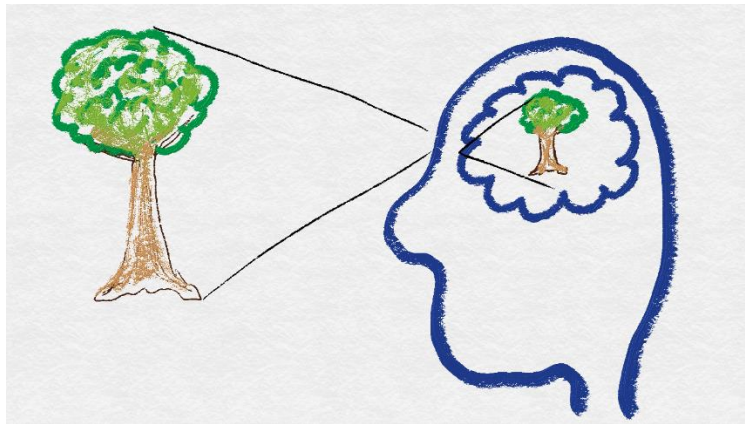


The Veil of Perception

Let's start with an experiment:

Camera One, Camera Two: Place your finger a couple of inches in front of your nose. Hold one eye closed and then the other. What do you see? Your finger seems to move against the background image. Now, keeping your finger there, focus your eyes on the room past your finger. What do you see? Two fingers?

Representationalist View of Perception: In light of observations like this, philosophers in the 1600's concluded that perception is "representational." That is, we do not DIRECTLY perceive reality, but only the IDEAS (or mental IMAGES) that are produced in us. John Locke writes, "It is evident the mind does not know things immediately, but only by the intervention of the *ideas* it has of them." In short, experience is like this:



But, having a mental idea or image of something does not guarantee that this thing really EXISTS in reality. For instance, I can "see" the ocean in my mind, even if I am not looking at it. I can "hear" my favorite song, even if it is not playing.

So, the question arises: How can we KNOW that the experiences that we are having are an ACCURATE REPRESENTATION of what is really out there? **How can we KNOW what the world outside of our head is really like?**

If we cannot have direct access to anything beyond what is inside of our own heads, then it is as if there is a **veil** between us and reality; between what we experience, and what really IS. Is there any way to know what is on the other side of that veil?

Primary and Secondary Qualities

Consider the sensation of tickling. If one is tickled by a feather, where is the tickling?

Surely we do not think that somehow the tickling is IN THE FEATHER. Rather, we think that the sensation of tickling is merely IN US.

Philosophers in the 17th century concluded that sensations like tickling were really just the result of certain shapes and textures that are had by the feather's parts; and the SENSATION of being tickled is merely within US.

But, experiences of things like colors, flavors, odors, etc. are ALSO LIKE THAT; that is, like tickling, they are merely sensations that exist in us, and they do not really exist in the objects themselves. HEAT too, and even PAIN, are like this. What is heat? Heat is just molecules moving really fast. The sensation of warmth is IN US. All that is really "out there" in the warm THING is just motion.

The Lukewarm Bucket of Water: In fact, the very same object may be perceived as warm by one person and cold by another. Imagine that I have a lukewarm bucket of water. One person holds ice cubes for 10 minutes and the other person holds their hands against a very hot mug of coffee for 10 minutes. If they both then put their hands in the bucket, the person who held the ice will say that the water is warm, while the person who held the mug of coffee will say that the water is cold.

Similarly, pain caused by placing one's hand in a fire is really just the cells in your hand moving faster – so fast, that the cells become damaged. It is absurd to think that pain is IN a fire. Nothing at all in the actual fire resembles pain.

It seems that we can divide the properties of things in the world into 2 types:

a. Primary qualities: These are things like size, shape, and motion or rest. It seems like every object REALLY has these—and has them no matter what.

b. Secondary qualities: These are things like colors, sounds, tastes, warmth, etc. And these are only in us—the products of the primary qualities in objects.

