

Can Psychiatry Make Causal Claims?
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The Russo-Williamson Thesis (RWT) maintains that, for a causal claim to hold water, evidence of both statistical correlation and mechanism is required. For instance, to prove that drug X cures disease Y, researchers must provide both (1) evidence that there is a strong statistical correlation between the use of X and the elimination or amelioration of Y, and (2) evidence of a mechanism by which X eliminates or ameliorates Y. This requirement is intended to eliminate the possibility of confounding, and aims to prevent the acceptance of causal claims which later turn out to be spurious. In this paper, I take the RWT and apply it to one area which has not yet received much treatment: psychiatry. While the RWT's implications have been discussed extensively in connection to medicine and the social sciences, its implications for psychiatry have not received the same level of attention. I make two arguments: 1) the RWT is vital for evaluating the causal claims of psychiatry, because of the tendency of psychiatric studies to produce low effect sizes, along with other important aspects of mental disorders, and 2) that once the RWT is taken seriously, it becomes evident that many causal claims made within psychiatry have not yet met the threshold for acceptance. This is because these causal claims rarely rely on two separate types of evidence, one of statistical correlations and one of mechanisms. Instead, such claims *derive* mechanistic explanations from statistical correlations, developing likely causal stories which are not independently verified. To illustrate this point, I discuss one historical example, namely that of the monoamine hypothesis for depression.