



CORRECTION

Corrigendum for “Effects of Global Consciousness on New Years Eve: A Study in Experimental Metaphysics”

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In an analysis reported in Radin (2025), which explored how data from the Global Consciousness Project behaved during multiple New Years Eve celebrations, I cited a principal component analysis (PCA) composite score at the stroke of midnight as $z \approx -4.9$ ($p < 3 \times 10^{-7}$). That statistic implicitly assumed that the normalized composite score followed a standard normal distribution with independent measures. However, thanks to the sharp eyes of two *JSE* readers, I realized that this interpretation was incorrect because the five constituent metrics (correlation dimension, permutation entropy, Higuchi fractal dimension, BDS statistic, and autocorrelation) were mutually inter-correlated. As a result, the first principal component, a weighted linear combination of these z-scored metrics, had an inflated variance relative to a standard normal distribution.

To obtain a valid probability estimate, I conducted a parametric bootstrap test with 100,000 iterations. In each iteration, a new dataset of 100 30-second segments of GCP data \times 5 metrics was generated by sampling from a multivariate normal distribution with the observed correlation matrix, and then PCA was computed. Repeated iterations built an empirical null distribution that correctly accounted for the dependency structure among the five metrics, which had a standard deviation of approximately 1.67 instead of 1.00, confirming the variance inflation.

Given the directional hypothesis predicting decreased complexity at midnight, the corrected one-tailed p -value for the midnight composite score was $p = 0.0013$, corresponding to an equivalent z -score of -2.97 . While this is not as significant as originally reported, the stroke of midnight remained the most statistically significant of all 100 time points tested, and when evaluated near the hypothesized stroke of midnight (± 5 30-second segments), it survived a Bonferroni correction for multiple comparisons (threshold $p < 0.0045$).

It is worth noting that the PCA composite score aggregated five correlated but *conceptually distinct* measures of order. While their inter-correlations necessitated the bootstrap correction described here, that metrics designed to detect different aspects of temporal structure all deviated coherently at the predicted time supports the conclusion that something about that moment in time was unusual. I thank Dick Bierman and Hartmut Grote for their comments.

REFERENCE

Radin, D. (2025). New Year’s Eve as a case study in experimental metaphysics: Exploring global consciousness in random physical systems. *Journal of Scientific Exploration*, 39(4), 393–406. <https://doi.org/10.31275/20253635>

<https://doi.org/10.31275/20263947>

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