

Amsterdam Meta Science Network Seminar, 10 April 2025

VU Amsterdam, Main Building, Forum 4, 15.00 – 16.30

You are cordially invited to the monthly seminar of the Amsterdam Meta Science Network on Thursday, 10 April 2025. The seminar features two talks (abstracts below) with Q&A. Save the date for the upcoming editions: Thursday May 8 and June 13.

How to find the venue: enter the VU Amsterdam main building (De Boelelaan 1105) through the glass doors the main entrance. Go up the stairs on your right-hand side to the 2nd floor. When you are in front of the Aula, take the stairs on your left-hand side down one level. You have now arrived at the entrance to the Forum rooms.

Stephanie Meirmans (Amsterdam UMC) - The function of conducting a direct replication may be different than typically assumed: understanding contextuality and asymmetry

Joint work with Kim Luijken, Patricia C.J.L. Bruijning-Verhagen, Rolf H.H. Groenwold, Annemarijn R. de Boer

Direct replication, i.e. analysis of new data with the same study protocol, has a purpose in checking the reliability of earlier research findings. However, using a medical case study aiming to replicate a previous study to quantify the association between laboratory-confirmed influenza infection and acute myocardial infarction we show that direct replication can have an additional function. We find that identical numerical replication results can be the result of differential effects of biases across different data sources and we draw attention to the risk of asymmetric evaluation in such cases. We then show how exact replications have the important function to bring into focus the contextualities inherent in the generation of research findings. Understanding the contextuality allows for a better and richer understanding of what the results imply.

Rene Bekkers (VU Amsterdam) – Data Availability in NWO/ZonMW Funded Publications: A Reanalysis and Validation Study

Automated algorithmic detection of study characteristics in publications can assist in large scale monitoring of the prevalence of transparency practices. Ultimately, dashboards and

benchmarks of transparency metrics facilitate recognition and rewards for a broad range of quality indicators in science. Crucially, such algorithms should only be used if they are accurate and unbiased. To determine their accuracy I reanalyzed data created by algorithms classifying the availability of data in publications funded by the Netherlands Organization for Scientific Research (NWO) and the agency for medical and health research (ZonMW). I hand coded a sample of 74 publications in the Social Sciences and Humanities domain. The results indicate that the accuracy of algorithmic classifications is 74% for data availability statements and 34% for data use, data creation and data sharing. The publications include more information on data availability than the classifications suggest, and less often share data than the classifications suggest. I discuss the sources of bias in the algorithms and conclude with suggestions for strategies that eliminate biases in algorithms for automated screening of publications.

Paper: <https://osf.io/kgj52>