Vortrag:

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Titel: Measuring Effectiveness to Inform Decision-Makers

Abstract: To achieve our goals effectively, we often rely on science for advice. And scientists across many fields — from social science to medicine — test the effectiveness of interventions at achieving our goals, for example, the effectiveness of treatments at curing diseases. When doing so, scientists typically measure and report how effective these interventions are using effect size measures. Such measures quantify how much an intervention changed an outcome of interest when tested. The resulting effect sizes are often used in evidence-based decision-making, ranging from clinical decisions to policymaking. However, such usage faces a serious and underappreciated problem. Even if accurate, effect sizes omit information that can be vital for rational decisionmakers — information about how a tested intervention changed an outcome of interest. I suggest a path forward: Using normative decision theory, we can show precisely in which circumstances and for whom effect size measures provide the information relevant to rational decision-making. In this talk, I illustrate this approach with one widely used effect size measure: the mean difference. Based on my results, I offer advice for how researchers and decision-makers should use mean differences. More generally, understanding when and for whom effect size measures provide all decisionrelevant information both opens new avenues for improving evidence-based decision-making and may help uncover hitherto hidden forms of social injustices in science communication.

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