The world doesn't have anything like the sensation of colors, odors, pain, or warmth, etc. in it. Rather, these things are only in US. So, much of what we experience is not really in the world. But, can we at least know things about the PRIMARY qualities of objects?

Maybe not. For, even our ideas of primary qualities merely RESEMBLE the actual primary qualities in objects. How can I know for SURE that the shape I am seeing is the real shape that something has in reality? We know for sure that at least sometimes, our beliefs about even the shape of something are wildly mistaken. For instance, watch this [T-Rex Illusion](#). In order to know for sure that our experience of something's shape corresponds to its REAL shape, wouldn't we have to compare the REAL shape with our idea of it? Unfortunately, this is impossible. Consider the following argument:

1. In order to know if our mental image (A) resembles the thing in the world (B), one must be able to compare the two with one another.
2. Yet, all we have direct access to are the mental images (A). Since we never directly perceive the thing in the world (B), we cannot compare A with B.
3. Therefore, we can never know for sure that our mental images really resemble the things in the world.

Descartes and the Method of Doubt

The Project: Descartes stated that, if we are to get at truth—if we are to build up something firm and lasting—then we need to start from scratch, clearing away all of our previously held beliefs—anything that is doubtable—and build from the ground up. Only then will our body of knowledge stand upon a firm foundation.

That “One Certain Thing”: Imagine that you are sitting on one side of a teeter-totter, and the biggest kid on the playground sits down on the other side. You are immediately shot up into the air with no way to get back down. How do you lift the biggest kid in school? Well, Archimedes, the ancient Greek philosopher who wrote of the power of levers and fulcrums noticed that, so long as the fulcrum (the middle of the teeter-totter that rests on the ground) is firmly fixed, all we would need to do is make your side of the teeter-totter LONGER. And this is true, no matter how heavy the object on the other side is. He then claimed that, if he could just find one single immovable point to serve as a fulcrum, he could place a lever upon it and move the entire Earth.

Descartes says that he is metaphorically looking for something similarly fixed. If he could just find that one certain thing, he says, he could hoist ALL of our knowledge upon it.

The method of doubt: In order to pursue his project, Descartes begins by rejecting any belief that is not completely certain, so that he can build up truth ONLY from those beliefs that ARE certain. He writes,

I will ... [put] aside everything that admits of the least doubt, as if I had discovered it to be completely false. I will stay on this course until I know something certain, or, if nothing else, until I know for certain that nothing is certain.

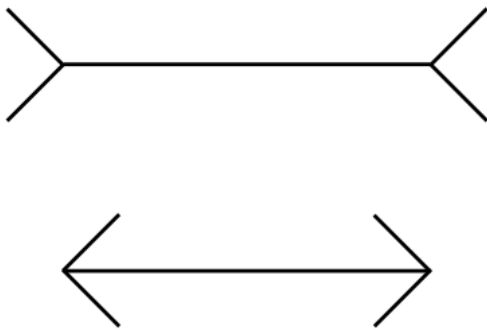
• **Doubting the Senses.** We have already seen reason to believe that our senses are not always reliable. So, our senses are at least sometimes doubtable. But, just to drive home the doubting, consider some more cases in which we know for certain that the senses are misleading. Ever seen a mirage?



Above, it looks as if there is water on the ground in the distance, when there is not. Or, how about this glass of water? When you immerse a pencil or a stick in water, it looks bent or disconnected, even though it is perfectly straight.



Now look at the lines below and ask: Which one is longer?



The top line appears to be longer, when in fact they are both the same length. Don't believe me? Go get a ruler!

Here's a great album cover:



Does the pattern above appear to be breathing? It isn't. It's perfectly motionless.

Now stare at this [Dancing Girl](#) illusion for a while. Which way is the dancer spinning?

About 50% of people say she's spinning clockwise, and 50% say she's spinning counter-clockwise. For some people, she changes direction repeatedly without warning. Don't believe me? Stare at her a little longer and see if you can get her to change directions.

