

Transparent objects have no interaction with light, light is transmitted through the object[1]. Opacity or an opaque objects absorb light[1], while some materials reflect light[1]. It is by the interaction of light with certain types of Matter that gives us the variety of colors we see, it is not only by reflection but by the above mentioned ways of light interaction: Absorption, reflection and transmission. Opaque object absorb light, transparent object transmit light through them, translucent objects scatter light within the geometrical framework of atoms [1], colored objects reflect light. Objects otherwise diffuse, scatter, disperse, or polarize light either within or on their surface. It is by this interaction of light with Matter and the propagation of that light into the eye that allows us to perceive see the manifold appearances of colors bodies create.

"In humans, and a number of other mammals light enters the eye through the cornea which then the lens focuses light onto the light-sensitive membrane in the back of the eye, called the retina. The retina serves as a transducer for the conversion of light into neuronal signals. This transduction is achieved by specialized photoreceptive cells of the retina, also known as the rods and cones, which detect the photons of light and respond by producing neural impulses. These signals are transmitted by the optic nerve, from the retina upstream to central ganglia in the brain. the lateral geniculate nucleus, which transmits the information to the visual cortex. Signals from the retina also travel directly from the retina to the superior colliculus."

This is the modern conception of vision, and it has come to my understanding that there are some flaws with this theory. I will first outline the properties of light and why this theory is flawed and then I will reveal to you my own theory.

First, light has the property of illumination, it has a perceptible brightness. Light renders object within the dark visible by this ability to illuminate. This power or ability of light to create illumination renders the construction of a shadow on bodies possible when interacts with them, a shadow is created when light is absorbed by an object, it is from this absorption of light that opaque bodies are created. In contrast to transparent bodies, light is not blocked by the object and therefore a shadow is not created.

Secondly, color is said to be a function of the human brain and not a trait of the bodies, the modern conception of color can be viewed here, en.wikipedia.org/wiki/Color#Color_of_objects

Now I have explained the property of illumination and the various ways that light interacts with Matter and the perception of color according to modern science. Next I will outline some flaws with this common theory of vision.

One flaw I noticed is that, because light can illuminate objects, why then is the beams or rays that are reflected from an object and then propagated to the eye have no property of illumination? We know light does not lose its brightness or the power of illumination when it is reflected from, let's say a mirror, the reflected light has the equal amount of illuminative power as the incoming rays. Now vision is said to be rays of light bouncing off of a body and those rays then enter the eye, the light which enters the eye should have the same brightness of the light before reflection, but this is not the case. Colored bodies have a dull light, or a non illuminative power. Colored bodies do not illuminate or color nearby objects nor are they as bright as the rays which are said to be reflected. And because of this, I now understand this theory of beams or rays entering the eye to be false.

Another concern I have is that, if an object absorbs light and this absorption causes it to be opaque and the shadow is the outcome of the object blocking out the light, then how, if the light is absorbed, can it also be reflected back into the eye? Such is the case with black objects, and even though all light is absorbed, we see the object with no light being reflected or sent into the eye. By what power does Matter have that allows it to decrease or hinder all illuminating power of the incoming light? If an object absorbs light, then why is it that the color of the object itself not illuminated? With objects that are black, the absorbed light loses all property of illumination and we do not see a 'bright black', likewise it is seen that naturally occurring light from the Sun is white or yellow tinted, with this in mind, then why does an object that absorbs this light appear to us as black and not white or yellow? If white light is all the colors of the spectrum in a superposition, then why, if they were to be all absorbed equally, is the object not white but black? How can white light turn black? It is for these reasons; that white absorbed light renders an object black and that object is still visible without incoming rays, that I understand the modern theory of color and vision to be false.

I have illustrated three main flaws with the modern theory of vision:

- 1) The colored object has no brightness or ability of illumination even though the incoming light does.
- 2) That an object absorbs white light but is then rendered black-
- 3) That the same black colored object is visible even though there are no rays of light entering the eye (because the object absorbed them)

As for flaw #1, which is that colored objects appear dull as compared to incoming light, this is the most convincing argument to me, and upon further deliberation of this flaw I have come to realize that the color of an object is not created by incoming rays of light, but that color is an intrinsic property of Nature, as in; Color is not a thing of the brain but exists in actuality. It then dawned on me that color is made manifest by light and not created by it; light acts to make it visible but does not act as a power to create the color by being beamed into the eye, and that colored bodies hold on to or have captured light internally thus making the color appear dull (as compared to sunlight or any other created light).

