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Prompt: *Imagine that – as you would have naively put it before this class – you see a table. Russell argues that “the real table, if there is one, is not the same as what [you] immediately experience by sight or touch or hearing. The real table, if there is one, is not immediately known to [you] at all...” (p. 413). Set out and assess Russell’s arguments for this conclusion. According to Vasubandhu, the table (in Russell’s phrase) “is merely ‘appearance’”. Is Vasubandhu’s idealism a defensible alternative to Russell’s conclusion?*

Sense Data and Reality

Both 20th century British philosopher, Bertrand Russell, and 5th century Buddhist monk, Vasubandhu, believe that our general notions of perception, physicalism, and reality are misguided. Russell argues for ‘sense data’, whereas Vasubandhu argues for an entirely mental reality. In this paper, I will assess Russell’s argument, in *Appearance and Reality*, for the separation of sensory perceptions from physical reality. This argument will be considered from both the physicalist and idealist schools of thought, drawing from Vasubandhu’s argument about appearance. Ultimately, I will resolve the two arguments, showing that Russell’s theory is only relevant if Vasubandhu’s theory is accepted.

Russell begins *Appearance and Reality* by citing facts that would easily be taken as true in daily life, such as the fact that he is “sitting in a chair”, that “the sun is about ninety-three million miles from the earth”, and that any other person entering the room will see “the same chairs and tables and books and papers as [Russell] sees”. However, he argues that if we think a little more about it, none of these can easily be taken as true. In fact, he does not believe they are true at all. To prove this, he begins an in-depth analysis of the table sitting before him. He first points out that just by looking at the table from two different view points or changing the lighting in the room, the light reflected by the table that reaches our eyes will be very different, causing our color perception of the table to change dramatically. The same will occur if a color-blind man or man wearing sunglasses were to observe the same table. Thus, no color is overwhelmingly the actual color of the table (or any given part of the table). This leads Russell to conclude that color is not inherent to the table, but instead dependent on the table and its environment (e.g. the spectator and way in which light hits the surface). He argues that, because we see the table with all these different colors and because no given color has more of a right to be *the* table’s color, we must deny that the table has any particular color. Russell extends this very logic from colors to shape, texture, and touch, arguing that these

properties we use to characterize the table are not inherent to the table itself. Thus, the table “is not immediately known to us at all, but must be an inference from what is immediately known”. Russell then proceeds to define the term ‘sense-data’ as “things that are immediately known in sensation” (i.e. color, sound, smell) and the term ‘sensation’ as “the experience of being immediately aware of these things”. In other words, color is a sense-datum (not a sensation), but our act of *seeing* the color is a sensation. Russell then comes to the radical conclusion that “what the senses immediately tell us is not the truth about the object as it is apart from us, but only the truth about certain sense-data which ... depend upon the relations between us and the object”. Let us clarify the argument in a concise premise-conclusion format:

Premise 1. *The table can only have one inherent color.*

Premise 2. *Depending on lighting conditions, viewing angle, etc. the table can have several changing colors.*

Conclusion 1. *The table does not have an inherent color.*

Premise 3. *Logic of Premises (1) and (2) applies to shape, smell, sound, etc.*

Conclusion 2. *The table does not have an inherent shape, smell, sound, etc.*

Premise 4. *Without any inherent properties an object cannot be known to us, but only inferred.*

Premise 5. *Inferences about an object are based on sense-data.*

Conclusion 3. *The table is inferred from sense-data.*

Conclusion 4. *The table is not known to us.*

While Russell himself does not take a definitive stance as to whether there is any reality at all, he notes that “what we directly see and feel is merely ‘appearance,’ which we believe to be a sign of some ‘reality’ behind”.

Russell comes to the bold conclusion that there is no such thing as color, taste, smell, hearing, etc. Rather, these are all just mind-dependent ‘sense-data’. However, I argue that Russell’s claim is only valid if there is no physical reality, i.e. everything is just a dream, an assertion that Russell himself

is not willing to make. In *Appearance and Reality*, although Russell describes past philosophies that endorsed this doctrine (e.g. the work of Berkeley and Leibniz) of matter as a collection of ideas, he refuses to take a position on the matter. For the rest of this paper, I will use the term ‘physicalism’ to refer to the view that matter is actually physical (non-mental) and the term ‘idealism’ to refer to the view that matter is purely mental. Furthermore, I will argue my claim by solely considering the example of color (since it is easily extendable to the other types of perception).

Under the physicalist view, matter is governed by the laws of physics. This means that any given object, depending on its molecular structure/composition, absorbs the components of incoming light within a range of wavelengths. When light is shined on the object, it reflects the remaining wavelengths, in a direction related to the incoming direction from the light source. Therefore, if we shine red light versus blue light on an object, we can expect light of different wavelengths to be reflected back from the object. Furthermore, if we shine light on the object at a 30° angle as opposed to a 75° angle, we will expect the amount of reflected light to vary. While it is clear that the object interacts with light in a variety of ways, the output can be predicted from the input, solely by using the laws of physics. Thus, I argue that there is no need for ‘sense-data’ in order to deal with this discrepancy. In fact, I believe that color is inherent to the object. In this case, we can define color as the absorption of light in the $X - Ynm$ spectrum (e.g. Red= $620 - 750nm$, Blue= $450 - 495nm, \dots$). By this definition, *color is independent of our perception*, it is an intrinsic physical property of the object under consideration. As long as the molecular composition of the object is unaltered (which would arguably make it a new object), this color property of the object will remain unchanged. Arguably, this is a simplified view of the true physics at work. To be rigorous, we would need to define color according to the object’s surface spectral reflectance (i.e. a curve of the reflectance as a function of wavelength). This is known as the bidirectional reflectance distribution function (BRDF) in computer graphics. While this is far more difficult to characterize than our previous definition of color, I argue it is still characterizable (as could any more complicated physical models

of color). In fact, there are devices, known as *Gonioreflectometers* that do this. The data collected with these devices is frequently used in photo-realistic computer graphics simulators to create colors that appear quite real. Hence, while simplified, the $X - Ynm$ spectrum definition of color serves its purpose for the sake of this analysis.