In reality the figure is a merely 2-dimensional silhouette of someone spinning—and this silhouette looks the same no matter which direction someone is spinning—but our brains IMPOSE 3 dimensions on the image and, to make sense of this third dimension of depth and the appearance of spinning, also imposes a DIRECTION upon that spinning.

• **Am I Dreaming?** But it gets worse. In the past, I have had dreams that were SO VIVID that I could not tell at the time that they weren't real. In fact, there is no way to be certain that you are not dreaming NOW. Therefore, NOTHING that our senses tell us is certain. For all I know, I am NOT surrounded by desks and students—I might just be dreaming... So, ALL of my senses are ALWAYS doubtable!

Or, alternatively, it is possible that an evil demon is deceiving me. Such an evil genius could deceive me into believing that I am living a real life, and that I am a teacher who studies philosophy—but in reality my life is nothing like that at all, such that ALL that I presently believe to be true is actually false.

Conclusion: Therefore, it seems that, perhaps, there is NOTHING that is certain.

If that is true, then we should not claim to "KNOW" anything! For, according to Descartes, we should be agnostic about everything (or, "withhold assent"), unless it is known with certainty.

Descartes: I Think, Therefore I Am

That one certain thing is that "I exist": Next, Descartes asks whether, if ALL truths are uncertain, is it even uncertain whether or not he exists?

Reply: A-ha! As soon as he doubts his own existence, Descartes realizes that his own non-existence is impossible. For, if his own existence is doubtable, then SOMETHING must be doing the doubting. Thus, doubting one's own existence is IMPOSSIBLE. Consider this question:

Question: Is it doubtable that I exist?

No: Then I DO exist.

Yes: Then DOUBT OCCURS, and we'll call the thing that is doubting ME. Either way, "I exist" must be true. In short, if I doubt something, then the very act of doubting affirms that something exists; namely, ME, the thing that doubts. So, "I exist" is necessarily true. Whenever I assert or conceive of this statement, it affirms itself. To deny such a thing would be self-defeating, for SOMETHING must exist in order to do the denying. Therefore, I know for certain that I AM. And doubt is just one of the many forms of thinking.

Descartes concludes: "**I think, therefore I am.**"

What am "I"?: With Descartes, I may affirm that SOMETHING exists, and I call this thing "me" or "myself", but what IS this thing? In other words, *what am I?*

As we have seen, all of the material objects in the world are doubtable—and yet I cannot doubt my own existence. So, I must not be a material object.

But, what about thinking? Could I be deceived into thinking that I am thinking, when in fact I am not thinking at all? No! That is impossible. Therefore, at the very least, THINKING exists.

So, what am I? "I" am a thinking thing. The existence of my thoughts cannot be doubted. Furthermore, their very existence affirms MY existence. And this includes ANY form of thought (doubting, understanding, affirming, denying, willing, unwilling, imagining, and sensing). Every time any of these things occur, their existence—and therefore MY existence—is certain.

So, even though the THINGS that I seem to perceive with my senses may or may not actually exist, it is nevertheless the case that THE FACT THAT I SEEM to be seeing tables, chairs, hands, and colors, etc. is certain and undoubtable.

Consider: If I say, "I am in pain", there is NO WAY that you can be mistaken about this. If you FEEL that you are in pain, then you ARE in pain—and no one can take this fact away from you. All that is doubtable is the SOURCE of that pain. We cannot be absolutely CERTAIN that the thing that is "out there" in the world that you think is causing your pain is really out there. For instance, you might think that the source of your pain is a knife with which you have just accidentally cut yourself. But, you MIGHT be dreaming, in which case there is no knife at all. So, the knife is doubtable. But, the PAIN is not. If you are having an experience of pain, then you are having an experience of pain. End of story.

