

## GANZFELD ESP RESEARCH: BUILDING ON LESSONS LEARNED

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**Background:** Meta-analyses of ganzfeld ESP research report highest scoring with selected participants. However, debate continues over how to interpret positive results. The present well-powered Confirmatory study seeks to build on lessons learned and reduce debate.

**Aims:** 1. to test the ESP hypothesis incorporating design features aimed to optimise psi-conduciveness and security (Confirmatory). 2. to explore the previously observed link between self-reported creativity and ganzfeld task performance using validated creativity measures (Exploratory).

**Methods:** A ganzfeld precognition design was used to test 240 participants selected for creativity as well as practice of a mental discipline and/or prior psi experience and/or psi belief. To avoid decline effects, multiple experimenters (selected for positive expectations and parapsychological knowledge) conducted a maximum of 20 trials each. Optimal security measures included recording session data in triplicate, including a manual logbook, to help make tampering detectable. For the pre-registered study design, a priori power analysis and analysis plan, see: <https://koestlerunit.wordpress.com/study-registry/registered-studies/>).

**Results:** 72 hits were obtained from 240 sessions with 15 experimenters. This 30% hit-rate was statistically significant on the planned analysis: exact binomial  $p = .043$  (1-t),  $z = 1.714$ . *Post hoc* checks and an independent software validation exercise found no subtle bias or software/RNG errors that might have inflated the hit-rate. For the Exploratory hypotheses, no significant correlations were found between psi task performance and the creativity measures.

**Conclusions:** To our knowledge this is the largest single laboratory ganzfeld study to date. The study's sole Confirmatory hypothesis was significantly supported, indicating that participants could identify the randomly selected future target. This finding demonstrates that optimum security and psi-conduciveness can productively co-exist. However, selecting participants hampers process-oriented enquiries. The study also made some meta-scientific contributions: pioneering the use of independent 'puppeteered' software validation methods in ganzfeld research; attention to fraud prevention/detection measures; and consideration of experimenter and participant expectancy effects. These aspects may be of interest to behavioural researchers seeking to further address replication issues in their field.

**Keywords:** Ganzfeld, Precognition, Extrasensory perception, Software validation

### Publication:

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