# Abstracts of the 61<sup>st</sup> Annual Convention of the Parapsychological Association

# **Full Papers**

#### Parapsychology Needs a Theoretical Program

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Demanding exceptional evidence for exceptional claims is not just a scientific position, it is also a social one. To put it prosaically, it addresses the worry that I might waste my time on a wild goose chase, as well as the concern that my field and I may lose credibility in the eyes of other scientists and the public. The demand is a gatekeeper for vetting which extraordinary claims (or effects or data) should receive attention within a discipline. But how does a discipline or sub-field become accepted in the first place? This too melds scientific and social issues. Parapsychology has long had one foot in and one foot out of the house of Science. Why is this, and is it normal? Obviously, the interplay of theory and experiment plays a big role in establishing any field. But it is worth a look at how this happens. Among many examples, two stories from contemporary physics are instructive: quasicrystals and quantum foundations. Both are cases where an anomaly developed into an accepted discipline when theory and experiment converged. In the first case, experiment led the way and in the second it was theory. These stories convey very different timelines, but the same unsurprising message: a discipline is unlikely to flourish without both theoretical and evidential groundings. Parapsychology should, therefore, redouble its theoretical efforts, for theory is the weak leg. We have some start points but see mostly fog. How to proceed? Ironically, a good bet will be to mine recent results from quantum foundations research, for there questions of causality, consciousness, and impossible effects that mirror many aspects of parapsychological science have been treated with great rigor and may be importable to psi theory. Several examples will be sketched to illustrate possibilities.

#### **Simulating Questionable Research Practices**

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Meta-analysis provides evidence for psi effects across a number of well-established protocols. However, the drawbacks of meta-analyses, which are well-known, can weaken the evidence, particularly for researchers in other disciplines who are not familiar with the parapsychological literature. Moreover, recent scrutiny on the variety and frequency of questionable research practices (QRPs) - methodological problems such as publication bias or unplanned analyses that can lead to spurious effects - has called into question meta-analytical evidence across many fields. A paper by Bierman, Spottiswoode, and Bijl used Monte Carlo simulations to test whether meta-analytic databases can be explained by QRPs alone. The paper is novel in that it attempts to simulate a comprehensive set of QRPs operating simultaneously. This work presents a reformulation of the problem that improves the power of QRP tests and speeds up simulation times by a factor of roughly 1,000. The method was applied to the ganzfeld database. In addition, it is shown how understanding QRPs can lead to insights about other databases, namely those of micro-PK RNG and Global Consciousness Project (GCP) experiments. Specifically, I show that a broad set of QRPs fails to account for the ganzfeld data, even if these are used in maximal combination and are adopted by researchers at frequencies approaching 100%. Applied to the micro-PK data, I argue that, although the data are not amenable to full simulation, the QRP analysis suggests that the heterogeneity cannot be explained by maximal QRPs. If substantiated, this conjecture would supply new support for a micro-PK psi effect and help clarify some of the confusion about this complex database. The GCP is fully pre-registered and hence generally immune to QRPs. QRP analysis is consistent with this framing. I indicate how the GCP, while exhibiting a real psi effect, does not provide evidence for its Global Consciousness hypothesis.

#### Ability of Alleged Mediums to Assess Mortality from Facial Photographs<sup>1</sup>

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Studies of characteristics of the human face indicate that it contains a wealth of information about health status. Most studies have involved objective measurement of facial features as correlated with historical health information, but some individuals (labeled psychics or mediums) also claim to be adept at intuitively gauging mortality based solely upon a quick glance at a person's photograph. To test this claim, we invited 12 such individuals to see if they could tell if a person was presently alive or dead based solely on a brief examination of his or her photograph. All photos used in the experiment were

<sup>1</sup> This research was supported by the Bial Foundation (grants 234/12 and 188/16).

transformed into a uniform gray scale and counterbalanced across eight categories: gender, age, gaze direction, glasses, head position, smile, hair color, and image resolution. Participants examined 404 photographs displayed on a computer monitor, one at a time, with each shown for a maximum of 8 seconds. Half of the individuals in the photos were deceased and half were alive at the time the experiment was conducted. Participants were asked to indicate if they thought the person in a photo was alive or deceased by pressing an appropriate button. Overall mean accuracy on this task was 53.6%, where 50% was expected by chance, p = 0.005, and significant accuracy was independently obtained in 5 of the 12 participants. We also collected 32-channel electrocortical recordings and observed a robust difference in the early event-related potential at 100 ms post-stimulus onset between images of deceased individuals who were correctly vs. incorrectly classified. Then, to see if machine learning techniques could classify the photographs as good as or better than humans, both random forest and logistic regression machine learning approaches were used. Both classifiers failed to achieve accuracy above chance level. These results suggest that some individuals can intuitively assess mortality based on some as-yet-unknown features of the face. In this report, we also outline a follow up experiment where we asked participants to classify the cause of death from photos of now-deceased individuals. Preliminary results on this experiment will be presented at the Parapsychological Convention.

#### Development of a Predictive Anticipatory Activity (PAA) Software: A First Step towards a Medium-Term Goal

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There has been enough research in the last two decades to report significant effects regarding predictive anticipatory activity (PAA), the unconscious ability to predict future events as measured by physiological responses. Although there have been advances in the design, methodology, and analysis of data, replication of this phenomenon still seems to be insufficient to confirm many of the findings concerning which type of stimuli, physiological response, or even task duration are best. Furthermore, the cost of the psychophysiology equipment, the high level of statistical analysis, and the skepticism of professional researchers in other areas decrease the probability that replications will ensue. Therefore, we have set a medium-term goal to develop PAA software with high-quality design compatible with low-cost psychophysiological equipment and allowing testing with a wide range of stimuli. The first step in the development of this tool was to replicate a double-masked free-running PAA experiment using visual stimuli with 39 participants, in more than 1600 trials, and measuring the skin conductance level and heart rate with inexpensive psychophysiological hardware and an exercise device. We divided the visual stimuli into different categories for independent analysis and comparison: the Calm category, formed by 40 images of landscapes and objects was used as control group. The Excitatory category contained both an Erotic category, formed by 10 images, and a Fearful one, formed by 5 images in the Animal-Injury category and 5 images in the Death-Danger category. The results showed evident differences prior to the shown stimuli, both in the skin conductance level and in the heart rate. In the

former, a significant difference between Calm and Death-Danger trials was found in all participants, z = 1.73, p = 0.0418, one-tailed; in the latter, there was a significant difference between Calm and Erotic

