

## Process of Constraint Relaxation in Insight Problem Solving

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Currently, insight problem-solving are being investigated in cognitive psychology. However, little is known about how the process develops. In this study, we investigate the process of insight problem-solving by using a discovery task proposed by the authors. The purpose of this research is to answer how constraint relaxation progress in insight problem-solving. In this research, we analyze the process of subjects searching their hypothesis space based on the hypotheses that the subjects verbally report. Additionally, we also measure the subjects' eye movement as they solve the problem. Our study detects insight problem-solving processes in more detail by using not only subjects' verbal reports but also psychological data obtained through eye movement measurements. The result indicated that insight is not suddenly obtained but rather gained through a relatively gradual mental relaxation process.

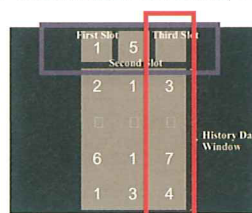


Figure 1: Screenshot of discovery task used in this study.

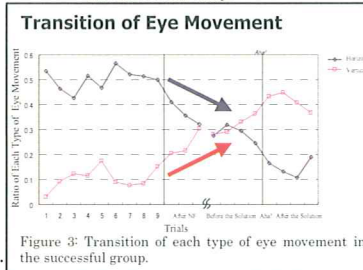


Figure 3: Transition of each type of eye movement in the successful group.

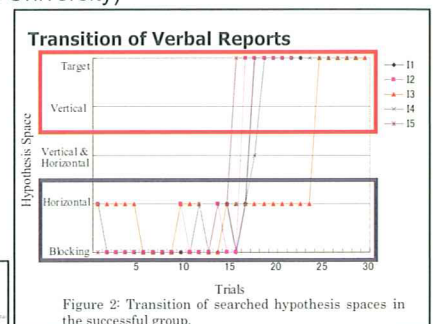


Figure 2: Transition of searched hypothesis spaces in the successful group.