I then considered the so called 'invisible rays of light' such as 'ultraviolet' 'xrays' and other such 'invisible electromagnetic rays' and upon studying them and how they manifest it is clear to me that there is no such thing as invisible rays of light and that radio waves and other invisible rays are not light at all but a property of electromagnetic waves. It is only from the unification of light and electromagnetic waves from Maxwell's equations that we consider them to be the same thing, where, light is a quantum of electromagnetic waves called photons, thus photons are not light, but a mathematical convenience. We can see the distinction of photons and electromagnetic waves by a simple radio; in a radio electricity vibrates electrons, those electrons produce electromagnetic waves which create a specific frequency, and the receiver can tune into the frequency by varying the electric current in the electrons. These waves travel at the speed of light and have no mass, thus they were combined with light by Maxwell's equations. The only thing in common that these invisible waves have with light is that they are able to move at the same speed, and from the flaws I noticed in vision and upon the realization that color is a real object in nature, color and light are not the same as electromagnetic waves-thus when a light bulb is turned on it does not create electromagnetic waves, it creates light, while a radio creates electromagnetic waves, and if light and electromagnetic waves were the same thing, then a radio receiver would be able to 'tune into' light bulbs. While mathematically it is rational and convenient to combine electromagnetic waves and light, it is not practical for understanding how Nature operates and how vision works.

So, hopefully I have cleared up some confusion you might have if you were to also inquire into the nature of color and vision, this same confusion has plagued me for a while now until I had a series of realizations. Now I will explain to what color is and how can bodies be colored and how does vision work. I will begin with what color is, then move on to how bodies are colored, then finally how vision works.

1) Color is a natural occurrence in Nature, it exists in actuality independently of biological creatures, there are 7 primary colors which combine to form all the varieties of colors we see. Colored bodies are not to be confused with a light source, for colored bodies have the property of being dull while light from a light source has the property of brightness and illumination and can create a shadow. Colored bodies do not illuminate objects and thus do not create shadows. Just as there are 7 atomic energy levels, so also there are 7 types of color in nature. Colored bodies do not lose their color when they are in the dark, i.e. not illuminated by light, they are only made visible by light not created by it.

2) Bodies are colored by an internal force inside Matter that colors them from within and encases this color inside the atoms. I theorize that color is dull because it is not in motion, and because it is not in motion it has no power to alter or modify the form or composition of the atomic body. Another theory I have is that color is light in motion and by the opposition of atomic motion, they cancel each other out and thus create a frozen state. Color is a type of substance inside atoms, its speed and other properties are unknown.

3) Vision does not need any light to enter or exit the eye to cause vision and color, vision is the real time perception of bodies that exist in actuality and it is aided by brightness or illumination. Pupils do respond to illumination, but not to color and the pupils are black not because they absorb light, but because they hinder light from entering by dimming the source of illumination and the pupils

contract to control the amount of brightness which can be seen. Light does not need to enter the eye for it to see an object, for it is able to observe by its own power the illumination of the world and the color therein. As I said, light makes an object visible, but it does not cause vision, nor does it cause color. It is the power of a light source to illuminate the darkness which then allows it to be seen, but not by rays entering the eye. I will illustrate this more in the following:

Light rays do not cause vision nor do they enter the eye, the reason why light does not cause color has been explained, now I will make some remarks on why vision or perception is not from light. Now, it is said that light enters the eye, and this makes Matter visible. This is impossible for how can light transpose or transmit the form and shape of Matter? Light has the property of illumination thus it does not impart a visual object but a sense of brightness, Matter and its form cannot somehow travel into the eye as to make it be seen. If vision is from light entering the eye than one would see light, not Matter, for light does not carry with it the form of a body. Another reason why light does not enter the eye is because if one were to look directly at a light source they would be blinded by the brightness.

In conclusion I hope I had made a logical attempt at explaining to you the flaws of the modern theory of vision that I have noticed and I hope I have provided by sound reasons as to what I think color is and how vision occurs and what it is. I also hope I was able to clear up some confusion regarding electromagnetic waves, photons, light and color.

[1] https://en.wikipedia.org/wiki/Transparency_and_translucency

[2] https://en.wikipedia.org/wiki/Visual_perception