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= 1.73, p=0.0418, one-tailed; in the latter, there was a significant difference between Calm and Erotic trials in males, z = -1.98, p = 0.0239, one-tailed, between Calm and Fearful trials in females, z = 1.69, p = 0.045, one tailed, and between Calm and Animal-Injury trials in females, z = 1.77, p = 0.038, one-tailed. Differences in gender were found, suggesting that fear negatively affects PAA in females while it aids the physiological prediction in males. The general difference between Calm and Excitatory images in all participants, both in skin conductance, z = 1.45, p = 0.07, one-tailed, and heart rate, z = 0.58, p = 0.28, one-tailed, were non-significant. This may be due to differences in gender perception and stimuli valence. Arousal and valence, as the orienting and defense response, seem to play fundamental roles on physiological activity in the anticipation of any event, as also happens in normal physiology studies when the stimuli are presented. Overall, we have independently replicated previous research and suggested new characteristics of the phenomena regarding the influence of the stimulus's valence, while implying that the use of inexpensive psychophysiological hardware may be used to test the body's ability to scan the future.

# Where Mind Connects With Matter: Replicating the Correlation Matrix Method<sup>2</sup>

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This article describes two experimental replications of a new methodological paradigm called Correlation Matrix Method (CMM) (Lucadou, 1987). The CMM was developed by Walter von Lucadou in an effort to offer a solution to the problems of replicability and decline effect in parapsychological experiments, namely in psychokinesis. Supported by von Lucadou's Model of Pragmatic Information (MPI) and von Lucadou, Wallach, and Romer's (2007) Generalized Quantum Theory (GQT), the model correlates physical variables produced by a Markov-chain random number generator with psychological variables measured from the participant before the PK task. The method claims that correlations produced between psychological and physical variables during the experimental session considered as statistically significant should be interpreted as non-local entanglement correlations. The two experiments used the same method and were pre-registered at the KPU registry at the University of Edinburgh. Each experimental session took on average 20 to 30 minutes. Forty-four participants completed 213 sessions in the first experiment, and 105 participants contributed 200 sessions in the second. In both experiments, participants were asked to influence solely by intention a physical target shown on a computer screen that was controlled by the output of the random number generator. The psychological data was derived from button presses to reflect the subject's intention as well to fulfill the CMM requirement of organizational closure, that is to maintain the participant interacting with the physical process so the experimental session is a whole structure. As a control analysis, a permutation method was used to generate new correlations using data from each experimental variable separately. The permutation also cleanses

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dependencies between the existing variables. A non-parametric correlation coefficient, Spearman's rho, was calculated across all subjects and sessions to calculate the number of significant correlations at *p* <0.05. In both experiments, the number of significant correlations produced between participant influence and the values produced by random number generator were significantly more than the ones produced by the control method. Limitations in the method and in the analyses are discussed, and suggestions for further experiments are explored.

#### **Associative Remote Viewing Dream Project**

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The present double-masked study is the first of its kind to utilize dreaming as a precognitive tool within an Associative Remote Viewing (ARV) protocol. A cohesive group of experienced remote viewers who varied in experience with intentional ESP precognitive dreaming practices took part in a year-long study that included 56 trials in which they attempted to have precognitive dreams that would enable them to produce descriptions and sketches that would match a photograph they would be shown at a future time. Five out of 7 remote viewers turned dreamers were able to consistently produce dreams at will. Their transcripts were utilized for the purpose of making predictions and wagers on outcomes of sporting events. If we focus on 17 hits out of 28 predictions, a binomial test has p = .07 one-tailed for the proportion of hits. Although this is not significantly better than chance, overall monetary winnings increased by 400 percent. Further, one individual dreamer had a 72 percent correct hit rate based on 13 hits and 4 misses with 20 passes while another had 16 hits and 9 misses. We discuss variables such as raising the threshold of Confidence Ranking Scores (at a CR score of 6) for dream based ARV predictions as opposed to traditional ARV predictions involving conscious application of psi based strategies; establishing spreads between CR scores for individual vs. aggregate dreamers; and other issues related to intentional ESP dreaming outside of a laboratory setting. Examples of sketches from ARV Dream Transcripts are also included.

# An Exploration of the Effects of Mood and Emotion on a Real-World Working Computer System and Network Environment<sup>3</sup>

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A customized computer system and network were designed to induce anxiety in a sample of computer operators while the network was monitored for errors. The study participants were asked to complete a series of simple computer tasks in a limited amount of time. Rewards were provided to increase motivation and potentially induce anxiety. Half of the participants were part of an experimental group where the software was designed to obstruct their ability to complete the tasks by presenting barriers to their progress. A control group completed the exact same tasks, but they were unencumbered in their sessions. Both groups self-rated their anxiety during the tasks before and after the sessions. During the sessions, unknown to the participants, a computer network continuously sent messages between two computers. The network was not associated with the software or tasks being performed, but the network was monitored for errors. Additional sessions were run when no computer operator was present as an additional no-operator control condition. Hypothesis 1 predicted that sessions with participants present would produce more errors than sessions with no operators, but results were not significant (p = 0.35). Hypothesis 2 predicted that participants who experienced higher anxiety would produce more errors in the network than those with lower anxiety. The initial experimental and control groups did not correspond to the predicted grouping of anxious and non-anxious participants. The full sample was examined to produce two groups based on the actually reported anxiety of the participants. The two groups that were created as a result of this regrouping, anxious and non-anxious, were examined for difference in the number of errors recorded during their sessions. The group that reported higher anxiety produced more errors in the unmonitored network than the group that reported lower anxiety (p = 0.04, d = 0.45, power = 0.61). These results indicate that anxious computer operators may affect network communication, and there may be other electronic effects as a result of their emotions. Though these results are exploratory and preliminary, their strength indicates that businesses and organizations that use computer operators or provide technical support should be encouraged to consider the working environment and mood of their computer operators to avoid unintentional effects that could disrupt the network traffic and operation of computer systems.

