

Goal

The goal was to provide a database incorporating normative information for abstract stimuli that can be used to control and manipulate stimulus features in experimental settings.

Background

People verbalize also abstract material to a certain degree. Therefore, in experimental research aiming to control for verbal influence and strategy or to control for novelty and familiarity, meaningless stimuli with corresponding norms are necessary. We provided a database incorporating such information for complex abstract stimuli that are hard to verbalize.

Methods

Stimuli: 400 greyscaled fractals

Rating: n = 512

Abstractness, animacy, complexity, familiarity, favorableness, memorability, verbalizability, Scale 1 - 7

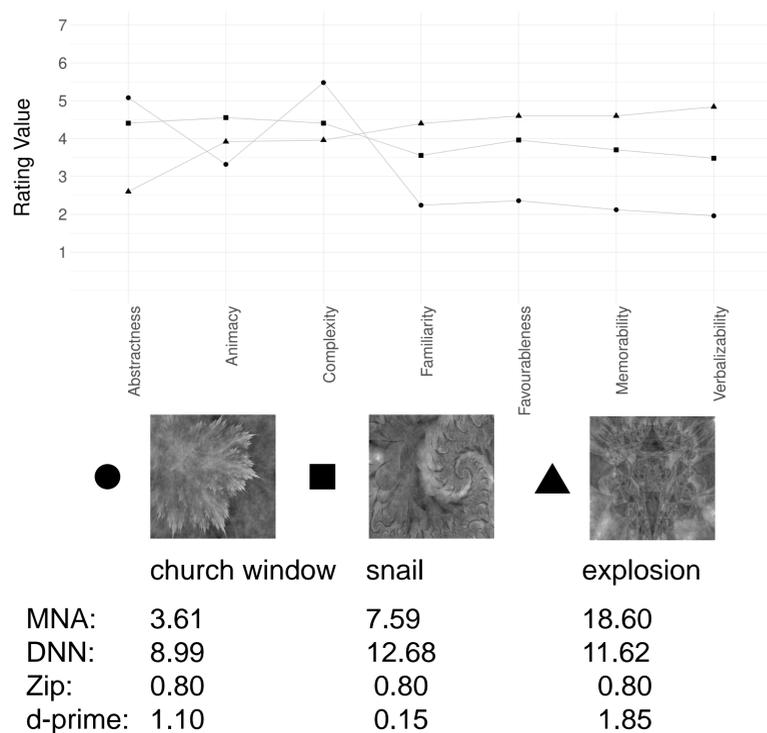
Labelling: n = 111

Naming agreement (MNA, 0 - 100)
Modal name

Validation:

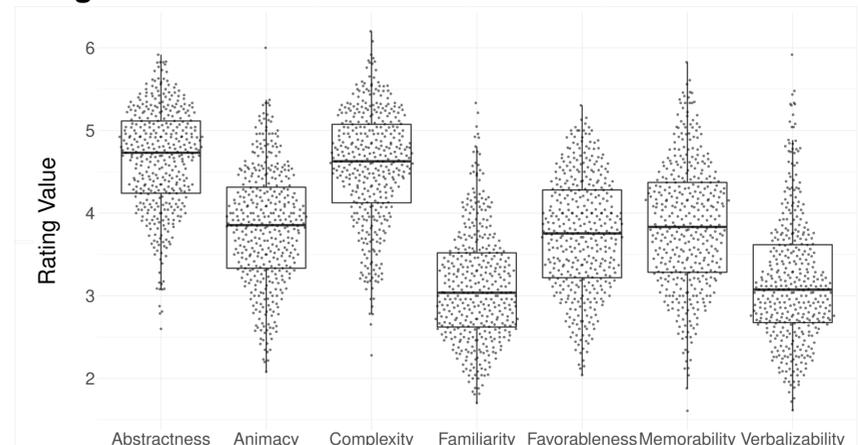
Abstractness, verbalizability: Classifier probability of a deep neural network (DNN, 0 - 100)
Complexity: Data compression rate (zip, 0 - 1)
Memorability: Recognition memory (d-prime, n = 212)

Results: Examples

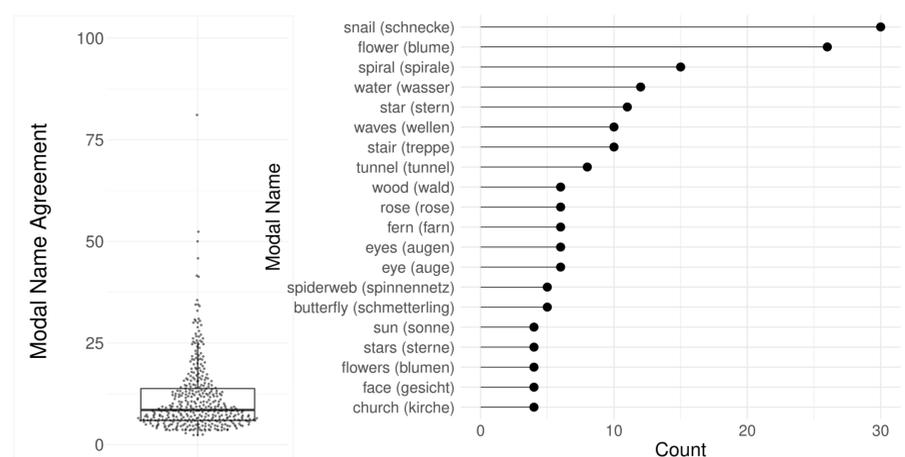


Results: Overall

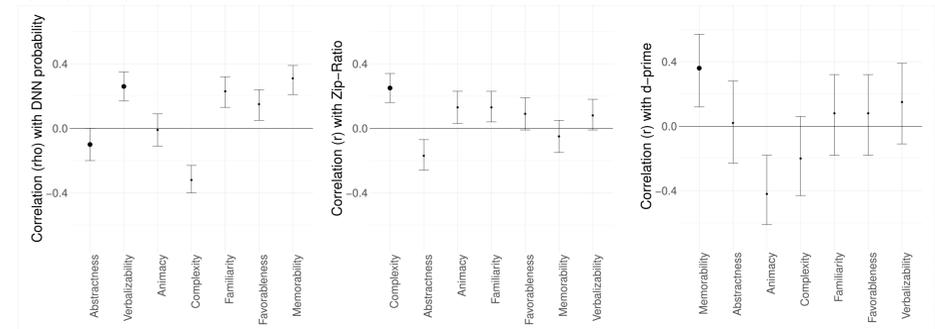
Rating:



Labelling:



Validation:



Conclusion

The database contains abstract, hard to verbalize and complex visual stimuli. The stimuli and norms can be used to create controlled stimulus lists for experimental research.

Reference

Ovalle-Fresa, R., Di Pietro, S. V., Reber, T. P., Balbi, E., & Rothen, N. (2021). Standardized database of 400 complex abstract fractals. *Behavior Research Methods*, 1-16. <https://doi.org/10.3758/s13428-021-01726-y>