

Science is dealing with paradoxes

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I regularly hear people say that economics and (other) social sciences are not real sciences. In such cases, "real science" refers to physics and chemistry in particular. Mathematics and sometimes even philosophy and especially logic are then "tolerated" as auxiliary sciences. I also regularly come across this view in books, in which case it is almost always ignored that these books are full of opinions that lose their scientific claims precisely because of this "no real science" view. What is wrong with these views?

Science is a practical approach to reducing uncertainty. Born out of fascination for what we don't understand, her goal is to kill this very same fascination. Oscar Wilde wrote in 1898 "Each man kills the thing he loves" and that is hardly anywhere more true than with regard to the scientific approach. No problem, however; for every aspect that we really learn to understand, there are usually at least 10 new aspects (problems) that we understand even less. For every "killed" love, 10 new lovers' yearns await. The comparison with Pandora's Box applies here (why should science be loyal?) The scientific approach is full of paradoxes. Our need for (more) certainty (knowledge) and control is also greatest where our lack of insight is also greatest. And, as can be guessed, that is precisely in economics, education, and the social sciences. Usually it isn't in natural science. Pointing out the unscientific nature of econometrics (models only work if nothing really changes, which of course is never the case) is too easy, certainly from the ivory tower of the natural sciences. In the meantime, physics has proven that more insight certainly does not always lead to wiser action and a better world. And I'm certainly not just thinking about the atomic bomb.

Of course it is possible that the scientific method no longer works, although it has led to much progress since it came into vogue in the

sixteenth and seventeenth centuries. Social scientists still have the hope that the triumphal march that the natural sciences have made is still ahead of them. But perhaps it is more obvious to establish that insight into how something works under strict conditions, does not (or not sufficiently) help to find a good working remedy or approach. In oncology, for example, there has been an enormous increase in scientific insight, but many people still die of cancer every day. Apparently, more insight did not lead to real or overall control. And even in the natural sciences, the question is whether

we can actually control the world with our insights. Threat after threat (for example the climate crisis and total war) threatens our planet and therefore our survival. The threat is getting bigger every day.

Another point is that the scientific method is critical as to how problems should be organized in order to let it make sense. But the real (economic, social and educational) world does not always offer us features and challenges that can be measured and counted by the far developed scientific means. The more uncertainty, the more the need for knowledge, the easier the discrepancy between the studied phenomenon and the measured aspects thereof. In other words, because of this, it's clear that science does not help here. Pointing out that educational science, economics or social science, for example, are no sciences is enormously easy and factually incorrect in this aspect. The cheapest conclusion is that science fails here. But, is there an alternative to the scientific method? Anyway, education and creativity are needed, even more than ever before!

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