<sup>3</sup> This study was supported by a grant from the BIAL Foundation and preregistered with the Koestler Parapsychology Unit's Registry for Parapsychology Experiments.

# Assessing the Underlying Spirituality: Development and Initial Validation of an Implicit Measure of Paranormal or New Age Beliefs<sup>4</sup>

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Paranormal beliefs comprise an essential element of New Age spirituality. There has been growing interest in the investigation of the personality characteristics and cognitive processes implicated in the endorsement of such beliefs. However, little is known about the *implicit* mechanisms involved in their formation and maintenance, including associations that underlie conscious awareness. There is also a scarcity of research with respondents from outside English-speaking countries, which could be of importance to determine the role of cultural factors in explicit and implicit endorsement of paranormal conceptions. The main purpose of this investigation was to develop and test an implicit measure of paranormal beliefs for use in Brazil, based on the widely used Implicit Association Test. In addition, the study also investigated whether paranormal beliefs are malleable to change in the face of counter-arguments and whether the correlation with belief change (if valid) would remain significant for the implicit measure as well. The results attest to the validity of our Spiritual Belief Single-Target Implicit Association Test. As expected, the implicit measure correlated significantly with a self-report scale of paranormal beliefs (r = 0.45, p < 0.001) and was unrelated to social desirability (p > 0.05). Additionally, the test was able to discriminate paranormal believers from disbelievers. Both explicit (r = 0.27, p < 0.001) and implicit (r = 0.14, p < 0.001) paranormal beliefs correlated significantly with a measure of the malleability of beliefs in the face of counter-arguments. The paper concludes with a discussion of the cross-cultural implications of the present findings and their relevance to other fields of research besides parapsychology, such as the psychology of religion and spirituality.

# **Cross-Cultural Research on Anomalous Experiences: Theoretical Issues and Methodological Challenges**<sup>5</sup>

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A number of studies have contributed to unveil the cognitive and personality correlates of anomalous experiences (AEs), but a less discussed topic has been cultural differences. The description of AEs as possibly non-ordinary or exceptional in terms of the Western scientific thinking raises questions as to whether this description can be considered cross-culturally valid. To most researchers in this area, the premise that anomalous experiences rest upon widely distributed, universal properties is usually accept-

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ed without sufficient evidence in its favor. Little research attention has yet been given to non-English speaking countries in the investigation of AEs, and few systematic comparisons between cultures have been carried out. In much the same way as other branches of psychology, anomalistic psychology has relied mainly on WEIRD (Western, Educated, Industrialized, Rich, and Democratic) samples to explore individual differences in reports of AEs. The main purpose of this essay is to critically review the scientific literature on anomalous experiences in the light of cross-cultural research. An outline of the theoretical issues arising from cultural and cross-cultural investigations of AEs are presented, and the methodological challenges and shortcomings in this research area are discussed, followed by specific suggestions to help overcome them. To pursue these objectives, we review some of the main findings obtained so far on the psychosocial and cultural aspects of AEs, as well as the existing gaps in our knowledge about the cultural underpinnings of these experiences. We begin by highlighting the complex interrelation between anomalous experiences and beliefs, and the difficulties in isolating the experience from its interpretations. Two prominent models in this regard are evaluated, the cultural source hypothesis and the experiential source hypothesis. The existing evidence in favor of these two models is surveyed, from prevalence studies of AEs in different countries to the psychological and neurophysiological correlates of these experiences across cultures. The implications of cross-cultural research on AEs to mental health issues are outlined. We conclude with a summary of the studies reviewed and proposals for future research.

# The Authority Strikes Back: Considerations about the Allegedly Fraudulent "Chopper" Poltergeist Case

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In poltergeist cases that gain public attention, confessions often acquire the function of supporting socially dominant worldviews and restoring a threatened social order. It is part of phase four of von Lucadou's (1995) model of the dynamics and temporal development of RSPK cases, the so-called "suppression phase." This last phase denotes the reaction of society as it strives to restore normality, "the order" that has been jeopardized by the alleged paranormal phenomena. In von Lucadou's considerations, the (potential) existence of "real" psi phenomena plays a crucial role and their elusiveness should be explained, whereas the concept of rational gravity by McLuhan (2010) is primarily directed to claims of such phenomena and/or judgments of such claims, irrespective of whether they actually, or possibly, occurred or not. Rational gravity means a pullback to normality by backward rationalizing. The so-called "Chopper" case (1981/1982) presented here could aptly illustrate the suppression phase of von Lucadou's model if it were actually an RSPK case. However, the social suppressive reaction was so strong that the case is only remembered as a case of fraud even in the parapsychological community. This feature makes it worth taking a closer look at it, its circumstances and development, and is a perfect illustration of the process of rational gravity. The case, investigated by Hans Bender and an assistant, brings together many characteristic problems associated with the investigation of RSPK cases: (a) the involvement of various kinds of mass media with their specific interests; (b) the increasing competition between different actors (reporters, German Federal Post Office, criminal investigation department, justice); (c) contradictory indications and testimonies; (d) serious scientists as debunkers; and (e) an increasingly confusing mélange of motifs, confessions, explanations, and various psychical mechanisms. In addition to the epistemological interest in the phenomenology of the case and the therapeutic and medical obligation to help, the scientific investigators are confronted with further claims and demands of responsibility from other actors: the post office attempted to eliminate external or internal disturbances of the telecommunication system and restore proper functioning. The police attempted to identify troublemakers who threatened public policy. For the mass media, the case was a valuable source for the production of attractive and promotional content. The "Chopper" case was hyped up as "the most sensational 'poltergeist' case of the last decades" and reached an audience across national borders. The pressure on all parties was enormous because large sums of money were involved. After bringing in the trans-regional police, a quick success was needed. Even during the ten days before its operation, the pressure on the people directly involved had increased enormously. They had to prove and/or maintain their own credibility. This led to unusual behavior and finally to the detection of fraud. The two main protagonists were extensively interrogated and made partial confessions. That was enough for the prosecution to declare the case as solved. After a long legal aftermath, the culprits were sentenced and fined, despite several contradictory statements, relativizations, and revocations of the confessions as well as unknown and hardly understandable motives. With regard to the "Chopper" case, the rational gravity had almost acquired the strength of a black hole. No more doubts existed publicly, despite the long and highly complex process with which the case had developed. From a retrospective point of view, taking all the publicly available and confidential information into account, the case would be more plausibly interpreted as a "mixed case." Many characteristic ingredients can be found with regard to the psychodynamics involved, as well as the typical development of the case. However, the extremely high level of public attention produced by the mass media caused an extremely strong and harsh reaction from the authorities in order to restore the disturbed "order of reality." Their outrage was enormous, as well as the derisive laughter in the media. The latter were the big winners of the game—as was the public who was given good entertainment and a change from everyday life for a while. All other parties lost: the individuals concerned, whose former life was actually destroyed, the officials, and the parapsychologists.

