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Refraction and Portraiture

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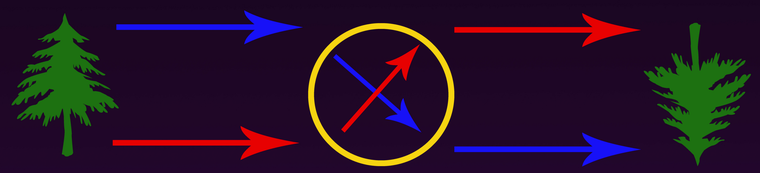
What is Refraction?

We commonly see objects refracted in liquid, such as a straw in a glass or a stick in a pond. Refraction involves light being passed through mediums of different densities. Refracting light through a glass sphere (refraction ball) works similarly to that of the human eye. Essentially, the image in the sphere looks upside down. Here is a simple illustration to help explain:



Purpose of this Research

Refraction ball photography is a technique commonly used for nature photography. When researching the tool and how to use it, I saw very few images that included people. I wanted to explore the results of using a refraction ball within portraiture. The process included intensive study of refraction as well as a knowledge of portrait photography. My purpose became something that few have tried before.

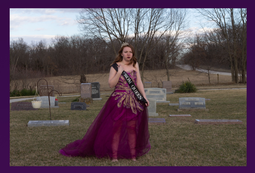
Equipment

60 mm refraction ball with stand
50 mm lens
Tripod

The Process

My process not only included gathering equipment and models, but practicing with the refraction ball itself to understand its tendencies. This proved more difficult than I originally thought. I placed my models several feet away from the refraction ball and shot through the ball. It took close attention to detail to ensure that the focus was on the subject inside the ball, not on the ball itself. I also had to be aware of where I placed my models to avoid distortion.

The post-production process included some detail work in Photoshop, as shown by these two images.



This before and after example shows how much a tool such as a refraction ball can raise an image's aesthetic quality.