He writes,

While we thus reject everything we can possibly doubt, and feign that it is false, it is easy to suppose that there is no God, no heaven, no bodies, and that we have no hands, no feet, indeed no body; but we cannot in the same way conceive that we who doubt these things are not; for there is a contradiction in conceiving that what thinks does not, at that same time as it thinks, exist. And hence this conclusion I think, therefore I am, is the first and most certain that occurs to one who philosophizes in an orderly way.

Re-Building All Knowledge Upon This Foundation: Building upon this one certain thing, Descartes goes on to offer a proof for the existence of God – a version of the argument called "The Ontological Argument". But, if God is certain to exist, then we can also be certain that our experiences are genuine. For, a good God would not allow us to be constantly deceived. This is how Descartes goes on to explain how we can know things about the external world outside of our heads.

But, rather than examining Descartes' argument, let us consider another approach, taken from the 20th century.

A Contemporary Argument: The Brain in a Vat

The brain in the vat: Consider the following scenario:

- You stumble upon a secret laboratory full of scientists. A friend of yours lies unconscious on an operating table. The scientists are removing his brain. They submerge the brain in a vat of fluid nutrients, and then attach various wires to the brain. The scientists see you, and one of them begins to speak:

"We have the ability to stimulate this brain to make it think whatever we want it to think," the scientist says. "Right now, your friend thinks he is walking to work. But, he is not. The things that this brain is experiencing are all merely the result of a computer simulation—but one that is SO real, that one cannot tell it apart from reality. Your friend thinks he is arriving at work now, but—as you can see—he is actually lying on an operating table without his brain."

You are stunned, and don't know what to do. Before you can even grapple with what you've just been told, the scientist says one more thing:

"Actually, that is not the whole truth. The truth is that none of THIS is real. Nothing you are experiencing RIGHT NOW is real. For, we abducted you three months ago and removed YOUR brain. Right now, your brain is actually submerged in a vat of nutrients, being stimulated by a computer program to make you think that you are seeing your friend having his brain removed. We figured that programming this experience for you was the easiest way to let you know what we've done to you. And now you know the truth."

Question: What would you do if this happened to you? Would you believe them? How could you know for sure if they were lying? If the computer is really capable of making you experience a reality that is JUST AS REAL as the REAL reality—as the scientists claim—then life in the vat would be indistinguishable from life in reality. You would have no way to prove them wrong.

Skepticism: Furthermore, for all you know, perhaps it is the case that YOU are merely a brain in a vat RIGHT NOW, and nothing you experience is real. How would you be able to know if you weren't? Ask yourself this:

Do you KNOW that you are not dreaming, or a brain in a vat, right now? If so, how?

There seems to be NO WAY for you to **prove** with absolute certainty that the things you are experiencing right now are real. This concern results in something like the following argument for skepticism about the external world:

1. If you do not know that you are not merely a brain in a vat, then you do not even know that you have hands.
2. You do not know that you are not merely a brain in a vat.
3. Therefore, you do not know that you have hands (nor, in fact, ANYTHING about the things in the world around you; the objects of your experiences).

G.E. Moore – A Refutation of Skepticism

If external world skepticism is true, then we cannot know that anything in the outside world exists—even our own hands!

But, the argument above has a certain form – it is called a “conditional argument”. And conditional arguments have TWO valid forms. Consider:

Argument #1:

1. If someone is old enough to drive, then they are at least 16 years old.
2. Frank is old enough to drive.
3. Therefore, Frank is at least 16 years old.

Argument #2:

1. If someone is old enough to drive, then they are at least 16 years old.
2. Frank is NOT at least 16 years old (rather, he is only 12).
3. Therefore, Frank is NOT old enough to drive.

Notice that both of these arguments are good ones. The conclusion MUST follow from the premises. They have the following format:

Argument #1 (modus ponens)

1. If P, then Q
2. P
3. Therefore, Q

Argument #2 (modus tollens)

1. If P, then Q
2. Not Q
3. Therefore, not P

Both arguments have exactly the SAME first premise. Only premise 2 differs. But, both arguments cannot be right. Only one of them can be.