# Preliminary Analysis of Sorrat Experiment Data: Testing Hypotheses from the PK Literature

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Psychical researchers offer a standard procedure for investigating group psychokinesis (PK). Participants put their hands on a table and, with sufficient preparation, perceive that the table moves on its own, sometimes levitating. Batcheldor (1984, 1994), Owens and Sparrow (1976), Richards (1982), Hansen (2001), and Lucadou (1995, 2015) specified variables affecting group PK. These factors include

special types of belief, artifacts, ambiguity, fraud, acclimation to anomalous experience, track record of experience, focus on special narrative, rapport, and quantum processes. These formulations allow sociological theories with testable hypotheses. Within this paradigm, PK is defined as an event regarded as paranormal by observers rather than a phenomenon verified as authentic. Hypotheses were evaluated using research data from the Society for Research on Rapport and Telekinesis (SORRAT), a group founded by John G. Neihardt in 1961. He assigned his graduate student, John Thomas Richards, to take notes during all experimental sessions. The group reported rapping sounds, paranormal table movements, table levitations, poltergeist phenomena, anomalous lights, and earthquake effects. Although the PK events experienced by sitter groups proved unstable, participant accounts reveal core features, implying a unifying process. All groups accepted the idea that special characteristics facilitated PK, that most people originally lacked these characteristics, but that the characteristics could be acquired through group interaction (Batcheldor, 1994, p. 103; Owens and Sparrow, 1976; Richards, 1982). Participants came to believe that most inexperienced people inhibited PK, while a small percentage facilitated it. A sociological study tested hypotheses derived from these formulations. SORRAT notes, recorded by J. T. Richards, described over 800 experiment sessions occurring between 1966 and 2007. The notes provided session date, time, participant names, phenomena experienced, positions of witnesses, flight path of levitating objects, attempts to photograph levitating objects, reaction of levitating objects to photography, participants in trance, reactions of participants during the session, and evaluations of experimental outcomes. The records indicated that, during the documentation periods, SORRAT groups consisted of between 1-25 participants with 320 different people attending sessions. Richards evaluated each experiment regarding the degree that it achieved specified goals. Within the experiment records, 742 sessions had the goal of levitation success, based on height and duration of the levitation, degree that participants removed their hands, time the object remained in the air, and whether an attempt was made to photograph the levitating object. Each session was assigned one of three outcomes: failure, partial success, success. Richards' notes were specific enough to allow content analysis and statistical evaluation of correlations between major variables: group size, participant names, number of sessions attended by each participant, and levitation success. Although levitation successes should not be regarded as proof of PK, the variable distinguished sessions with high emotional impact from those with low, a factor affecting belief. Two sociological theories were devised: (1) An interaction theory argued that group participation facilitates the psychological processes allowing PK. (2) A facilitation-suppression theory argued that some people facilitate PK while most people suppress it. Preliminary analyses focused on three exploratory hypotheses: (1) Facilitation-suppression hypothesis: Size of experimental group should be inversely correlated with levitation success since the average person inhibits PK and larger groups are more likely to contain such people. (2) Facilitation-suppression hypothesis: Individual probabilities of levitation success should not be distributed normally but be skewed, since only a small percentage of people facilitate PK. (3) Interaction hypothesis: People attending many group PK sessions should have higher levitation success rates than those with limited experience since the former have greater exposure to factors conducive to PK. The study plan includes exploratory investigations regarding experiment location and time-period, composition of successful PK groups, and changes in individual success rates over time. Analysis of the three hypotheses resulted in rejecting the null hypotheses (treating all sessions as independent and using chi-square and Pearson correlations). Future analyses will entail multilevel analyses to account for nesting of individuals, location, and time periods.

The results supported the facilitation-suppression and interaction theories. Exploratory investigations revealed that: (1) probability for levitation success varied among experimental locations, (2) probability of levitation success declined during the second and third SORRAT time periods but increased during the final era, and (3) individual success rates tended to decline, rather than increase, with participation. This result coincide with predictions derived from Lucadou's theory and reduced faith in the *interaction theory*. Alternative theories involving special people, special groups, and ritual healing, will be discussed.

#### The Relation between Premonitions in Dreams and Perceived Luckiness, Style of Cognition, and Absorption

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The major aim of this study was to examine the proportion of people in Argentina who claim to have had more than one premonition in a dream and to explore comparisons between them and those who report one or fewer premonitions in terms of cognitive and perceptual variables. Out of 265 questionnaires, 234 (88%) were completed. Along with demographic information, the questionnaire contained information regarding premonition experiences, beliefs about luck, locus of control, cognitive style, and absorption. Participants were classified as either *Experients* (i.e., > 1) or *Controls* (i.e., 1 or < 1). Comparisons between the two groups revealed that *Experients* were less intuitive compared to *Controls* but scored higher on absorption. However, there was no difference between the two groups in terms of belief regarding luck and locus of control. Absorption model proposes that recall dreamers who are prone to vivid and unusual experiences during the day, such as fantasy and daydreaming, will tend to have vivid and memorable dream content and more analytical (cognitive thinking style) and thus will be more likely to remember their precognitive dreams.

