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The Development of Reasoning About Abductive, Inductive and Deductive Conditionals

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Abstract

Conditionals are statements of the form "If P, Then Q". Reasoning about conditionals is a core component of human cognition. However, studies of how adults and children interpret and use conditionals have highlighted discrepancies between human reasoning and logic inference rules. Recently, Douven and Verbrugge (2010) have found that a classification of conditionals based on the type of inferential connection between the antecedent and the consequent (e.g., deductive, inductive and abductive conditionals) allowed for a finer analysis of adult conditional reasoning. Do these findings extend to child conditional reasoning? We report a study (N=200, ages 4 to 11) that examines how performance in modus ponens and modus tollens tasks depends on the type of conditional embedded in the argument. These results will shed light on how the development of conditional reasoning in children is sensitive to the nature of the inferential relationship of conditionals.