

# The contribution of natural sciences

[Science](#)



The contribution of Natural Sciences to knowledge is undoubtedly enormous. Methodologies of Natural Sciences have helped scientists and us to understand better what drives us as human beings, how our planet has evolved and even what the universe will look like. There have been cases where scientific hypothesis were seen as completely ridiculous and even dangerous because they did not fit in the dominant way of thinking.

Methodology is the justification of methods or research used in a particular area of study, in this case the methodology of Natural Sciences. Natural Sciences is a branch of science which deals with the physical world, so in this case it would be the methods used in Geology to understand climate change. This think piece will focus on the limitations of sense perception and emotion and the extent to which the Natural Sciences "corrects" them. The methodology of Natural Sciences plays a huge role in acting as a corrective to the errors that arise in personal knowledge.

Sense perception is one of the Ways of Knowing (WoK) that plays an important role within Natural Sciences. Sense perception is used as a foundational means to understand most phenomena that occurs in our environment. Without sense perception, we would not be able to gain knowledge that is shared within the Natural Sciences.

There is one method that fits well with sense perception in Natural Sciences, and that method is the Scientific method; a method of procedure that has characterized natural science. Scientists use observation, hypothesis, experiment, and conclusion, in order to test and understand the Climate Change.

Scientists' investigation starts with observations through their senses, and using the data they collect from their observations they are able to make conclusions of what is happening within our planet due to Climate Change. For example, an article I read on Climate Change, called, " Union of Concerned Scientists - Science for a Healthy Planet and Safer World," had ten prominent global warming skeptic organizations that talk about their disinformation efforts and funding sources from the fossil fuel industry.

Many of the claims were made about how " global climate change is inevitable," " global climate change is real," or " the planet is warming," etc... Even if these claims are false or misleading, there is still some sense perception involved. What I mean is, before these organizations claimed their claims, someone had to observe what they saw or heard using their senses or at least do some background research and observe that.

They could not just give a conclusion or claim without actually having some background knowledge or understanding of the particular subject that needed to be investigated. Another example, a first-hand example could be: when I cook supper at home. Before I serve supper, I need to make sure the result of the supper made is and looks right and I need to use my senses in order to do that. I need to use my visual sense to make sure the supper looks good, so not burnt.

I need my olfactory sense to make sure it smells good, so again not burnt, moldy, or bad. I also need my gustatory sense to make sure it tastes good, so to make sure there is enough ingredients like salt and pepper. When all of

this thing are fine then I know that, according to my observations and data collection of my supper, it is ready to be served and eaten.

Although sense perception plays an important role in sharing knowledge within the Natural Sciences, it has some limitations. Sense perception is more of a System 1 thinking and therefore could also be misinterpreted. System 1 thinking is an automatic, fast and often an unconscious way of thinking.

It is autonomous and efficient, requiring little energy or attention, but is prone to biases and systematic errors. Sometimes our senses makes us believe something is there even though it really is not. To what extent are we or scientists sure that what we are sensing is true? When we use sense perception in Natural Sciences we use system 1 thinking. This is by when we observe things, we automatically observe so fast that we never really take the chance to slow down and think about if what we observed is correct. This is how it leads us to systematic errors.

Also, this is why sometimes when we sense things and then predict what we sensed, the results would most likely end up being false. For example; In chemistry, when we do labs then most of the times we use system 1 thinking. For instance, when we observe the solution and record the time and temperature at the same time, you have to use system 1 thinking.

Your senses have to quickly observe what is happening at what time, otherwise your data would have a huge amount of error. Although, you would still get some systematic error, but not as much as you would if you

used system 2 thinking; slow and conscious way of thinking, creates less errors.

Sense perception could also be misinterpreted. Sometimes what you hear, see, smell, taste, or touch can be falsified and can be untrusted. Everyone's senses are different and because of that if one person's observations from their senses are something that doesn't mean that their observations will be the same as the other person's observations from their senses. For example; the data that are collected for Climate Change throughout the years are different depending on what source you look at.

For instance: the graph on the climate. nasa. gov website shows that the current level of carbon dioxide (CO<sub>2</sub>) is 400 parts per million (ppm). Yet, another graphs data, similar to the one from the website, from " How We Know Global Warming is Real and Human Caused," article by Donald R. Prothero shows that the current level of CO<sub>2</sub> is approximately 381 ppm, which is not a huge difference from the one on the website.

However, if the effect of these results was observed and recorded by two different scientists, then we can say that because every individual's senses are different, their observations and data would be different. Just because one scientist believed that his observations were right, that does not mean that it is true.

Every scientist will have different observations and data because their sense perception is different. This is where sense perception could be misinterpreted. This also means that there are several other different data based on Climate Change, that were observed and recorded by different

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scientists, so how do we know which data is correct and to what extent is it true that, that data is the correct one?