# Tricking the Trickster: Detecting Hidden Structure in Data from an 18-Year Online Psi Experiment

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From August 2000 through October 2017, two online psi experiments based on a five-target, forced-choice protocol collected over 100 million trials from an estimated 200,000 individuals around the world. The direct hit rate combined across both experiments was consistent with a null effect, where  $p_0 = 0.20$ ,  $p_1 = 0.19996 \pm 0.00004$ , z = -0.94, p = 0.35. A planned secondary analysis, designed to detect a subtle but predicted pattern in the data, resulted in a significant deviation, where  $p_0 = 0.32$ ,  $p_1 = 0.32051$ 

 $\pm$  0.00005, *z* = 10.6, *p* < 10<sup>-25</sup>. Control tests found no evidence that this small magnitude but highly significant positive deviation was due to optional stopping, response biases, target sequence dependencies, learning of subtle cues, or other potential artifacts.

# Experimenter Effect and Replication in Psi Research II: A Global Initiative<sup>6</sup>

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The replication issue in parapsychology was studied through the examination of experimenter and participant belief in psi and their impact on the outcome of a psi task. This series of three formal experiments employed a standardized psi protocol developed by Daryl Bem that has been the focus of several replication attempts and that allows for a systematic collection of data under well-controlled conditions. A session lasted no more than 30 minutes per participant. The replication protocol tested the retroactive priming aspect of experiment 4 of Bem (2011) by examining reaction time for congruent or incongruent pairing of words and pictures. Study 1 examined expectancies of 32 experimenters and 512 volunteers. Study 2 manipulated priming for expectancies by showing either randomized pro or anti-psi statements (for participants) and videos (for 32 experimenters), to assess the experimenters' and/or participants expectation using questionnaires with 640 participants. In this article, we report the results of Study 2. All analyses were pre-registered. Although a trend in the expected direction was observed when comparing congruent image-word pairs versus incongruent ones for all participants combined, it does not reach the 0.05 (two-tailed) significance threshold. No effect of participants' expectancy was observed.

# **Modeling Supernatural Belief: Cognition and Personality**

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This study set out to create and test a new model of supernatural belief based on cognition and personality, which would potentially test two theories of belief in the paranormal: The Cognitive Deficits Hypothesis and the Psychodynamics Functions Hypothesis. This was accomplished by conducting

6 This research was sponsored by a grant from the Bial Foundation.

two studies. Study one had 179 participants. A MANOVA followed by a discriminant function analysis revealed one profile relating to cognition: reflective thinkers. The profile was more likely to contain skeptics and believers, and least likely to contain paranormal believers. Study two had 152 participants and looked at personality alongside cognition. A MANOVA followed by a discriminant function analysis revealed sensitive and abstract thinkers and reflective metacognitive dogmatists profiles. The sensitive and abstract thinkers were least likely to contain skeptics and religious believers and most likely to contain believers and paranormal believers. The reflective metacognitive dogmatists were most likely to contain religious believers and believers and least likely to contain paranormal believers. Following this analysis, structural equation modeling was used to test seven different models of personality, cognition, and belief. Studies one and two found that the skeptics and religious believers have remarkably similar profiles, indicating that the religious beliefs themselves may have been cognitively ring-fenced off in some way. The paranormal believers, however, were not reflective thinkers and were not metacognitively active, indicating that they were not aware that they were not thinking critically or analytically. The structural equation model showed that schizotypy was the main predictor of belief. The relation between belief and cognition was more complex; it was dependent on what type of belief was active. Paranormal belief required a more intuitive thinking style to be present, whereas religious belief could withstand a reflective mindset. This study provides a unique contribution to the existing literature by establishing a model that combines cognition, personality, and belief.

# Saddam Hussein Remote Viewing Experiment: A Historical Contribution to Applied Remote Viewing

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This paper describes an applied remote viewing experiment carried out on November 3, 2003, with the explicit purpose of locating and describing the circumstances and conditions of Iraqi deposed president Saddam Hussein, who was then in hiding. Over a month after the remote viewing data were collected, analyzed, and operational hypotheses were developed, on December 13, 2003, Saddam Hussein was discovered by American forces assisted by Iraqi nationals. The paper describes the protocol used by 47 remote viewers, the development of operational hypotheses, and an assessment based on American government-sourced information as to the accuracy of the remote viewing session data.

#### Water, Wine, and the Sacred: An Anthropological View of Substances Altered By Intentioned Awareness, Including Objective and Aesthetic Effects

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This paper discusses the ancient anthropological linkage of water and wine with sacred rituals after these substances have been the focus of nonlocal perturbation. The changes produced can be both physical as well as subjective aesthetic reactions arising when individuals have a sensorial interaction with the treated substances. In making this argument the paper presents and discusses research done by others and the author, including reporting the results of a 12 part series of experiments in which groups of seven people tasted wine from one 750ml bottle that had been decanted into two identical 375ml carafes. The histories of the carafes were the same except that one, before the tasting, had been the focus of intentioned awareness by meditators, while the other was a control. Twelve sessions were conducted, 11 resulted in a majority preferring the treated wine, and one resulted in a tie. Using an exact binomial test, p = .0005. With 95% confidence we can say that the probability that a majority would prefer the treated wine is at least 0.76. The conclusion discusses the implications of the totality of this research.

