Abstract

Optical illusions have been documented in history since the Greek period, but were not recognized as an art form until the nineteenth century. While also seen in architecture, theatre and film, optical illusions are most known for its art form. Even though it is considered an art form, there are many mathematical strategies that create the deceptive qualities of illusions. This project researches the techniques artists use to create optical illusions and displays my personal attempts to recreate some of the most well known optical illusions.

Introduction

Major cultural changes erupted throughout Western Civilization in the early eighteenth century. Elements of culture such as art, music, religion, scientific thought and literature had radical changes causing an influx of new ideas. During this time, the popularity of optical illusions began to expand and artists began to push the limits of normal art. Many optical illusions are seen in art form and contain numerous mathematical devices to create their unique, deceptive characteristics and mind boggling features.

To begin my project, I did extensive research on the techniques artists use to create illusionary deception in art.

Physiological Illusions:
- Use overstimulation of the brain and eyes to create illusion
- Techniques include afterimages, false motion, object placement, contrasting colors, opposing brightness and shape edges

Cognitive Illusions:
- Utilize paradoxes, tessellations, illogical scenery, image distortion, ambiguity, impossible images, and inversion to create deception

Using this information, I tried to recreate some of the most famous optical illusions. As a beginner artist, this task was challenging and took a lot of practice.

Method and Results

Discussion

At the end of this research project, I learned that there are many mathematical techniques used by artists to create deceptive images. The mathematical techniques artist used were limitless but popular methods include opposing parallel and perpendicular lines, tessellations, perspective, and altered proportions. It was an educational and entertaining experience trying to recreate optical illusions. I would enjoy continuing to research this topic and improving on my illusionary drawing skills.

References


