

INVESTIGATING THE RELATIONSHIP BETWEEN SENSORY PROCESSING SENSITIVITY (SPS), ANOMALOUS EXPERIENCES, AND PRECOGNITIVE PERFORMANCE

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Grant 48/20

Background/rationale: Sensory Processing Sensitivity (SPS) is a temperament trait identified by deeper processing of information, being overwhelmed by stimulation, having greater empathy and emotional reactivity, and being able to sense subtleties in the environment. Research has found that individuals who score as highly sensitive, are more prone to anomalous experiences (AEs) (Irwin et al., 2014). Highly sensitive individuals also report more meaningful and vivid dreams and have highly developed unconscious processing abilities, intuition (Aron et al., 2012) and a more sensitive sensory nervous system, suggesting they could make ideal candidates for precognition tasks. SPS also seems to share similar features with other personality variables that are identified by heightened sensitivity, such as transliminality (Thalbourne & Delin, 1993) and boundary-thinness (Harmann, 1991) which have both been linked to precognitive ability.

Research questions: 1) Is there a relationship between SPS, transliminality, boundary-thinness, and AEs, 2) Is high SPS associated with better performance on a dream-precognition task, and 3) Is high SPS is associated with greater presentiment effects.

Methods: Study 1 ($N = 200$) used an online survey consisting of the Revised Transliminality Scale, the Boundary Questionnaire Short-Form, the Highly Sensitive Person Scale - Brief Version, the Anomalous Experiences Inventory, and open-ended questions on SPS and AEs, to establish relationship between SPS, transliminality, boundary-thinness, and anomalous experiences. Study 2 ($N = 101$) was an experimental design using a dream diary precognition protocol to investigate if SPS predicted similarity ratings given to a target image. Study 3 ($N = 74$) was an experimental design using measures of heart rate variability (HRV) and electrodermal activity to establish whether SPS is associated with presentiment. All studies were pre-registered with the Koestler Parapsychology Unit.

Results: Study 1 - There were correlations between each of the three sensitivity predictor variables and the AEI. Transliminality and boundary thinness positively predicted anomalous beliefs with transliminality being the stronger. Only transliminality predicted anomalous experiences and anomalous abilities. Study 2 - Participants rated target images marginally higher than the decoy images. However, there was no clear relationship between target ratings and SPS, transliminality, boundary thinness, or anomalous belief and experiences. Study 3 - There was no evidence of presentiment effect, or an effect of SPS, however, HRV did seem to play a role with regard to presentiment.

Discussion: Transliminality plays a mediating role between SPS and anomalous experiences, belief, and abilities. When using a home-dream paradigm participants were able to precognitively dream about a future target image, but this was not influenced by sensitivity. Furthermore, SPS could not predict any presentiment effect, However, there were some interesting correlations between the variables, particularly the EDA and HR change scores and the HRV scores. A Network Analysis also demonstrated that the

subscales of the SPS measures, and anomalous experiences, are connected via transliminality, which sits at the centre of the network, adding more depth to the findings of Study 1 in this project.

Keywords: Anomalous experiences, Boundary-thinness, Highly sensitive person, Sensory processing sensitivity, Transliminality, Precognition, Presentiment

Publication:

Roxburgh, E. C., Vernon, D., & Schofield, M. B. (2024). Sensory processing sensitivity, transliminality, and boundary-thinness as predictors of anomalous experiences, beliefs, and abilities. *Current Psychology*, 43, 30098–30106. <https://doi.org/10.1007/s12144-024-06619-9>

Vernon, D., Roxburgh, E. C., & Schofield, M. (2024). Testing home dream precognition and exploring links to psychological factors. *International Journal of Dream Research*, 17(2), 148–156. <https://doi.org/10.11588/ijodr.2024.2.100871>

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