# A Qualitative Exploration of Skeptics' Experiences of the Exceptional

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Disbelief in paranormal phenomena has been relatively under-researched in the literature. This study explored how disbelievers in paranormal phenomena described exceptional experiences (ExE) that occurred in the context of a laboratory experiment that was designed to encourage them. Thirty-three strong disbelievers (as identified by scoring 2 or more SD below the mean on Tobacyk's Paranormal Belief Scale) participated in a laboratory study designed to encourage exceptional experiences (ExE). As part of another study, participants took part in three 30-minute sessions in which they were asked to relax in a reclining chair while wearing earplugs and an eye mask. On two out of three of these occasions they wore a sham head device, designed to resemble a device that has previously been associated with exceptional experiences (ExE). The participants were encouraged to verbalize any experiences they noticed and answered 4 semi-structured interview questions following the 30-minute session. Any verbalizations and interviews were transcribed and these transcriptions were retained for the analysis if they included a description of an ExE (cf. Belz & Fach, 2012). Verbal descriptions of ExE were analyzed using inductive Thematic Analysis (TA). Four themes were identified: actor-observer separation, intensified thoughts and perception-like imagery, attributions of normality, control, and emotional responses. These themes indicate that a subset of skeptics is prone to ExE that included thoughts that were vivid and perceptual-like (external) sometimes akin to synesthesia. When ExE occurred, they were described in a manner that emphasized a position of logic (controlled thinking) over irrationality (automatic, emotional and uncontrolled thinking) and there was frequently an attempt to label and attribute experiences to experimental context, state of consciousness, and the workings of the brain and body with a view to normalizing them. This study complements and extends the existing literature on the psychology of exceptional experiences and the psychology of paranormal disbelief.

# A Couple of Radical Ideas for Advancing On the Problem of Consciousness

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In this paper, I suggest a two-pronged proposal for advancing on the problem of consciousness. That is, in addition to an ontological explanation of consciousness, we must also confirm such a theory using objective data. On the ontological front, I propose wave function psychism; the entity behind the quantum wave function is the base of conscious experience. My proposal results from combining three strands within philosophy of mind and physics: 1) Russellian monism, 2) the ontology of the quantum wave function, and 3) Tonini's Integrated Information Theory. I argue that my proposal is able to address many of the problems that face panpsychism. But perhaps most important, this framework is consistent with anomalous data known as psi. Thus my proposal is consistent with extant anomalous data on consciousness.

#### **Research Briefs**

#### The Associative Remote Viewing Re-Judging Project

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Associative Remote Viewing is one of the only methods studied formally in parapsychology that has demonstrated successful application of psi in predicting future events leading to the acquisition of money. In order to understand what worked when predictions resulted in hits and what went wrong when predictions resulted in misses, a large sample size of completed ARV trials for 86 events (sports or financial events) consisting of 220 free response remote viewing transcripts were analyzed. Six independent judges (single new judges) and two teams of two judges operating under masked conditions

repeated the judging, scoring, and predicting while keeping all other variables stable. These new scores/ predictions were then compared to the original scores and predictions as well as to each other. Our premise is that if we find that specific single new judge(s) or a team of two judge's predictions matched the actual outcome more consistently than the others, this will illuminate which judging methods (single vs. team of judges) and scoring methods (7 point scale vs. 3 point scale) can be considered more effective if the end goal is having higher hit rates and fewer misses. As of March 1, our experimental phase has been completed and we are now in the analysis phase with results projected to be determined by early June 2018.

## Remote Viewing of Concealed Target Pictures under Light and Dark Conditions

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The belief that darkness plays a facilitating role in putative remote viewing and other psi-related phenomena is well established in esoteric and traditional beliefs (Grim, 1983; Hallowell, 1942; Lyon, 2012). However, the role of darkness in RV success is unclear beyond these esoteric explanations. This study explored the differential effect of darkness/light on purported remote viewing ability alongside the effect of time and their potential interaction. From an initial sample of 20, 7 remote viewing claimants contributed a total of 19 sessions each (nine light/ten dark) that utilized randomized target selection, free-response descriptions, and ratings by both participants and an independent judge. Although the usable data gave the edge to the dark condition performance, the difference was not significant. Due to participant attrition, the usable data were too few to provide a definitive answer to this question. On the whole, participants who left the study early reported they did not find the target pictures "engaging," "interesting," or "emotionally involving." This led to exploratory post-hoc analyses concerning the numinosity of target images, to determine if this characteristic was associated with success. For the numinosity ratings of target images, a mean difference of 11.24, 95% CI [.12, 22.3] was shown as significant, with the target images of participant hit sessions containing higher numinosity ratings than unsuccessful miss' sessions, t(11.47) = 2.22, p = .048, with a large effect size, d = 1.02, [.01, 1.99]. No significant difference was found for target's numinosity ratings between independent judge hit and miss sessions. These findings suggest a response bias with participants inclined to select a more numinous target regardless of if it is the target or decoy, which should be investigated by future studies. To our knowledge this analysis is the first attempt to directly evaluate the degree of target numinosity's effect on attempted remote viewing success. The findings may have implications for the use of participant judgment in future remote viewing research. Furthermore, because there are several advantages to what parapsychologists refer to as free response targets as opposed to forced choice targets (Honorton, 1975), this finding may have implications for the selection of target material in future parapsychological research.

## Exploring the Correlates and Nature of Subjective Apparitional Experiences

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Several studies have explored the correlates of exceptional experiences (ExE). However, more research is needed on the correlates and nature of different types of experiences. In addition, recent trends in psychology and parapsychology include the application of qualitative methods to various types of ExE This project explores the psychology of subjective apparitional experiences in an online survey investigation using Qualtrics. A series of questions asking about subjective apparitional experiences (employing neutral language) was developed from existing measures. These questions were presented with response options that allow for different forms of appraisal such that the tendency to experience can be explored separately from the tendency to consider the experiences as paranormal (following Irwin, Drinkwater, and Dagnall, 2013). Additional questions asked about ways of experiencing and the nature of the experiences. A battery of individual difference measures included evaluations of creativity; synesthetic experiences; locus of control, the revised Transliminality scale; Hartmann's BQ a measure of hyperaesthesia and two measures of body awareness (interoception and a measure of somatic focus). We plan to analyze data using quantitative and qualitative methods. A difference test will explore whether synesthetes differ from non-synesthetes on subjective apparitional experiences; correlates of subjective apparitional experiences will be explored, and open-ended questions will be analyzed qualitatively (using grounded theory). The survey will also identify participants who will be invited to participate in a psychomanteum study at a future date.