This new definition of color accounts for the examples, given by Russell, of changing the viewpoint of the table or lighting in the room. However, you may still be wondering why a color-blind man or a man with spectacles will have drastically different beliefs of the color of the table from a man with normal vision. In order to address this, let us think of the human visual system as a spectrometer. Light is reflected from the object and reaches the eye, where cones in the eye are stimulated and send information to the brain. The brain classifies the information from the cones, to properly (or improperly) color the image being construed in our minds of what is being seen. Now, just as if a spectrometer were to have a broken sensor or a bad classification algorithm, the human eye can have defective cones or a bad classification mechanism. This accounts for examples such as the color-blind man or visual illusions (evolutionarily beneficial biases have developed in our perception to sometimes perceive things that are not actually there, such as in Akiyoshi Kitaoka's famous grey strawberries). Furthermore, by wearing spectacles or putting a filter over his eyes, a man can externally impair his color perception. Thus, when we interact with an object we are receiving physical stimuli from the object that result from its unique physical properties (color, taste, smell, touch, etc.). Our brain, to the best of its abilities, tries to infer these intrinsic properties from the given stimuli (however, sometimes it can be wrong), allowing us to understand the nature of the object. In conclusion, under the physicalist view, contradictory to the claims of Russell, the table (or any other object) is immediately known to the viewer (in use of the term immediate, we include the delay of the propagation of light and its interaction with our nervous system and processing time in the brain).

Specifically, under the physicalist view, Russell's argument is not valid because Conclusion 1,

does not follow from Premises 1 and 2. As established above, objects have inherent color, i.e. Premise 1 holds. Furthermore it is also true that, depending on the environmental conditions the table can give rise to ‘sense data’ of different colors, i.e. Premise 2 holds. However, it does not follow that the object does not have an inherent color. On the contrary, the ‘sense data’ is a result of the interaction of the inherent object color and the environment (e.g. the light shined on the object). It follows that Russel is not following the physicalist view. In fact, the importance given to the notion of ‘sense data’ by Russel is better justified if we consider the idealist view. Under the physicalist view, there is nothing intrinsic about the object in sense data, as sense data is only the result of the interaction between the object and the environment. The only thing that is intrinsic about the object is how it reflects light. On the other hand, there is an easy jump from Russell’s argument to idealism, which goes as follows:

Premise 1. *Objects emit sense data.*

Premise 2. *Our knowledge of objects is acquired via sensations of these sense data.*

Premise 3. *Sensations change with your perception, meaning they are mind-dependent.*

Conclusion 1. *Our knowledge of objects is mind-dependent.*

Premise 4. *If our knowledge of something is mind-dependent, then it is a mental, not physical, entity.*

Conclusion 2. *Objects are mental entities.*

If there exist no actual physical entities, then ‘sense data’ are in fact the only way to describe our experience. Without an actual, physical object in front of us, we are living in an entirely mental dream or simulation, which deceives us into believing that there are physical objects surrounding us through ‘sensations’. Since there exists no table, of course it is impossible for me to know the table. Rather, I know the fake table attributes provided by my mind that make me believe there is a table.

A proponent of the idealist view was Vasubandhu, who argues for the view by considering the example of a fly and defending it against three physicalist objections (he uses the term ‘atom’ in the

sense of smallest possible physical object, not in the modern chemistry sense): 1) the fly is an object consisting of atoms joined together in a certain way, 2) the fly is an object consisting of atoms, which do not have to be joined, and 3) the fly is a simple spatially extended object that does not have parts. He argues against point (1) by claiming that if atoms can be conjoined, they must have sides on which they can be conjoined. Each of these sides is a smaller part of the atom, thus making the sides atoms. Vasubandhu argues against point (2) by claiming that a unified collection must be conjoined at some level, which would mean appealing to the conjoining of atoms. Finally, in point (3) he argues that atoms must be spatially extended, so as to provide “shadows and concealment,” meaning it is not simple. Any composite whole must be composed of these atoms, meaning it too cannot be simple. I do not believe that Vasubandhu’s view is an alternative to Russell’s view. If we do not accept Vasubandhu’s idealism (or the arguments made by any other idealist philosopher), we must accept the physicalist view. As explained previously, this would make Russell’s theory of ‘sense data’ is irrelevant.

In conclusion, Russell tries to defend a bold assertion, that our notion of the most fundamental properties of any given object is wrong. However, I have argued that this bold assertion only holds if we are to deny the notion that any physical objects exist in the world. This would require a radical shift in the way we think and clearly is not easy to accept. In fact, Russell himself does not indicate support for this idealist view. While Vasubhandu makes some strong points, defending idealism against numerous objections, it should be noted that he does not actually have a thorough proof for a fully mind-dependent reality. And here lies one of the great challenges in Russell’s view. It is reliant upon a world view which we have no actual means of proving. No matter how hard I try or how many experiments I conduct, I will never be able to tell if everything is just an illusion or it really does exist.