

Inductive reasoning and dual processes

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One assumption that has been made about inductive reasoning is that it relies more on associative, belief-based, Type 1 processes than it does on symbol manipulating, structure-sensitive, Type 2 processes. The results of two sets of studies suggest that this assumption is incorrect. In the first set I showed that both sensitivity to evidential diversity and the monotonicity effect, two key phenomena in the study of category-based inductive reasoning, are associated with cognitive ability. Such associations are normally interpreted under a dual process framework as evidence for the involvement of Type 2 processes. In the second set of studies we show that when logical validity and causal consistency are independently manipulated on a simple reasoning task, sensitivity to structure is associated with ability whereas sensitivity to causal consistency is not. This pattern holds whether participants are instructed to judge conclusions on the basis of necessity or plausibility. These results support two conclusions: first, inductive reasoning appears to be supported by both types of process; and second, the distinction between these processes may be more important psychologically than is the distinction between induction and deduction.