#### Investigating an Unconscious Physiological Precognitive Response to Schematic Face Stimuli Using EEG

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This study is intended as a replication of a series of experiments designed and performed by Jacob Jolij (Jolij, 2015), and is being pre-registered with the Koestler Parapsychology unit as a confirmatory experiment. The Jolij team had been performing unrelated research on electroencephalographic (EEG) responses to a schematic face randomly embedded in static noise and analyzing its post-stimulus response. However, they were aware that other laboratories have reported findings in which physiological effects before random events could predict these events above chance levels, with the pre-stimulus events mimicking the post-stimulus events with a weaker effect size (Mossbridge, Tressoldi, & Utts, 2012). A later meta-analysis of experiments conducted after those covered by the first meta-analysis showed a larger effect size (Duggan & Tressoldi, 2018). Due to the research conducted by Mossbridge, Tressoldi, & Utts (2012), the Jolij team analyzed their pre-stimulus data for any precognitive effects and found a significant effect. This experiment aims to replicate Jolij's results. We hypothesize that the pre-stimulus EEG response will be predictive of the random stimulus at a significant level. We also hypothesize that the directionality of the pre-stimulus effect will be the same for the post-stimulus effect, but with much smaller pre-stimulus effect size.

# Precognitive Priming of Compound Remote Associates: Using an Implicit Creative Insight Task to Elicit Precognition

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Precognition encapsulates the notion that something that occurs in the future can influence cognition and/or behavior now. However, a number of recent research projects examining this aspect of parapsychology have failed to produce consistent results. Nevertheless, some light may be shed on these disparate findings by a recent meta-analysis that suggests that what may be considered fast/implicit type tasks are more able to elicit such effects as compared to slower/explicit type tasks. Given this, and the proposed link between individuals' creativity and their ability to exhibit psi type behaviors, the current study attempted to elicit a precognitive effect using a creative insight task. The task involved presenting participants with three words and requiring them to come up with a fourth related word. This compound remote associates task is a standard test for creative insight. Here, the added twist was that participants were primed with the correct answer to half the items after they had completed the task. The prediction was that participants would be more accurate when completing the compound remote associates for which they were later primed compared to those not primed. The results showed no evidence of a precognitive priming effect. The lack of such an effect could parsimoniously be interpreted as suggesting that precognition is impossible, but there remain many positive effects reported in the literature. Hence, a plausible alternative explanation offered suggests that the context (lab-based vs. online) of the research may influence the outcome.

#### Testing Precognition and Altered State Of Consciousness with Selected Participants in the Ganzfeld: A Pre-Registered Study

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This study was the first to contribute to a registration-based prospective meta-analysis of ganzfeld ESP studies (Watt, 2017a, b; Watt & Kennedy, 2016, 2017). We sought to maximize the anticipated psi

effect size by selecting participants on one or more of the following criteria: self-reported creativity; prior psi experience or belief; and practice of a mental discipline. Psi targets and decoys were short video clips randomly selected with replacement from a pool of 200. We employed an automated precognition design for simplicity and security, and to add to the small database of precognitive ganzfeld studies. The experiment was designed by CW and the computer program was written by AT. As well as predicting overall significant precognition task scoring, we tested the assumption that the ganzfeld method elicits a psi-conducive altered state of consciousness. Based on Cardeña and Marcusson-Clavertz's (2017) findings, we predicted that higher target similarity ratings (measured by session z-score) would be associated with greater evidence of ASC during the session, measured using the Phenomenology of Consciousness Inventory and a time estimation task. Procedure. Three experimenters (ED, AP, & HR) each conducted 20 trials. The participant reclined wearing a red eye-shield so that they perceived a uniform red visual field. Headphones first played a 9-minute progressive relaxation exercise, then played white noise for 25 minutes. The participant reported their impressions aloud and these were recorded. After the impression period ended, the participant estimated the time duration of the session. The experimenter then reviewed the participant's impressions and, when ready for the judging phase, the experiment program was progressed to randomly select one target pool. The participant rated each target for similarity to their mentation on a 1-100 scale (where 1 = no correspondence). After the participant's ratings were submitted, the PCI was completed. Finally, when the participant was ready to view the conclusion of the session, the program was advanced and the precognitive target clip was randomly selected and played to the participant for feedback. Results. Twenty-two direct hits were obtained out of 60 trials, corresponding to a statistically significant 37% hit-rate. Therefore, our hypothesis that the randomly selected future target would be identified to a greater than chance degree was supported. Contrary to prediction, no significant relation was found between measures of ASC and session Z-scores. We conclude that further ganzfeld ESP research is justified because previous extensive research with the ganzfeld has identified moderator variables that can optimize effect-size and because the method maps on to common features of spontaneously reported paranormal experiences.

#### Workshop

# Parapsychology and Transpersonal Psychology in Dialogue

Harris Friedman<sup>1</sup>, Dean Radin<sup>2</sup>, and Stanley Krippner<sup>3</sup>

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Parapsychology and transpersonal psychology were founded independently and have evolved separately as two distinct movements, although there is considerable overlap in both their content and in the interests of a number of scholars who are active in both areas. Harris Friedman, co-president of

the Association of Transpersonal Psychology, and Dean Radin, President of the Parapsychological Association, engaged in an informal discussion on the salient commonalities and differences between the two movements. Their focus was on exploring ways that the two could be brought into better alignment, such as including more transpersonal approaches within parapsychological studies and vice versa. Harris delineates the two areas by separating between extraordinary events and extraordinary experiences, seeing the former as more characteristic of parapsychology, and the latter as more characteristic of transpersonal psychology. Harris also sees them as typically using different methods, viewing parapsychology as tending toward more use of quantitative approaches vested in mainstream positivistic science, and transpersonal psychology as tending toward more use of qualitative approaches vested in a human-science paradigm. However, Dean thinks the main difference between the two is that parapsychology has focused on experimental methods (largely quantitative, but also qualitative) designed to explore the nature of both extraordinary events and experiences, with a goal of determining if they are what they seem to be and, if so, how they work. Dean also sees transpersonal psychology as largely focused on the psychological implications of these experiences for human mental (and possibly physical) health, and for what such experiences imply about human potential. Stanley Krippner, whose seminal work straddles across other areas, chaired the workshop, introducing and serving as a discussant for Harris and Dean's views, as well as presenting his own views on the relation between parapsychology and transpersonal psychology.

