

SMI paper draft

schizophrenie & mental images - draft hypothesis

st. schwarz

2026-02-05

research question and hypothesis

preliminary

Q:

- how do mental images relate in wordfields i.e. what are typical resp. atypical semantic fields in which imageability of patients language increases or decreases?
- how do word categories from concrete to abstract influence imageability in relation to controls language?
- are there genres/fields which are avoided/promoted?

hypothesis

we assume that:

1. violence wordfield increase imageability
 1. body associated wordfields in contrast decrease imageability
2. food wordfield decrease imageability
3. weather/climate/atmosphere wordfield decrease imageability
4. abstract categories increase in imageability
5. concrete categories decrease in imageability

references

- Bates, Douglas, Martin Mächler, Ben Bolker, and Steve Walker. 2015. “Fitting Linear Mixed-Effects Models Using Lme4.” *Journal of Statistical Software* 67 (1): 1–48. <https://doi.org/10.18637/jss.v067.i01>.
- huggingface. n.d. “Google Colab.” Accessed December 15, 2025. https://colab.research.google.com/github/huggingface/notebooks/blob/main/diffusers/stable_diffusion.ipynb.
- Nenchev, Ivan. 2026. “Clip Score Computation.” https://github.com/esteeschwarz/SPUND-LX/blob/main/mental-img/clip_scores.ipynb.
- Nenchev, Ivan, Berlin Institute of Health at Charité – Universitätsmedizin Berlin, Germany, Christiane Montag, Department of Psychiatry and Psychotherapy, Charité Campus Mitte, Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Germany, Sandra Anna Just, Department of Psychiatry and Psychotherapy, Charité Campus Mitte, Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Germany, and Department of Clinical Medicine, UiT – The Arctic University of Norway, Tromsø, Norway. 2025. “Reverse Prompting: A Novel Computational Paradigm in Schizophrenia Based on Large Language Models.” In, 797–806. <https://doi.org/10.26615/978-954-452-098-4-092>.
- Patil, Suraj, Pedro Cuenca, Nathan Lambert, and Patrick von Platen. 2022. “Stable Diffusion with Diffusers.” *Hugging Face Blog*.
- Pillny, Matthias, David J. Hallford, and Kerem Böge. 2024. “The Nature of Mental Imagery and Its Relationship With Amotivational Psychopathology in People With Schizophrenia Spectrum Disorders.” *Behavior Therapy* 55 (4): 885–97. <https://doi.org/10.1016/j.beth.2024.01.009>.
- Princeton U. 2005. “Current Version.” *Wordnet*. <https://wordnet.princeton.edu/download/current-version>.
- Richter, Raffael. 2026. “Evaluation Script (Clip Evaluation, Visualisations) for p... · Esteeschwarz/SPUND-LX@01d293b.” <https://github.com/esteeschwarz/SPUND-LX/commit/01d293bfa731f80944ec1298699c15543d6dbcd7>.
- Schwarz, St. 2026. “This Paper Scripts.” <https://github.com/esteeschwarz/SPUND-LX/tree/main/mental-img>.
- Tucker, Benjamin V., Daniel Brenner, D. Kyle Danielson, Matthew C. Kelley, Filip Nenadić, and Michelle Sims. 2019. “The Massive Auditory Lexical Decision (MALD) Database.” *Behavior Research Methods* 51 (3): 1187–1204. <https://doi.org/10.3758/s13428-018-1056-1>.
- Wu, Si. 2025. “Swsiwu/Composition_and_deformance.” https://github.com/swsiwu/composition_and_deformance.
- Yates, Andrew, Bart Desmet, Emily Prud'hommeaux, Ayah Zirikly, Steven Bedrick, Sean MacAvaney, Kfir Bar, Molly Ireland, and Yaakov Ophir, eds. 2024. *Proceedings of the 9th Workshop on Computational Linguistics and Clinical Psychology (CLPsych 2024)*. St. Julians, Malta: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2024.clpsych-1.0>.