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What is science's crisis really about?

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Abstract

Present day reasoning about difficulties in science reproducibility, science governance, and the use of science for policy could benefit from a philosophical and historical perspective. This would show that the present crisis was anticipated by some scholars of these disciplines, and that diagnoses were offered which are not yet mainstream among crisis-conscious disciplines, from statistics to medicine, from bibliometrics to biology. Diagnoses in turn open the path to possible solutions. This discussion is urgent given the joint impact of the crises on public trust in institutions. We ask whether the present crisis may be seminal in terms of drawing attention to alternative visions and governance arrangements for the role between science and society. We finish by offering a number of suggestions in this direction.

1. Crises recognized and unrecognized.

Many articles have been written on the crisis in science's reproducibility, science's governance, and the use of science for policy. Still a clear identification of the root causes of the present situation seem to have eluded most commentators. A discussion of those causes is urgent given the public impact of the crisis on trust in institutions. We argue that:

- Science's crisis is real, encompassing roles and social functions of science.
- The mainstream interpretation of the root causes of the crisis is insufficient, and needs to be complemented with the insight offered by some scholars who anticipated the current predicament.
- The root causes of the crisis include profound transformations of society and science's role in society. In this situation, scientists cannot hope to resolve the problem alone as they have contributed to create it in the first place, and have high stakes in the preservation of the status quo.

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