Outsourcing the Inference Evaluation in Causal Analogies

Julie Colhoun
Northwestern University

Dedre Gentner
Northwestern University

Abstract: In recent papers, Lee & Holyoak (2007, 2008a, 2008b) argue that models of analogy (ACME, LISA, SMT) fail to explain how people draw inferences from causal analogies. L&H gave participants common-effect scenarios and showed that their effect inference ratings dissociated from their similarity ratings contrary to the predictions of structure-mapping theory (Gentner, 1983). L&H conclude that models of analogy should "incorporate the basic elements of causal models" (2008b, p1121), and that the evaluation of the causal inference "cannot be simply outsourced to some postanalogical module" (2008b, p1121).

We replicated their study (Colhoun & Gentner, 2008). Here we show, in simulations using SME (Falkenhainer et al., 1989), that evaluating the causal inference with an extremely simple post-analogical calculation matches the human data very closely. We maintain that causal inference is indeed "outsourced" to a postanalogical process.