

# Question Re Thermodynamics And Deductive Reasoning v. Empiricism

**Post by "Cassius" of October 3, 2019 at 8:52 AM**

It is an observation that the senses are all we have to work with, and that our choice is either to use them intelligently or essentially despair and go live in a cave and die. You are stating a huge epistemology issue that we ought to develop and be very clear about. Because there are certain things that are outside our power to observe, do we then sit down and cry and say that "anything goes"? Or do we with confidence embrace the tools that we have and use them to the best of our ability?

Much time is spent on this issue in Book 4 of Lucretius as it is basically the same issues as the "illusion" question. We know that we are imperfect and that the senses can provide perceptions that are at times distorted. Do we then throw up our hands to imaginary gods to save us from our weakness? No!

That's what is being discussed in this passage from Lucretius Book 4:

"The sun, to Mariners, seems to rise out of the sea, and there again to set and hide his light; for they see nothing but the water and the sky; but therefore you are not to conclude rashly that the senses are at all deceived.

To those who know nothing of the sea, a ship in the port seems disabled, and to strive against the waves with broken oars; for that part of the oar and of the rudder that is above the water appears straight, but all below, being refracted, seems to be turned upwards, and to be bent towards the top of the water, and to float almost upon the surface of it.

So when the winds drive the light clouds along the sky in the night, the moon and stars seem to fly against the clouds, and to be driven above them in a course quite opposite to that in which they naturally move.

And if you chance to press with your fingers under one of your eyes, the effect will be that every thing you look upon will appear double, every bright candle will burn with two flames, and all the furniture of the house will multiply and show double; every face about you, and every body, will look like two.

Lastly, when sleep has bound our limbs in sweet repose, and all the body lies dissolved in rest, we think ourselves awake; our members move, and in the gloomy darkness of the night we think we see the sun in broad day-light, and, though confined in bed, we wander over the heavens, the sea, the rivers, and the hills, and fancy we are walking through the plains. And sounds we seem to hear; and, though the tongue be still, we seem to speak, when the deep

silence of night reigns all about us.

Many more things of this kind we observe and wonder at, which attempt to overthrow the certainty of our senses, but to no purpose - for things of this sort generally deceive us upon account of the judgment of the mind which we apply to them, and so we conclude we see things which we really do not; for nothing is more difficult than to distinguish things clear and plain from such as are doubtful, to which the mind is ready to add its assent, as it is inclined to believe everything imparted by the senses.

Lastly, if anyone thinks that he knows nothing, he cannot be sure that he knows this, when he confesses that he knows nothing at all. I shall avoid disputing with such a trifler, who perverts all things, and like a tumbler with his head prone to the earth, can go no otherwise than backwards.

And yet allow that he knows this, I would ask (since he had nothing before to lead him into such a knowledge) whence he had the notion what it was to know, or not to know; what it was that gave him an idea of Truth or Falsehood, and what taught him to distinguish between doubt and certainty?

But you will find that knowledge of truth is originally derived from the senses, nor can the senses be contradicted, for whatever is able by the evidence of an opposite truth to convince the senses of falsehood, must be something of greater certainty than they. But what can deserve greater credit than the senses require from us? Will reason, derived from erring sense, claim the privilege to contradict it? Reason - that depends wholly upon the senses, which unless you allow to be true, all reason must be false. Can the ears correct the eyes? Or the touch the ears? Or will taste confute the touch? Or shall the nose or eyes convince the rest? This, I think, cannot be, for every sense has a separate faculty of its own, each has its distinct powers; and therefore an object, soft or hard, hot or cold, must necessarily be distinguished as soft or hard, hot or cold, by one sense separately, that is, the touch. It is the sole province of another, the sight, to perceive the colors of things, and the several properties that belong to them. The taste has a distinct office. Odors particularly affect the smell, and sound the ears. And therefore it cannot be that one sense should correct another, nor can the same sense correct itself, since an equal credit ought to be given to each; and therefore whatever the senses at any time discover to us must be certain.

And though reason is not able to assign a cause why an object that is really four-square when near, should appear round when seen at a distance; yet, if we cannot explain this difficulty, it is better to give any solution, even a false one, than to deliver up all Certainty out of our power, to break in upon our first principle of belief, and tear up all foundations upon which our life and security depend. For not only all reason must be overthrown, but life itself must be immediately extinguished, unless you give credit to your senses. These direct you to fly from a precipice and other evils of this sort which are to be avoided, and to pursue what tends to your security. All therefore is nothing more than an empty parade of words that can be offered against the certainty of sense.

Lastly, as in a building, if the principle rule of the artificer be not true, if his line be not exact, or his level bear in to the least to either side, every thing must needs be wrong and crooked, the whole fabric must be ill-shaped, declining, hanging over, leaning and irregular, so that some parts will seem ready to fall and tumble down, because the whole was at first disordered by false principles. So the reason of things must of necessity be wrong and false which is founded upon a false representation of the senses."