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Effects of implicit processes on conversion from a sub-optimal to an optimal solution

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Abstract

Conversion from an initial representation for gaining insight has mainly been studied in experimental settings where solution through that initial representation is impossible.Many studies of insight problem solving have shown that an implicit process engage in conversion from an inadequate initial representation. However, few studies exist about such conversion in a situation in which solution by the initial representation is possible. A typical situation is conversion from a sub-optimal to an optimal solution. In such a situation, solution by the initial representation is inefficient, but possible. Therefore, participants received no negative feedback that the solution is impossible.In this study, by measuring eye movement, we investigated the hypothesis that the implicit process also emerges in such a situation. We found that the implicit process related to relaxation of fixedness on the sub-optional solution was observed prior to conscious finding of the optimal solution.