

Review of: "Objectivity and Honesty in Science: The case of Light Interference Phenomena"

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Potential competing interests: No potential competing interests to declare.

"Objectivity and Honesty in Science: The case of Light Interference Phenomena" is an interesting work about a crucial step in our understanding of light and its nature, whose goal is "to demonstrate that a variety of human behaviours and a variety of human feelings could have a drastic impact on Science. Or to be more precise, on scientific choices" (p. 20).

Another commentator has already pointed out that this is quite obvious, for science is a human endeavour and presents all the limits of any human enterprise. The author intends to show "that History of Science must absolutely be embedded in a whole social context: it must not only take into account policy or economic situation of a country, it must also consider human feelings and relationships between people among a community" (p. 5). But is that really so ?

According to James Secord, "historians of science do not simply chronicle progress towards the present, nor do they search for the origins of a one-size-fits-all scientific method. Instead, they ask how discovery became identified as a key feature of science, and how different methods have arisen in different subjects".^[i] Despite the interference of human nature and its weaknesses, that Carole Nahum points out in the text, some idea of progress in science arises even in her study. Yes, Thomas Young did not get the recognition he deserved, in his life. Nor did Augustin Fresnel. But we are all well aware of the importance of their works now. Historical processes usually take longer (even much longer) than a lifetime. Young and Fresnel are but two individuals of a countless list of scientists who did not get any honour nor recognition during their life. Still, science evolved, quite often thanks to the contribution of people whose works were not understood or appreciated at the time they took place. Should historians of science deal with the reasons why a particular scientist received the honours they deserved, while others did not? Albert Einstein became a sort of popstar when he lived in the United States; Galileo Galilei had a different fate, as we all know. And yet, they are both considered as key figures in the history of science now, because of the extraordinary contributions they have given to our understanding of the world surrounding us. And this is what counts, to historians of science.

Should we then ignore that science is a human enterprise and, as such, prone to errors and affected by all the limitations that we humans have? Of course not. But that depends on the perspective on science we are talking about. Philosophy of science is one field of study that deals with the human limitations – think of the 'eternal' debate between empiricists and realists. Still, the human limitations we are talking about here are not what Nahum has in mind. No room for talks about jealousy, rancor, friendship, etc. in the philosophical debate about science.

Sociology of science is the field that deals with social influences on the content of scientific knowledge. My guess is that researchers in this area might find some inspiration in Nahum's reconstruction of the history of the study of the

phenomenon of light interference, that I take to be accurate – despite some passages where she is clearly just trying to guess the feelings of the authors she mentions. I would not dare telling historians what they should do though.

[i] James Secord, “What is the history of science?”, URL <https://www.thebritishacademy.ac.uk/blog/what-is-the-history-of-science> (Last access: June 29th, 2023)