

## Effects of Level-of-Processing on Automatic Memory in the Category-Exemplar Production Test

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Four experiments were conducted to assess effects of level-of-processing on automatic memory in a category-exemplar production test. In Experiment 1, the process-dissociation procedure was used to separate automatic memory from recollection in the test. Results showed no effect of LoP on estimates of automatic memory. Experiment 2 investigated LoP effects on automatic memory in the test estimated by a modified version of the process-dissociation procedure and on that estimated from performance on an indirect version of the test. Consistent with conventional indirect studies, results of Experiment 2 showed a positive effect of LoP on automatic memory. Experiments 3 and 4 were the

same as Experiments 1 and 2 except that the interval between study and test phases was set at 20 min. LoP effects in Experiments 3 and 4 were the same as those in Experiments 1 and 2, respectively. These results suggest that (a) unconscious memory measured by conventional indirect tests is contaminated by conscious memory, and (b) conscious memory separated by the process-dissociation procedure may be underestimated under some conditions.

**Keywords:** Implicit memory, conceptually driven test, level of processing effect (LoP), process-dissociation procedure (PDP).

