

## Controlling stimulus ambiguity reduces spurious creative ideation variance in a cyclic adaptation of the alternative uses task

Creative ideation is a dynamic and elusive process that relies on continuous idea generation and evaluation. One of the most popular language-based creativity measures, the Alternative Uses Task (AUT; Guilford, 1967), requires participants to come up with unusual uses of everyday objects within 2–3-minute ideation sessions. Such an approach, calling for unlimited listing of alternative uses, focuses primarily on idea generation and minimally involves selection and evaluation. Moreover, object cues are presented as isolated words, leading to uncontrolled interpretation variability. For instance, a word “brick” may bring to mind either a solid brick or a brick with holes, resulting in different possible ideas for alternative uses. In order to remedy that, we introduced a cyclic procedure to our modified version of the AUT, requiring participants to select their best ideas for each cycle. We also enhanced the classic word-only prompt of the AUT with disambiguating images of objects. Experiment 1 compared word-only and word+image conditions, while Experiment 2 tested the difference between the cyclic and list procedures. Both experiments were monolingual and conducted in Polish. In Experiment 1, we found that word+image prompts increased idea fluency but reduced idea originality and variability within a group of 67 native Polish speakers. In Experiment 2, another group of 72 native Polish speakers did not produce more original ideas in the list condition than in the cycle condition (when selecting one idea after 30 seconds of ideation in three separate cycles). However, we found that the first three listed ideas were rated as less creative than the ideas produced in the cyclic procedure. Using image prompts and fostering evaluation in the AUT allows for a more controlled exploration of creativity, beyond mere ideation.

### References

- Guilford, J. P. *The nature of human intelligence*. (McGraw-Hill, 1967).
- Witczak, O., Krzysik, I., Bromberek-Dyzman, K., Thierry, G., & Jończyk, R. (2024). Controlling stimulus ambiguity reduces spurious creative ideation variance in a cyclic adaptation of the alternative uses task. *Scientific Reports*, 14(1), 12492. <https://doi.org/10.1038/s41598-024-63225-2>