Philosopher G.E. Moore noticed this, and suggested that, while the argument for SKEPTICISM takes the form of Argument #1 (modus ponens), ANOTHER argument can be offered which takes the form of Argument #2 (modus tollens). Namely, this one:

1. If you do not know that you are not merely a brain in a vat, then you do not even know that you have hands.
2. You DO know that you have hands.
3. Therefore, you DO know that you are not merely a brain in a vat.

So, we have two competing arguments—but only ONE of them can be right. But, the only difference in the premises of the two arguments is premise 2 (for, their first premise is exactly the same). So, we must decide between these two claims:

2. You do not know that you are not merely a brain in a vat.

OR

2. You DO know that you have hands.

Moore argues that, whenever we are trying to decide between two conflicting premises, we should go with the more plausible one. But, it is FAR more plausible that I do have hands than it is that I am merely a brain in a vat. So, we ought to accept the second argument rather than the first.

This strategy is a common one and is actually known as “The G.E. Moore Shift.” Notice that, unlike Descartes, the emphasis here is not placed on CERTAINTY. If we demanded absolute CERTAINTY for knowledge, then we would know very little.

And this seems to be more in line with how we use the word “knowledge” in everyday language. For instance, if someone asked, “Do you know that there is a desk in front of you?” you would respond, “Yes, of course!” But, then, if they came back and asked, “Do you REALLY KNOW that there is a desk here? You might be dreaming. Or hallucinating.” You might respond, “Well, I can’t KNOW FOR SURE that there is a desk here, but I have a pretty good idea that there is one.”

Here, “knowledge” is being used in two different ways. We MIGHT insist that knowledge requires ABSOLUTE 100% CERTAINTY. But, that seems too strict. Rather, it seems that knowledge refers to something like “All evidence points in this direction, so my best estimate is that there IS a table here.”

Moore says that Skeptics are confused, thinking that, in order to KNOW something, one needs to be able to PROVE it. Moore claims that he KNOWS that “here is a hand” is true, though he can’t PROVE it (because he can’t prove that he is not dreaming, for instance). But, Moore notes, there are LOTS of things that we know without being able to prove them. For instance, I *know* that I spilled some coffee yesterday, that Hydrogen has one proton, and that I have two hands—though I cannot *prove* any of these things.

People CONSTANTLY take the sort of argument he has just provided as the only sort that is ever needed in order to establish some conclusion. For instance, imagine that you and your friend disagree about whether or not there is milk in the refrigerator. In order to settle the dispute, all that you need to do is open the refrigerator. “Here is some milk

in the refrigerator," you say, while pointing to the milk. "Therefore, there is milk in the refrigerator." What more could possibly be needed?

But You (Probably) Aren't Real: That is all well and good. Even someone in a computer simulation would THINK that they have hands, and would THINK that the world around them was real, rather than a computer-generated simulation. Moore suggests that the best we can do is believe our senses.

But, what if there were some evidence that you probably ARE living in a computer simulation right now? Wouldn't that be evidence that we SHOULD doubt our senses?

Consider: In the near future, we will probably develop the technology to create real, fully conscious, free-thinking intelligent beings who exist solely inside of computers (like in the film "Her"). It is quite probable, then, that in the near future, every REAL human being will have one or even hundreds or THOUSANDS of artificially intelligent, conscious beings "living" in their computers or video game consoles.

Now, if, say, 2 billion people end up having 1,000 AI's living in their computers, there would be 2,000 billion AI's in the world. But, then, the total of real people who have EVER lived is only ~100 billion. So, out of the entire collection of conscious, intelligent beings that ever live on the face of the Earth, the number of artificial intelligences might outnumber the REAL intelligences by 20 to 1. But, then, given that YOU are an intelligent, conscious being, the odds of you being one of the REAL intelligences is only about 5%. Therefore, you are probably only an artificial intelligence, living in something like a 12 year old's xbox.