

## COMMENTARY

# Science That Swears by Objectivity Is Half-Blind

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## Abstract

Whatever is deemed to be objective, is in the final analysis, the subjective opinion of an individual. Thus science, by its very origin, has a subjective element. Common sense allows a balanced approach, where objectivity and subjectivity are treated equally without any bias. Even mathematical equations that appear objective, have a subjective element, the classic example being the equations of quantum mechanics. There are enough reasons to consider objectivity and subjectivity on an even scale. Great scientific discoveries have been made based on intuition (which is subjective), which has been further pursued with objectivity and common sense.

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## Science that swears by objectivity is half-blind

It is widely understood that science is knowledge that is based on a systematic and objective study of the natural world. However, such a study is conducted by the human being, who is a combination of objectivity and subjectivity. Whatever is deemed to be objective, is in the final analysis, the subjective opinion of an individual. Thus, there can be no objectivity without an element of subjectivity.

Thus science, by its very origin, has a subjective element. Though its boundaries are not clearly defined, science has proved to be immensely useful to mankind and has been the basis of great technological progress. This has been possible because the human being is endowed with a third quality, which is common sense.

Common sense allows a balanced approach, where objectivity and subjectivity are treated equally without any bias. Without common sense, scientists can lose touch with reality and end up building castles in the air. Objectivity is the engine of science but subjectivity is the rail on which it runs.

The tendency to become too objective is the bane of science. It can stall meaningful progress and makes the scientist and science to go around in circles. Usually, any new discovery in science is considered 'scientific' only if it can be shown to be true in the form of some mathematical equation. But the subtle point here is that even mathematical equations that appear objective, have a subjective element.

The classic example is the case of quantum mechanics (which is about indeterminism in physical laws). It is well known among physicists that the equations of quantum mechanics 'work', but all agree that it is not known 'how they work'. There is general conclusion that it is not necessary to understand 'how they work', but nevertheless it makes sense to use the equations since they actually 'work' in the real world. <sup>[1]</sup>

There is another aspect of science that is less well known. It has become an established norm that any scientific argument needs to be supported by 'objective' evidence. Something is accepted as objective if several people subjectively agree that it is 'objective'. However, a rational argument based on 'evidence' perceived within one's subjective 'experience' and supported by several people who agree with a similar 'experience', is dismissed as being 'merely subjective'.

There are enough reasons to consider objectivity and subjectivity on an even scale.<sup>[2]</sup> Scientists who swear by objectivity and reject subjectivity do a great disservice to the progress of the 'search for truth in the natural world' if that is what science is about. Albert Einstein has famously said that 'imagination is more important than knowledge'. <sup>[3]</sup> Great scientific discoveries have been made based on intuition (which is subjective), which has been further pursued with objectivity and common sense. To swear by objectivity can be a personal choice but science cannot remain half-blind for that reason.

## References

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