On the Properties of Real Objects

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In this paper I will argue that ‘colour’ is not in real objects. I will then go beyond that to argue that properties of real objects – if they have properties – cannot be emitted to the perceiver. It becomes necessary, therefore, to hold that all that is ‘known’, via the senses, of the world be inferred from the Representation only.

On using the word ‘colour’, I mean real colour: that is, what is thought of, in the natural manner of thinking, as the colour – a particular surface hue – of matter and/or objects in the objective world. (This is ironic in that I have stated already that this paper argues against real colour!)

Generally, if an atom absorbs a photon of light, one of its electrons almost immediately emits energy in the form of a new photon. Some of the emitted photons are reflected then combine to form light waves. That process is not new: it has been ongoing since near the creation of the universe. The Sun and the Earth were made at a time when there were no living creatures. At that time there was no need for matter to be observable.

It was only much later, with the appearance of sentient creatures, that the ‘information’ in the wavelength of photons was used in a new way – to initiate the sight process (What I usually think of as the start of mid-vision). That was satisfied with the evolution of the eye. The human visual system evolved to become extremely complex and, even today, it is not fully understood.

Is colour in physical objects? If so, that would mean two layers of colour: one, in objects in the real world and a second in the Representation. Or even a third, if light is included. It is not uncommon to read, 'light that has the colour...', or other, similar phrase. Light does not have colour: rather it carries a potential: and, without a visual processing system that potential would remain as that only.

Modern man has an understanding of the universe that extends from the far reaches of space to the smallest of quantum particles: particles so small that they are often thought of, not as matter but, as energy. Yet, there is no knowledge of a mechanism in the objective world that makes colour in, or puts it into, real objects. Yet, so often, matter is thought of as having colour? Given that, then nature's colour-making mechanism must be minute!

Given the above, there is a need to ask: is colour in the physical world? If so, then it should also be asked: what makes colour and what might its purpose be? Should the atoms and molecules in a white rose have a need to 'know' that they should represent the whiteness of a white rose? Nature, in her wisdom, created a relatively large eye and a ‘visual’ processing system for observers of the world. Surely, if there is colour, then that same all-

embracing Nature would have done something similar in real objects to ensure the making of colour there? Plus, there is much more to colour than colour-making. Would a nascent Nature know of a need for colour, and that she had succeed in making it for creatures that had not yet appeared on Earth?

Of course, it could be argued that colour is a 'natural' property of objects. That, there is an inherent 'something' in matter that makes it in, or puts it into, objects. Given that, it would still be necessary to ask: what is that something? Further, it should be asked, is colour necessary to the basic functioning of atoms and molecules? Indeed, colour-making would add complexity to what is, fundamentally, at the atomic and electromagnetic levels, simple.

Wavelength is a ‘limited’ source of information. Between reflectance and absorption in the retina, that information cannot be altered. Therefore, it can be held that the frequency range of emitted information limits the range of possible ‘interpretation’ by the visual-processing system. Hence, absorbed information limits what the perceiver can know of real objects.

Photons are the only in-the-world link between objects and the retina, and wavelength is the only real-world source of information available to the processing system. Their availability to us does not mean that colour is in real objects. The visual-processing system, although mechanical, is the only known natural structure that translates information into phenomenal colour. If objects and wavelength do have colour, it has to be shown where that colour is and how it can be emitted to its perceiver[1].

If Nature has no colour-making mechanism then it should hold that there can be no colour. The world of Nature is a mechanical system that can have no, has no need of, knowledge of itself. Therefore, given all of the above, it is necessary that colour be thought of as phenomenal only. If there is no colour, a similar argument should hold for each of the secondary qualities?

Although this paper follows the usual practice of arguing from sight, the remaining processing systems – modes – are dependent on real information. Therefore, if the extrapolation holds, then there cannot be real sound, and so on. All of the secondary qualities are phenomenal. Although this is not a new conclusion (i.e. Locke and many others), this writer presents an argument that brings this long-running issue to a sharper focus.

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[1] The implication here is that, if colour is in the real world, then colour must be in electrons. The argument is that, as photons are emitted from electrons only, and photons are the carriers of wavelength, and that is the only ‘information’ that we receive on the world, then the electron must be the source of colour. However, the electron is too small to have its own colour-making mechanism. Indeed, if there is colour in the world, then each individual electron should have its own colour-making mechanism. And, that would make them … very big indeed!

