Prior beliefs about the evidentiary weight of crime scene data impacts juror verdicts

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Abstract

Jurors operate as legal fact-finders, incorporating multiple pieces of evidence into their decisions. Prior work suggests jurors may not be able to distinguish flaws in scientific evidence (Schweitzer & Saks, 2012) or properly assess the reliability of evidence (Thompson, 1989; Kaasa et al., 2007). However, it remains unclear how much probative value is given to individual evidence types. What prior weights do jurors place on different types of evidence and how do these predict their decisions? We built a Bayesian model of how people weigh individual pieces of evidence and used this to predict guilt ratings. Consistent with previous work, we found people have trouble distinguishing differences in quality among evidence, and assign similar probative value to even flimsy types of evidence. The model also revealed individual weighting of evidence can exert large, and sometimes problematic effects on decisions to convict. We discuss the implications of our findings for legal decision-making.