Colour Irrealism

The Ontology of Colour, from *Colour for Philosophers*

Hardin

Why should we accept colour irrealism?

-Hardin suggest we should be irrealists about colour because there is no acceptable physicalist theories offered by colour realists.

-Hardin sets out to demonstrate that colours are not the properties of physical objects or sense datum. He reaches the conclusion that *"We are to be eliminativists with respect to color as a property of objects, but reductivists with respect to color experiences."*

Two possible strategies the objectivist can adopt

Strategy 1

- Physical objects are, at the level relevant to colour science theories of colour, what the physicist says they are and that color must therefore be a physical property or combination of physical properties or else be supervenient on some set of physical properties.

(argued for by David Armstrong)

Two possible strategies the objectivist can adopt

Strategy 2

- Colour is an objective property of physical objects over and above the properties with which the physicist endows them and that it is in no way reducible to or supervenient upon those properties.

(argued for by James Cornman)

The Problem with Strategy 2
(the less popular strategy proposed by Cornman)

- If the colours are attached to the physical objects in some way, they must either be causally connected to the other physical properties or not.

The Problem with Strategy 2 (the less popular strategy proposed by Cornman)

- - If they are causally connected, then they should have some physical effect and we should be able to perform experiments to determine if they are there or not. Since Cornman presents no physical theory to show that colours are causally connected to the other properties, we must take colours to be free of causal relations to the object's other properties or be epiphenomena of some of them.

The Problem with Strategy 2 (the less popular strategy proposed by Cornman)

- From this position, colours play no role in determining what wavelengths are transmitted from the surface of a physical object or which photons are absorbed by the photoreceptors. (colours can make no difference in normal human colour perception.)

- In this case the colours have no effect on the perceiver's beliefs about colours and we may therefore be wrong in all our judgements about what colour any object is.

The Problem with Strategy 1: (the strategy proposed by Armstrong)

- One may take an objectivist position because it can then be said that when people typically experience a colour (yellow) there is some part of the microstructure of the yellow thing which is similar to the microstructure of other yellow things. We would then want to know what parts the yellow things have in common and would make statements like "yellow things are..."

"Like most hopes for conceptual neatness and unity, this one is doomed to disappoint..."

The Problem with Strategy 1: (the strategy proposed by Armstrong)

- "There are just too many heterogeneous causal factors in objects which can cause them to look yellow to us in normal circumstances." Things can appear yellow because of different processes, so attempting to assert that "yellow things are…" will be problematic.

A possible solution to this problem:

- "The specific feature which yellow things have in common but which they do not share with red things might be their disposition to cause characteristic sorts of light to issue from their surface."
- The relevant aspects of light we could look to are intensity and wavelength, but because of the principle of univariance this information is lost when the photons of light are absorbed.

What is left for the objectivist?

- At this point the supporter of objectivism may give up on the notion that there is a common, unitary physical property, but argue that there is a complicated disjunction of properties. The physical objects we see are made up of many elementary bodies arranged in complicated ways, so the realist should expect colour to be a high level or supervenient property like temperature or elasticity.

What is left for the objectivist ?

- The relative spectral energy of light sources, the relative reflectance of opaque bodies, and the relative transmittance of transparent or translucent bodies are properties that could be used from this approach. But these will also face problems: the phenomenon of metamers. Light sources of different spectral composition can appear identical to the perceiver under certain conditions. This approach faces the same problems as the earlier approaches in strategy 1.

More problems with colour objectivism

- Standard Conditions:

There are many descriptions of standard conditions in colour science.

For example, the instructions that come with a set of Munsell colour chips require to chips to be viewed against an achromatic background, arranged under North Daylight or scientific daylight, illuminated at 90 degrees and viewed at 45 degrees (or the exact opposite of all those conditions.)

More problems with colour objectivism

- These standard conditions work for viewing colour chips, but what about viewing a rainbow, star, or neon tubes?

- Whatever conditions are labelled as standard conditions may still result metamers or not capturing what colour certain objects are.

More problems with colour objectivism

- There is also the problem of what a normal observers is. As we have seen, people will vary in chromatic response. They will see identical stimuli in somewhat different ways.

Another possibility...

- Since colours cannot be predicated of strictly physical objects, it would seem that, if they are to be predicated of anything, they must be predicated of regions of the visual field.

Sense-Datum Ontology (Frank Jackson)

- Jackson argues:

-that whenever sensing occurs, there is a coloured patch which is the immediate object of perception.

-this coloured patch bears the apparent properties.

-the immediate objects of perception have at least colour, shape, and extension.

Problems with sense-datum theory

- Cases where we can see something, and one of its properties, but not see a patch with either colour or shape. Our eyes are good at detecting motion, and at high speeds can sometimes just tell that there is an object moving but not distinguish its shape or colour.

Problems with sense-datum theory

- If we perceive an object at the center of our visual field we may be able to see clearly defined shape and colour, but if it moves to the periphery it will appear as an amorphous moving object.

- If colour is just non-physical colour patches of sense datum, then why is the colour not perceived in certain situations where we still perceive something.

