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## What is mechanistic evidence, and why do we need it for policy?

### **Abstract:**

It has been argued that successful evidence-based behavioral policy must rely on two kinds of evidence, statistical or difference-making evidence and mechanistic evidence. The former is held to be evidence that the behavioral policy brings about the desired outcome, whereas the latter is held to be evidence about *how* the policy does so (e.g., Grüne-Yanoff 2016; Clarke et al. 2014). We agree that mechanistic evidence is useful for extrapolating claims about the effectiveness of a policy. However, we argue that mechanistic evidence should not be understood as evidence obtained by a particular research method, or concerning a given level, such as that of psychological processes, as it is sometimes claimed. The kind of mechanistic evidence needed for extrapolation is evidence about the factors that mediate and modulate the causal connection between the policy lever and the outcome. Such factors can be found at any level, and evidence about them can, in principle, be obtained by any method. Knowledge of these factors contributes to refining judgments about the range and degree of invariance of the causal connection between the policy lever and the outcome. We also show that models of mechanisms, understood as structured representations of difference-making, are needed to bring together evidence about different aspects of the causal structure relevant to the effectiveness of a policy.