

2. 'It is obvious that when you perceive a tree, what your eyes actually register is an upside-down image of a tree on the back of your retina. Therefore, no one ever REALLY perceives the tree.' - Comment on this argument.

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First of all: It is absolutely irrelevant for this question, whether the tree is projected onto the retina “upside-down”. The lens of the eye in combination with the retina is simply a tool to sense an image of a tree. When we touch that tree, it’s obviously not upside-down, but perceived through a different sensory tool. And when we hear the wind blow through its leaves, our auditory senses also indicate the direction of the top of the tree.

All to say – we do have another tool in our brain (or wherever in us) that combines sensory input from various senses to form a coherent image of that tree.

From that I conclude:

If the tree is real, then it is completely irrelevant how the information is processed, as long as in the end we do get a coherent image of the tree as our perception (and that we do, unless there is some sort of brain damage). The fact that the retina experiences an upside-down picture is just an intermediate step of processing a visual image; it does not determine “reality or not”.

So – if the tree is real, everyone has a perception that comes from something real. It would be hard to argue that the reality of the tree has nothing to do with the sense of perceiving it (i.e. our senses project an image independently of the existence of the tree).

If the tree is not real, then of course our perceptions are not real either. That means our brain creates an image of a tree using the perception of using tools like eye, retina, touch, ear, etc. By extension, if the tree is not real, then those sensory tools are also not real – we perceive them in the same way as we would perceive the tree – and as a consequence everything is image only, even our brain and ourselves. In that scenario, nothing is real – it’s all “empty” images. Again, the fact that we experience the retina as an organ that perceives an upside-down image is irrelevant to this scenario. It does not provide a criterion on which we could decide whether the tree is real or not.

Summary conclusion:

The question cannot be answered using the retina as a relevant argument.

However, the issue extends deeper:

If we assume scenario #1, then there exists a reality outside our mind, even though our brain only contains images in some sort of electro-chemical form. And that reality is observable by everyone, who has a similar mind-brain system. Thereby, different persons can compare their perceptions – and since they generally turn out to be coherent, we can conclude that there is a high probability that our assumption is correct. This relates to the nature of proof – in mathematics, it would be proven only if all possible experiences are covered directly or by logical conclusion, that is not possible here – in science a proof is weaker in the sense that it is accepted if no contradictory result has been observed in a (statistically) very large sample of observations. From that one could conclude that an external reality is a correct scenario with very high probability.

If however, we assume scenario #2, we end up in an infinite loop of inconclusive claims. If an outer reality does not exist, or at least we do not perceive it, then that holds also for our sensory organs, and therefore the perceptions do not come from those sensory organs. Then all we perceive is an image in our mind – but the mind itself is not real and an image only. Then nothing is real and everything is an image – but then what is an image? It is not real either. I guess – that comes down to the same question as trying to define what space is – and we don’t have a coherent definition for that either. And that is in my opinion an unreasonable foundation to build a philosophical interpretation of the world upon it.

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PS: Not directly related, but a comment about finiteness of space: In the lectures, there is a statement kind of saying, if space is infinite than no two spaces can exist because that would contradict the definition of infinity. Counter-example: Take a ball with a smooth surface (say the size of our earth). Put an object on its surface that can only perceive two dimensions: forward-backward and left-right. Let that object move in any direction as long as it wants to go. Because of the nature of the ball-surface, the object will never reach any “end” – its space is infinite in all directions.

But we as 3-dimensional observers can use the diameter of this ball to calculate the size of the surface (and its volume as well) and that is certainly a finite number.

The object itself (if it can calculate) can by evaluating the sum of angles in triangles conclude the curvature of its space and do the same calculations we can do, but it cannot perceive an image of it, because it is restricted to 2 dimensions. (i.e. it can mathematically prove that its infinite space is finite from a different view point)

And in that sense, two infinite spaces can exist beside each other and can still be finite in reality. It all depends on what we can perceive. (It's easy to transfer this analogy to higher dimensions as well.)