Review of: "Science That Swears by Objectivity Is Half-Blind"

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This manuscript discusses the issue of scientific objectivity, a topic that has long been a subject of significant debate. I read it with great interest. However, the manuscript suggests that objectivity inherently includes subjectivity, which contradicts scientific reality. The authors write:

“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."

The subjectivity mentioned here refers to the researcher’s/scientist’s creative capacity, which itself is a product of the objective knowledge accumulated by science. Science progresses through accumulations and breakthroughs (discoveries, innovations). A well-trained scientist, who closely follows this accumulation, is the one who realizes a discovery or innovation that was already on the verge of being found. A good example of this is the discovery of the structure of DNA. As is well known, by the early 1950s, humanity’s accumulated knowledge had reached a point where the discovery of the DNA structure was imminent. Francis Crick, James Watson, and Rosalind Franklin were working with molecular models to determine the structure of DNA. But there was another scientist using the same methodology: Linus Pauling, who elucidated the secondary structure of proteins and won the Nobel Prize in Chemistry in 1954. There was a race, and the Crick-Watson-Franklin team won it. If the DNA structure had not been discovered by the Crick-Watson-Franklin team, it would certainly have been discovered by Pauling or other scientists. This is the result of objective scientific knowledge accumulation.

Science is entirely objective and must be so. Here, objectivity refers to the fact that scientific knowledge is based on proven facts. A research study should yield the same results when repeated under similar conditions by other scientists. This is scientific testability or reproducibility. There is no room for bias, emotions, or beliefs in this process. However, during the scientific research process, a researcher may become attached to their hypothesis and, in a subjective tendency to validate it, may deviate from objectivity. If one relies on subjective thinking rather than evidence, the scientific literature becomes polluted, but "facts are stubborn things," and this subjective stance will eventually be exposed.

The author also writes the following about objectivity in science: “Something is accepted as objective if several people subjectively agree that it is ‘objective’.” I believe this assessment is also incorrect. Here, validation or acceptance is based not on the subjective assessment of individuals, but on scientific evidence.

On the other hand, there are concepts of “absolute truth” and “relative truth” in science. Some truths or facts accepted today may be found to be false tomorrow. However, over time, with new scientific knowledge, “the pieces will fall into place,” relative truths will be weeded out from science, and absolute truths will take their place. Charles Sidney Burwell, who served as the Dean of Harvard Medical School between 1935 and 1949, said to his students: “Half of what we are going to teach you is wrong, and half of it is right. Our problem is that we don't know which half is which.”

Indeed, this is how science progresses.

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