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The Evolution of Light Technologies

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What is light? This is the question philosophers and thinkers have asked themselves since a long time ago. Our search for the understanding of this term starts back in the ancient Greece where light and vision were thought to be the same and it was not something that existed apart from seeing. This thought made us consider the question of what happens to, in this case, light when we are not looking. As the time kept going, the perspective of light as a physical entity was getting stronger and our early investigators of light, being not satisfied with what light was thought to be at that time, started to develop some interesting explanations for what even today is a mysterious phenomenon.

Sir Isaac Newton, known mostly for his work in mathematics and mechanics, was one of the first early investigators of light who thought about it in a similar way to what we call today the ray model. He thought that light was made up of very small and fast particles traveling in straight lines. Even though Newton's model was one of the first ones generally accepted by the scientific community, it did not take long until someone found a way to oppose to it, we are talking about Robert Hooke, known by the law with his name, and the Dutch scientist Christiaan Huygens, who thought light was some kind of wave. This opposition was one of the first times that Newton's model was being challenged and it was the birth of our second generally accepted model of light, the wave model.

The wave like behavior of light was demonstrated to be a reality after the experiment of the English scientist Thomas Young who said he had been able to create interference between two waves of light, being interference, a distinctive wave-like phenomenon. Engineers and scientists have made good use of both models of light, the ray model being used to fabricate cameras, microscopes and telescopes with the help of lenses and mirrors and the wave model as a valuable tool to explain what happens to light at a microscopic level. Also being the missing piece to open a new area of studies, quantum physics.

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It was required a theory of light, the photon model of light. This new model is reliant on quantum physics and it solves the problem of light being a wave or a particle dilemma considering it as neither of them but instead as photons that have both wave-like and particle-like properties. This is still a new field for physicists to study and the most of its applications are still unknown.

In conclusion, the history of light has been continuously changing through the years and there is still so much to find out about what light really is but if we keep on mind the light of hope, we will able to succeed in this journey started centuries ago.