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Poker Cards for the Color Blind

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POKER CARDS FOR THE COLOR BLIND

by

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A thesis submitted in partial fulfillment of the requirements
for graduation with Honors in the Art, Studio

Ab Gratama
Thesis Mentor

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All requirements for graduation with Honors in the
Art, Studio have been completed.

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POKER CARDS FOR THE COLOR BLIND

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Color, an important element in human activities, exists in almost every aspect of our daily life. People obey traffic signals by looking at red, yellow, and green lights; a bathroom is indicated as vacant or engaged by looking for a green or red sign. However, color blind people have disability in identifying all these above. There are 3 types of color blindness and in 2007, there were 330,000,000 color blind people worldwide, almost 5% of the world's population. In the macroscopic view, color blind people have difficulties with transportation and communication. In the microscopic view, they also have a hard time appreciating artwork, figuring out the environment in a video game, connecting a flavor with the package color of a beverage and even in determining the four suits in poker cards. For my honor project, I am designing a series of poker cards where the suits can be easily distinguishable even when color blind.

The traditional design of poker card is four shapes identified by red and black. However, for color blind people who can only register shades between the two colors—black is darker, red is lighter. To begin my redesign, I first changed the four suits into black. Then, I noticed that the hardest part is figuring out the suits rather than the number on cards. Therefore, I decide to focus more on the geometric shapes of the suit, and keep the display of numbers as simple as possible. I kept looking for the easiest way to represent the four suits, especially when designing Heart and Spade, since they are the closest. I tried to use up-side and down-side triangles to distinguish these two, but the difference was not significant when laying them side by side. Also, the cards have the suit and number from two directions, so that the upside down triangles cannot help players to immediately figure out the suit. I tried different combinations of overlapping multiple shapes to create the most understandable shape, but they were all complicated. Finally, I decided to use solid shape for the two black suits, Spade and Club; hollow shape for the two red suits, Heart and Diamond.

I was surprised that the ratio of color blind people is so high. Many color blind people do not realize they are color blind, until the first time they came across the Ishihara Test, a pattern of random color dots that display numbers or images. My father, who was the catalyst for this project, is a deuteranomaly color blind person who does not distinguish between red and green. In the course of this project, I learned a lot about the challenges of being color blind and the unique design elements that have to be considered when tackling a project to aid those challenged by color blindness.