

SENSING THE DARKNESS:

SPIRITUAL EXPERIENCES THROUGH THE LENS OF PREDICTIVE PROCESSING AND EVOLUTIONARY ETHOLOGY

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Spiritual experience:
Religious experience in the context of alternative spirituality

Cognitive ethnography: qualitative method for the cognitive study of spiritual experience?

- I am combining qualitative methods with cognitive/evolutionary theories:
 - Semi-structured in-depth interviews
 - Field observations
 - Analysis based on predictive processing & human ethology assumptions

In my project, I am focusing on the **Dark therapy: alternative-spiritual practice of long-term visual deprivation inducing spiritual experiences**

- Typical form is one week in complete (!) darkness & seclusion
- Dark therapy guide is visiting participants once a day with food

Theoretical assumptions & research questions

- How can sensory deprivation create “unusual” experiences?
 - Our brain is receiving sensory signals AND actively making bayesian-based predictions about what is happening in the outside world (and inside our bodies)
 - In the absence of sensory signals, our predictions are computed on the basis of previously learned schemata – our experience is created by “best possible guesses”
- What is the role of culture and authority?
 - Culture (socio-cultural learning) is a crucial source of predictive schemata
 - The Dark Therapy guide thus may directly influence participant’s experience; however, only if participant subjectively perceive guide as (prestigious) authority

Preliminary findings

- After some time, people can see things in the darkness
 - From environment-driven expectations (lights, landscapes) to purely cultural expectations (beings like Jesus or spirit animals, space travels...)
- The interpretation of such experiences vary – it can be directly guide-related or purely individual
- While some clearly do not want/need the guide, others are creating an attachment
 - However, the strongest experiences stemmed from participant’s own practice and previously learned information (books, external prestigious authorities in general)

Conclusion:

- Predictive processing & authority influence helps to understand how culture causally influences the content of spiritual experiences
- Cognitive ethnography as a promising fieldwork method

Literature:

- Andersen, M. (2019). Predictive coding in agency detection. *Religion, Brain & Behavior*, 9(1), 65–84.
- Taves, A. & Asprem, E. (2017). Experience as event: event cognition and the study of (religious) experiences. *Religion, Brain & Behavior*, 7(1), 1–44.
- Clark, A. (2013). Whatever next? Predictive brains, situated agents, and the future of cognitive science. *Behavioral and Brain Sciences*, 36(3), 181–204.
- Henrich, J. & Gil-White, F. J. (2001). The evolution of prestige: Freely conferred deference as a mechanism for enhancing the benefits of cultural transmission. *Evolution and Human Behavior*, 22, 165–196.
- Luhmann, T. M. (2020). *How God Becomes Real: Kindling the Presence of Invisible Others*. New Jersey: Princeton University Press.
- Maner, J. K. (2017). Dominance and prestige: A tale of two hierarchies. *Current Directions in Psychological Science*, 26(6), 526–531.
- Nenadalová, J. (2018). *Mystická zkušenost v laboratoři: Terapie tmou*. *Sacra*, 16(2), 7–25.
- Nenadalová, J. (2019). *Spirituální zkušenost a řízení meditace: imaginativní sugestibilita a vliv autority*. Diploma thesis. Masaryk University, Brno.
- Partridge, C. H. (2004). *The re-enchantment of the West vol 1: Alternative spiritualities, sacralization, popular culture and occulture*. London: T & T Clark.
- Pekař, R. (2015). *Terapie tmou jako způsob (sebe)poznání (týden v temnotě na cestě k nám samým)*. Diploma thesis. Brno: Masaryk University.
- Schjoedt, U., & Andersen, M. (2017). How does religious experience work in predictive minds? *Religion, Brain & Behavior*, 7(4), 320–323.
- Sun, R. (2008). *The Cambridge Handbook of Computational Psychology*. Cambridge University Press.
- Taves, A. (2009). *Religious Experience Reconsidered: A Building-Block Approach to the Study of Religion and Other Special Things*. Princeton: Princeton University Press.
- van Elk, M., & Aleman, A. (2017). Brain mechanisms in religion and spirituality: An integrative predictive processing framework. *Neuroscience & Biobehavioral Reviews*, 73, 359–378.
- Waal, A. W., Gregg, A. P. & Lammers, J. (2015). When status is grabbed and when status is granted: Getting ahead in dominance and prestige hierarchies. *British Journal of Social Psychology*, 54(3), 445–464.