Who Is To Blame? The Impact of Views of Causal Agency on Reasoning and Decision Making

Maria Carolina DaCosta & Clark A. Chinn
Graduate School of Education, Rutgers University, 10 Seminary Pl., New Brunswick, NJ, 08903
Email: mc_dacosta@yahoo.com

Overview

Research on people's understanding of causality has focused mainly on science and has not fully examined the effects of views of causality on patterns of reasoning. This paper addresses this gap in the literature by investigating the impact of individuals' views of causality on their reasoning about social events. We have focused on beliefs about *causal agency* (i.e., *what* drives causation in an event). We propose a taxonomy of views of causal agency and their implications for reasoning and decision making. Like Grozter and Perkins (2000), Chi (in press), and Resnick (1996), we are concerned with issues of decentralized causality, but our taxonomy is focused squarely on the social world and is extended to the effects of causal views on patterns of decision making.

Our taxonomy specifies three views of causal agency: centralized, antagonistic, and systemic. A *centralized view* simply encapsulates a complex causal mechanism in a single cause with an immediate, localized influence (e.g., the cause of a students' low grade is simply the student's lack of effort). In an *antagonistic* view, the causal agent is a two-way interaction between two factors where mutual states of asymmetry or imbalance drive causality (e.g., the cause of the low grade lies in the imbalance or conflict between the student and instructor). A *systemic view* of causal agency assumes the causal agent to be not something about individual factors or even about isolated interactions between them but about system-based rules arising from the entire system, which govern and constrain how the system operates (e.g., the cause of the low grade is due to a forced-curve grading system in which 10% of students fail no matter what, and this competitive grading system is central to the school's sense of mission).

The study and main findings

In an exploratory study, we provided participants with an ill-structured problem and documents containing information varying in systematicity. Participants wrote an initial explanation of the case, many intermediate explanations, and a final explanation and decision. We found that most participants did not change their view of causal agency as they read more information about the case. Most of the initial explanations reflected a centralized view of causal agency in which participants were looking for someone to "blame." There was also a relationship between participants' views of causal agency and their patterns of decisions and justifications. Individuals with a centralized thinking pattern tended to provide decisions with regulatory goals; they aimed at order, resolved the problem simply, and sought to control the situation. Individuals with an antagonistic type of thinking sought to compromise. Individuals with a systemic view of causality focused on understanding how the whole system operates before committing to a particular decision.

Conclusions

Our focus on views of causal agency is based on the idea that views of causal agency may influence how we structure the social world around us and may be highly diagnostic of the quality of reasoning and decision making. For instance, when causal agency is viewed as centralized in an encapsulated entity, thinking is less systemic, and it might lead to decision making that is shortsighted and focused on immediate effects. Our study showed that pre-service teachers who lacked systemic thinking were more likely to make decisions that overlooked the impacts of these decisions on the whole system, which might lead to ineffectual or unethical decisions. We need much more research on the types of problems that benefit from systemic thinking and the problems that do not.

References

Chi, M.T.H. (in press). Misunderstanding processes of emergent systems as causal events. *Journal of the Learning Sciences*.

Grotzer, T.A., & Perkins, D.N. (2000). *A taxonomy of causal models: the conceptual leaps between models and students' reflections on them*. Paper presented at the American Educational Research Association (AERA), New Orleans, April 28-May 1, 2000.

Resnick, M. (1996). Beyond the centralized mindset. *The Journal of the Learning Sciences*, 5 (1), 1-22.