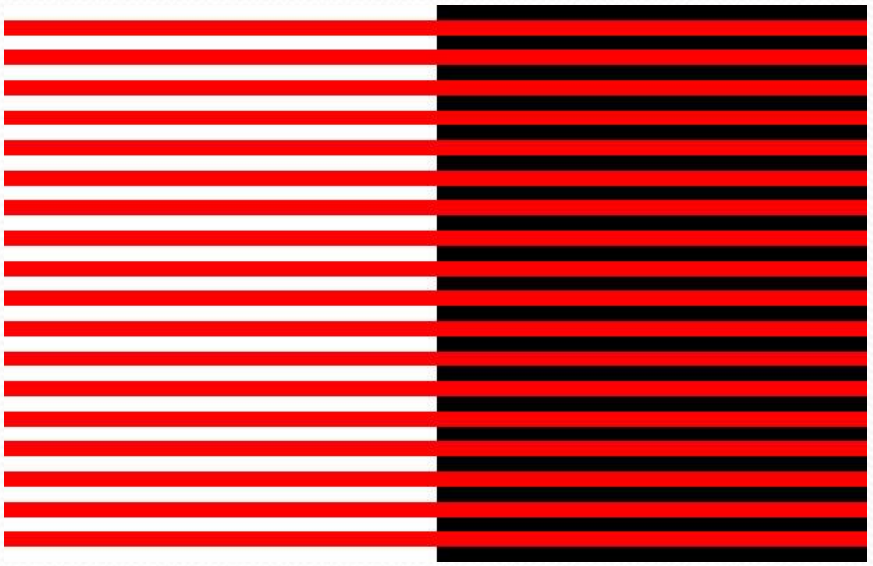
Problems with sense-datum theory

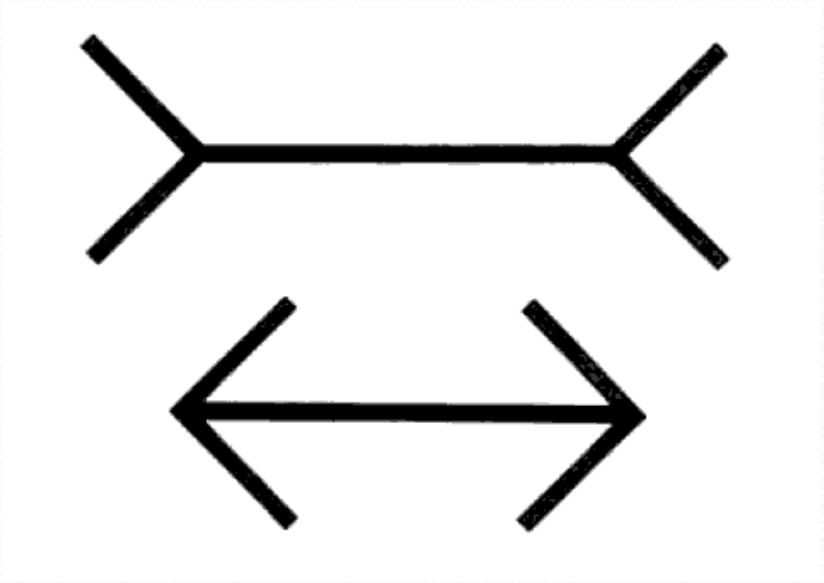
- problems even arise is paradigmatic domain of sense datum theory.

-the waterfall example. Is the sense datum moving and not moving?

-also von Bezold's spreading effect. Are the colours really there?

-or with the Muller-Lyer illusion, is one sense datum line longer than the other?





Materialist reduction and the illusion of color

- If colours are not in the physical objects or in sense datum, then we are left with colours being something psychological.

- We should not and cannot forgo phenomenal description, but in order to get a clearer representation of the deliverances of experience, we must go beyond it, and the natural place to turn is psychobiology.

Materialist reduction and the illusion of color

- *"Since physical objects are not colored, and we have no good reason to believe that there are nonphysical bearers of color phenomena, and colored objects would have to be physical, we have no good reason to believe that there are colored objects. Coloured objects are illusions, but not unfounded illusions."*

Colour Irrealism

Objections raised against Hardin from Byrne and Hilbert

Some Objections raised by Byrne and Hilbert.

From ***Color Realism Redux***

If we accept Hardin's eliminativist proposal, then we run in to a couple of difficulties.

- If eliminativism about colour is right, then our perceptual system has evolved to represent properties that are properties of nothing that is in the world.

"Just how it could have done that is something of a mystery“

Some Objections raised by Byrne and Hilbert.

From ***Color Realism Redux***

- If we find it plausible to accept colour eliminativism, then we must be willing to accept eliminativism about our other perceptual systems. For instance, if objects have no colour, we should be willing to the same about sound.

"Eliminativism about color thus threatens to obliterate anything resembling our intuitive conception of a perceiver's environment, as populated with variously colored, noisy, smelly, and tasty objects. "

Some Objections raised by Byrne and Hilbert.

From ***Hardin, Tye, and Color Physicalism***

- Hardin's objections to reflectance physicalism are unsuccessful.

- For example, Hardin argues that if no scientific sense can be attached to the claim that some people perceive a colour of something correctly and other do not, then reflectance physicalism is false.

Some Objections raised by Byrne and Hilbert.

From ***Hardin, Tye, and Color Physicalism***

- Reply: It does make scientific sense that that different people can perceive the same thing as having a different colour and still be correct.

For example: imagine that there is a population of intelligent, reasonably accurate thermometers. To one of the thermometers it seems like it is some particular temperature. All of the thermometers are calibrated slightly differently, but they all agree it's pretty close to standard room temperature.

intelligent, reasonably accurate thermometers

From ***Hardin, Tye, and Color Physicalism***

- Some think it is 69, 70 or 71 degrees, but they have no independent method of determining if it is exactly 70 degrees because they have no theory of intentionality that allows them to know they are representing physical properties of some kind (e.g. molecular kinetic energy)

intelligent, reasonably accurate thermometers

From ***Hardin, Tye, and Color Physicalism***

- Some of the thermometers are getting it right, and some are not, but since they do not have any independent way of determining the temperature, they are still justified in believing that the temperature is what they have determined it to be. They may not be exactly right, but knowing its around 70 degrees is good enough.

"Despite presently—and, perhaps, eternally—lacking an independent method to determine the veridicality of our color experiences, we may be reasonably accurate detectors of the colors of things."