Explanatory Schemata as Determinants of Performance in a Syllogistic Reasoning Task

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Abstract: Recent findings have demonstrated that explanations provided by scientists are deemed better when they are supplemented with scientific evidence even when that evidence is irrelevant (Weisberg, Keil, Goodstein, Rawson, & Gray, 2008). In the present study, participants were asked to solve a syllogistic reasoning task. Two kinds of irrelevant explanations were provided: mechanistic explanations (e.g., forces, cause-and-effect) and anthropomorphic statements (e.g., like, want). Participants were further told either that 'scientists' or 'people' provided the explanations. Descriptions of natural phenomena were presented ranging in terms of the extent to which they were human-like (e.g., molecules, snakes, human group) to alter the congruency of the explanations and descriptions. Supporting our earlier findings (Schoenherr & Thomson, 2009), we found that participants performed better when there was a congruency between the explanations and natural phenomena and when scientists provided mechanistic explanations and people provided anthropomorphic explanations.