Therefore, having only phenomenal colour opens more doors, such as to extrapolating further, making it necessary to ask another, and equally fundamental question: if there are no real secondary qualities, then might that same argument also be used to refute most of the primary qualities (i.e. Locke)?

It should follow from the above that, if all real-world information has a limited range, and that is translated into phenomenal colour only then, can the 'triangularness' of a triangular object be encoded into wavelength? If emitting particles cannot have a 'knowledge' of secondary qualities, in that they, quite simply, carry emitted frequencies only, then the same argument should apply equally, if not more so, to the more complex primary qualities?

Indeed, could that argument be applied to all inferred 'real properties'? (Given our dependence on the senses, and the centrality of real information from the world, that can be held. If we are to have knowledge of perceivable, real-world objects then information must arrive via the senses. There is no other pathway.)

If it were possible to have knowledge of both real primary and secondary qualities, the perceiver would have to know everything of the surfaces of reflecting objects. To ensure that, and this under all viewing conditions, it would also be necessary that individual packets of wavelength contain a much wider range of information? An argument would be that, if an object were square and green then, both properties would be transmitted in a combined form. It becomes necessary that wavelength would have to be not only larger but, crucially, how would the processing systems know that one section of a wavelength should represent colour and another section its form? More information would, inevitably, make processing systems ever more complex and, possibly, liable to error.

Further, even if colour and form were transmitted separately, the visual processing system would not 'know' that. It would not know which of the many millions of wavelengths carried objective form and which colour. It is, surely, as equally mechanical as is real matter. How would it separate colour from form? The complexity becomes staggering.

From the above, an overview should become apparent: to ensure the emission of both primary and the secondary qualities, it is necessary to have a 'knowledge' of the whole object. That is something that the perceiver can do: he can stand back, walk around, and, in doing so, grasp the idea of, for example, a table. But, emitting particles, as 'non-perceptual' structures, cannot gather 'knowledge'. They can 'know' neither that it is in an object nor that is surrounded by primary and secondary qualities. It cannot know of the wholes that the perceiver takes for granted. Therefore, it should follow

that they cannot emit information on those: of an object's structure – on form, movement, extension, and so on – of which it is a minute part.

This paper is not only an argument against the impossibility of knowing real, perceivable properties. It asks also: if real objects do have properties then how can we know of them? It seems that the argument on knowledge of the world is turning inwards. We do live in, and are an essential part of, a complex world. Indeed, the complexity of Nature is such that man still does not fully understand Her. If we do understand the real-world to be complex then it should be asked: can that complexity be communicated?

One key to understanding perception is perception itself. If colour is not in objects then those other properties, such as form and extension, that are in the Representation, should be representative of the properties of objects. But, phenomenal properties are the visual processing system's interpretation of what real objects might look like: it is not necessarily how real objects are.

It would be very difficult to remove properties from an object without also changing what it might look like. Altering an object would change it into something other than it was. If we cut a tomato in half we would see that phenomenal transformation. Therefore, it could be concluded that those inferred 'real' properties are real. But, after some consideration of the above, there is a growing 'gap' between what we perceive in the Representation, and what can be inferred from it.

Rationalising information tells us that communication with real objects is minimal. And yet, we see so much? (Of course, there is the argument that nature wants us to 'know' her world – we too are a part of Her World – and that same nature provided us with senses that enable that: but we perceive Her in, what might be termed, a more 'human friendly' form.)

Should the Representation – the perceivers visual 'picture' of the world – be regarded as a veridical representation of the real world? It is natural to hold that there is an objective world but, the common sense view now becomes that, it could be much less than what it is usually inferred to be. All sentient creatures, speaking generally, see the same phenomenal world. But, that real world is communicating something that is very different to what we perceive? Indeed, it is communicating something that it 'knows' nothing of!

In the era of planet Earth, the obligation is on us to try to understand what it is trying to tell us of itself. But, how is that possible if the 'tools' of the perceiver create an 'unreal' world of appearances of the 'real' world that we can never know?