

The Role of Explicit Awareness of the Existence of Logical Rules in Category Learning and Metacognitive Monitoring

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The aim of our investigation was to examine whether the complexity of logical rules that define category membership affects category learning and its metacognitive monitoring. We employed different arrangements of three drawings as stimuli. We also manipulated explicit awareness of the existence of logical rules. Two experiments were performed. In the first experiment, participants were explicitly told to discover and learn the rule underlying category structures, while in the second experiment participants were just told to learn category structures. Category structures used in the experiments were defined by logical rules of different levels of complexity: conjunctive, conjunctive-disjunctive or complex rule. To examine metacognitive monitoring, we asked participants to give feeling-of-warmth judgments repeatedly during learning in order to assess their subjective feelings about how close they are to the acquisition of the appropriate rule. As expected, the results showed that feeling-of-warmth judgments generally follow classification accuracy through the course of learning. Contrary to expectations, there were no differences between different levels of complexity of category structure on any of the tested measures. This was true regardless of whether the participants were explicitly informed that they should learn the underlying logical rule. The results suggest that when complex pictorial stimuli are used category learning is of similar difficulty for category structures defined by different logical rules.