Coding in public: recognising vulnerability as a barrier to reproducibility

Reproducibility is an important topic and one that is increasingly recognised as necessary for building trust into science and research. However, reproducibility entails transparency and openness which many find challenging as they can make researchers feel vulnerable; being clear about what you have done and why, opens the door to criticism, imposter syndrome, unethical or competitive behaviour and even professional disadvantage. Vulnerability is not easy for anyone but for most the discomfort is generally resolved through experience. However, researchers from marginalised or historically excluded groups will experience the vulnerability in very different ways which go beyond discomfort through to fear and genuine problems. For these researchers, the vulnerability and fears associated with reproducibility can be a very real barrier that prevents already disadvantaged researchers from participating that causes problems when they do participate. These researchers cannot assume that they will enjoy the benefits of established reputations, peer solidarity, or supportive management and instead may feel deliberately excluded from and disadvantaged by research practices that demand reproducibility. This presentation explores the barriers faced by researchers in efforts to be more reproducible, how those barriers may be unevenly distributed, and how research institutions and cultures can make these barriers better or worse. The presentation concludes by arguing that those calling for more transparency, openness and/or reproducibility must consider how the vulnerability and barriers entailed may not be equitably distributed and that they should be advocating for changes that allow everyone to participate in reproducible practices without exposing themselves to unfair risk.