

Conceptual constraints on creativity: A case study of an undergraduate visual artist

Emma Karras¹, Wilma Koutstaal²

¹ College of Liberal Arts, University of Minnesota, ² Department of Psychology, University of Minnesota

Research Question

Constraints in creative pursuits are often perceived as undesirable, yet there is emerging evidence that constraints may heighten the creativity of artistic outputs.

- How do conceptual prompts (externally provided topics) impact the creative outputs of a visual artist as perceived by an audience of peers?

Methods

Participants

- 1 undergraduate mixed media artist
- 16 undergraduate college students

Procedure

- The artist completed 8 trials, including 4 unconstrained and 4 constrained artworks
- Trials were assessed by participants on 12 descriptive words for aspects of creativity

Data Analysis

Exploratory Factor Analysis yielded 4 composite measures of the 12 descriptors:

- Harmonious Composite (harmonious, appealing, colorful, beautiful, exciting, lively, inspiring, pleasing)
- Intriguing Composite (intriguing, surprising)
- Playful Measure (playful)
- Complex Measure (complex)

Descriptive Statistics and Paired Sample *t*-tests were conducted for each composite measure

Figure 1.
Final Artist
Trials

Constrained
Trials:
#2, #3, #5, #8

Unconstrained
Trials:
#1, #4, #6, #7



Results Continued

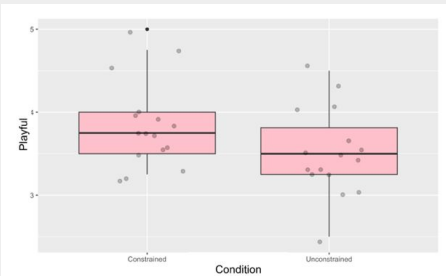
- The Intriguing Composite and the Playful Measure showed significantly higher ratings for the *constrained* artist trials over the unconstrained.
- **In contrast, the Harmonious Measure was significantly higher for the unconstrained trials** (mean difference = .30, $t(15) = 5.60$, $p = .00005$).
- The Complex Measure did not differ for the two types of trials.

Discussion

- The findings suggest that there may be specific aspects of creativity (intriguing, surprising, and playfulness) heightened by the use of conceptual constraints as observed in the peer ratings of the artist trials.
- The study is limited as a small scale case-study with potential investigator-participant bias.
- Work in the field could promote new arts curricula and artist practices to best support visual art outputs.
- Future research is needed on constraints in visual artist creative effectiveness in reaching their audiences and in improving our understanding of the artist creative process.

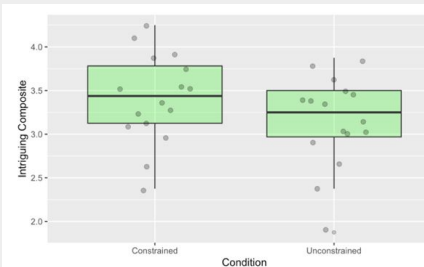
Results

Figure 2. Playful Measure



Significantly higher playful ratings for the constrained trials, mean difference = .34, $t(15) = -3.08$, $p = 0.008$.

Figure 3. Intriguing Composite



Significantly higher intriguing composite ratings for the constrained trials, mean difference = .27, $t(15) = 2.32$, $p = 0.035$.