

Calls for Papers

PURSUITWORTHINESS IN SCIENTIFIC INQUIRY: special issue of *Studies of History and Philosophy of Science, Part A*, deadline 1 May.

CLASSIC METHODOLOGIES IN THE PHILOSOPHY OF SCIENCE: special issue of *Journal for General Philosophy of Science*, deadline 30 April.

WHAT'S HOT IN . . .

Science Policy

11th of February is the International Day of Women and Girls in Science. This was an occasion to cherish female researchers and the improvements towards equality, but also to remind ourselves that there is still a lot of work ahead of us. One important aspect that we should focus on is the fact that we are still witnessing discrimination against LGBTQ+ scientists. For instance, Cech and Waidzunas (2021, *Science Advances* 7, eabe0933) showed that LGBTQ+ scientists experience career limitations, mental health difficulties, and are more likely to leave natural sciences. Moreover, we should keep in mind that the distinction between genders is fluid and respect the personal choices in this matter. Apart from radical problems such as sexual harassment, there are many other reasons why female scientists might feel uncomfortable at their workplace. They report lower satisfaction with their jobs and face more obstacles when it comes to career advancements in academia. These differences in treatment go very deep. Studies even show that women on average get less physical office space than men (<http://museum.mit.edu/150/71>).



Gender balance is not achieved by a simple numerical proportion. Even in a situation when the number of male and female researchers is equal, it is very important to check what is the dominant communication culture in a field or research group. In academic cultures that are designated as aggressive or masculine, female researchers will feel discouraged to express their opinions, and thus participate less with their ideas in the scientific discourse. This has negative consequences to the whole community as a diversity of opinions, approaches, and experiences enriches science.

The role of men in achieving a balanced and inclusive environment is very important. The positive example of Pierre Curie is an inspiration to us all. He supported Marie Curie's scientific success and even wrote a letter announcing that she deserves scientific credit when he was considered for a Nobel Prize (Pycior 1993, *Social Studies of Science* 23(2) 301-323). Men can always use their voices to promote women in society and act in supportive ways.

The COVID-19 crisis brought to light another aspect of inequality between female and male researchers: the traditional picture of females spending more time with children than males

reflected itself in the scientific output of female scientists during the school and kindergarten lockdown (Gewin 2020, *Nature* 583, 867-869). More active participation of men in home duties, equal distribution of obligations, and time spent with children would help to overcome such scenarios in the future.

Inclusion is the dynamic adaptation of the dominant environment and its shift towards a balanced one. This means shifting the dominant culture in science to a more open, less authoritarian, and more tolerant one. In return, not only that the ideas of underprivileged scientists will be more prominent, but the community and work environment will be more pleasant for all genders. This should facilitate our transition to the desired gender-neutral workplaces.

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Evidence-Based Medicine

As its name suggests, Evidence-Based Medicine (EBM) is a medical methodology relying on evidence, where, traditionally, this evidence is a statistical correlation between a disease and its cause established through association studies like clinical or observational trials and confirmed through systematic review and meta-analysis e.g., Howick (2011: *The Philosophy of Evidence-Based Medicine*).

However, more recently, evidence of a mechanism linking the disease and its cause has been added to the EBM approach (e.g., on EBM+, Parkkinen, Wallmann, Wilde, Clarke, Illari, Kelly, Norrell, Russo, & Williamson. *Evaluating Evidence of Mechanisms in Medicine: Principles and Procedure* 2018, and Hauker-Howlett, & Wilde, "Reinforced Reasoning in Medicine", 2020, *Journal of Evaluation in Clinical Practice* 26: 458-464). How much useful is EBM+ with respect to the new SARS-CoV-2 pandemic? This question has attracted, and is still attracting, a lot of scholars and scientists from many diverse backgrounds. The internationally reputed *Journal of Evaluation in Clinical Practice* has very recently included a certain number of papers addressing this question. Among those papers, one can find the following multi-authored paper: Aronson, Hauker-Howlett, Ghiara, Kelly, & Williamson, "The Use of Mechanistic Reasoning in Assessing Coronavirus Interventions", *Journal of Evaluation in Clinical Practice*, forth. In this paper, the authors argue that, when assessing causal claims in the case of an infectious disease like COVID-19, it is insufficient to rely merely on association studies; clinicians must also rely on mechanistic reasoning. In a nutshell, COVID-19 is here used as an example for the fruitfulness of an EBM+ approach, which combines association and mechanistic studies.



The authors' main line of argumentation is as follows: (i) the reliance on association studies for assessing the effectiveness of causal interventions on the coronavirus disease is insufficient, for "[...] correlation is insufficient for causation: a correlation may be attributable to chance, bias, uncontrolled confounders, inappropriately controlled colliders, or relationships other than