.

Though there are many differences in the male and female brain, there are little differences that may affect vision. Our eyes are set up a lot like a camera. The pupil is an opening where light enters the eye. The pupil has two curved, transparent structures; the cornea and the lens. They control the path taken by lights and create, on the back of the eye, an inverted image of what is being observed. This image falls on the retina, a sheet of neurons in the back of the eye.

The retina transforms the three dimensional world into a pattern of activity in a two dimensional sheet of neurons. While it does this, it throws away a lot of information and leaves the brain to fill in additional information in its own way. The retinal neurons are a sheet of pixels that detect the intensity of light. Three different types of cone cells in the retina detect red, green, and blue in bright light. Other colors are formed by different levels of activity on combinations of three cell types.

Rods detect light intensity in dim light, but do not contribute to color vision. Rods and cones communicate with other neurons. The retina also includes a layer of photoreceptors. Photoreceptors are neurons that measure light intensity and translate into a signal which thenervous systemcan understand. Each photoreceptor generates a signal related to the intensity of the light coming from a corresponding point of the observed object.

Signals from light falling on photoreceptors are first processed in a number of ways by a variety of interactions among the neurons within the retina.

From the signal received from our two eyes, the brain is able to construct a high resolution, three dimensional, colored representation of our world. Our brain is constantly processing and reprocessing all the visual information received, and stores representational maps of our environment. In simpler terms light enters the eyes, a message is sent to a number of the brain parts, the brain constructs pictures, and the brain tells the body how to respond to it. An optical illusion in an optical phenomenon that results in a false or deceptive visual impression.

Optical illusions use color, light, and patterns to trick our brains. The information gathered by our eyes is processed by our brains and creates a perception, an interpretation of what we see. There are many different types of optical illusions. Ambiguous illusions have more then one picture in them, impossible illusions have no end, contrast and color illusions, you can see in more then one way, distortion illusions appear to change size, typography illusion can be looked at in different ways, and in after affect illusions the image changes. Optical illusions have more to do with our brain than our eye.

Everything that enters our senses needs to be interpreted through our brains. Sometimes those interpretations are wrong. The visual cortex in our brain processes visual information through our visual system. The visual system is made up of the eyes and optic nerve linked to the brain. We see illusions because the brain doesn’t want us to see the image on your eye, but the meaning of the image. The brain takes the image on the retina and creates what it sees according to the information from the brains past experiences.

Another reason for optical illusions is that when light hits the retina, one tenth of a second goes by before the brain translates the signal into a visual perception of the world. Our eyes never really play tricks on us; it’s our brain doing the tricking! Our brains interpret what we see and our eyes just act as a camera. Though there are few differences with how boys and girls see things, there are multiple differences in their brains. These differences can explain why girls are dominant in different areas then boys are.

But the differences in boys and girls have more to do with cultural influences then biology. This science project will focus on if there is a difference in the male and female visual system, which would cause them to see optical illusions differently. The prediction is that if males and females of the same age are shown the same optical illusions they will see different images within the picture, because there brains function differently. This experiment is being conducted to discover if the male and female visual system work differently.

There is little evidence to say if it does or doesn’t.