

Decision Processes Colloquia

Monday, October 14, 2024

Where: JMHH F 55

When: 12:00 – 1:20 pm

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Where are the self-correcting mechanisms in science?

ABSTRACT:

We often hear the self-correcting mechanisms in science invoked as a reason to trust science, but it is not always clear what these mechanisms are. Some quality control mechanisms, such as peer review for journals, have recently been found not to provide much of a safeguard against invalid claims. Instead, I argue that we should look for visible signs of a scientific community's commitment to self-correction. These signs include transparency in the research and peer review process, investment in error detection and quality control during and after formal peer review, and an emphasis on calibration rather than popularization. We should trust scientific claims more to the extent that they were produced by communities that have these hallmarks of credibility. Fields that are more transparent, rigorous, and calibrated should earn more trust. Metascience can provide scientists and the public with valuable information in assessing the credibility of scientific fields.