

Julia Schneider – Abstract

Differential Reliance on the Causal Core Concept in the Domain of Physics and Biology: A Revised Study

Dispositional theories held that people interpret interactions of two objects including an asymmetric impact of forces as causal (Mayrhofer & Waldmann, 2014; Talmy, 1988; White, 2009; Wolff, 2007). This intuitive conception of causality appears to emanate from specific bodily experiences acquired in and reinforced throughout development. This reinforcement occurs whenever bodily force is used to change something physically by direct contact. Two studies examine the developmental origins of causal thinking and intent to compare the adoption of an agent-patient relationship when judging physical and biological phenomena.

Children (5-6-year-old, 7-8-year-old, 11-12-year-old) and adults judged a collision and a stinging event with a sentence verification task covering the central aspects of dispositional causality, e.g., assumption of asymmetric forces, agent-patient role distribution, antagonistic interaction, goal-directed production of effect. Adults additionally experienced time pressure. Results indicate that participants cross-domainly rely on a causal core concept when interpreting interactions between two objects. Moreover, the tendency to adopt a disposition of causality appears to increase with age, particularly noticeable in biology.

Since the child-oriented setting of the present study could have primed the intuitive thinking, in a revised study, adults repeat the task in a scientific setting. So far, first results slightly support the prior findings.