Posters

# Parapsychology and Buddhism: Interviews with Vipassana Meditation Practitioners across India

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The analysis of Pali canon's understanding of psychic powers was one of the main phases in my PhD research at the University of Northampton. The main categories and themes found in the Pali canon analysis led me to understand psi better. The analysis showed the theme of merits or good deeds as the base for developing psychic powers. Based on that analysis further evidence gathering was important with living examples of meditation practitioners. I chose to interview 15 Vipassana meditators from India around the Aurangabad, Mumbai, Nashik, and Pune region of Maharashtra state. These interviewees are serious Vipassana meditation practitioners as taught by S. N. Goenka under the tradition of Sayagi U Ba Khin. This research is being done on the Theravada Buddhist scriptures known as the Pali canon. The follower of this tradition is strictly expected to observe the five precepts and meditation routine of at least two hours daily sittings. The participants involved in the interviews had at least 5 years of experience in this tradition. The aim of this paper is to emphasize the relevance of the theme of merits as found previously in a Pali canon analysis that can come into operation in psi experiments, along with the notion of Act of Truth.

# Are People Conscious of Scopaesthesia? Do the Number of Starers and the Introduction of Acoustathesia Affect Hit Rates? A Pilot Investigation

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Scopaesthesia is derived from the Greek words for thinking and knowing. In this paper, the phenomenon of Acoustathesia, the idea that individuals are able to sense when they are being spoken about has been introduced, with the hope that this may increase the hit rates produced by participants. The influence behind the idea of including the phenomenon of Acoustathesia is based on research produced by Friday and Luke (2017). In this research the idea of being able to sense when someone is staring at you has been linked with the idea that it is possible to feel when you are being spoken about. The hypothesis behind the current study is that when an individual is being spoken about and stared at they are able to sense this more strongly and pick this up more often. It has also been hypothesized that individuals with higher levels of Paranormal Belief will produce higher and more accurate hit rates. The ability to feel when someone is staring at you and to feel when you are being spoken about has been said to be evolutionarily advantageous, which would suggest that in the past survival may have been dependent on these abilities. The results of this study showed a marginal positive correlation between the mood of the participants after the study and the hit rates scored by participants and their confidence that they would contribute to the study. This means that the higher the mood of the participant the higher their hit rates and the higher the confidence of the participant, the higher their hit rate. Paranormal belief levels did not significantly correlate with the hit rates produced by the participants nor did a stare condition. There was no significant difference between the hit rates scored by the participants within the group stare or single stare condition when compared to chance.

# Anomalous Experiences Reported by Nurses: Second Study Examining Personality, Perceptual and Cognitive Factors

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The aim of this study was to determine the degree of occurrence of certain unusual perceptual experiences in hospital settings often related by nurses. Three hundred forty-four nurses were recruited from 36 hospitals and health centers in Buenos Aires, grouped as 235 experiencers and 109 non-experiencers. The most common experiences were sense of presence and/or apparitions, hearing noises,

voices or dialogues, crying or complaining, intuitions, and extrasensory experiences. In relation to the experiences of their patients, the most frequently reported were near-death experiences, religious interventions, and many anomalous experiences in relation to children. The rationale of the present study was to confirm the early findings for work stress and absorption with a bigger sample of nurses (Parra & Gimenez Amarilla, 2017) and measuring schizotypy proneness and empathy skills. The initial finding that nurses who report anomalous experiences tend to score higher on work stress was not confirmed. However, experiencers scored higher on a depersonalization factor when compared with non-experiencers. Nurses reporting these experiences tended to score higher on absorption and proneness to schizotypy, mainly "positive" schizotypy (unusual experiences). Also, they reported higher cognitive empathy and emotional comprehension than non-experiencers.

#### **Invited Addresses**

# Parapsychology as an Essential Component of an Expanded Science of Mind: Promises and Challenges

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In the course of more than half a century of work in the psychology of consciousness and the development of transpersonal psychology, I have become convinced that practical deployment of psi abilities could be used to enrich a science of the mind *per se*, that we could, as it were, put the psyche back in psychology. It will be difficult, but I want to share this vision. Early historical attempts to develop this as a kind of mental chemistry foundered on six major, unaddressed issues, viz. ignoring individual differences, experimenter bias, culture boundedness, insufficient training in introspection, a dominance of materialism that marked introspection as inherently inferior, and a rigid assumption of the inherent privacy of mental events. The development of practical, intelligence-gathering applications of psi, remote viewing in the last few decades indicates that, if remote viewing were applied to multi-observer psi observations of others' mental processes, the inherent privacy of mental events could be greatly reduced and a more probabilistically useful, if not exact, understanding of mind could be developed, including normally "unconscious" processes. Building on the accomplishments of methodologically sophisticated technical parapsychology, a deeper psychology and transpersonal psychology could allow relatively scientific refinement of experiences and knowledge quite important to people, but now generally isolated behind barriers of rigid beliefs and prejudice.

# The Software of Consciousness: Intriguing Lessons and Lingering Puzzles on the Far Side of the Stargate

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The advent of global computer communications and social networking presents the parapsychology community with novel opportunities for wide-ranging experimentation. These opportunities come at several levels: (1) Research can be extended in real or differed time around the world, eliminating many financial and logistical concerns with travel and coordination. (2) A higher degree of accuracy in data capture is assured through the network's precise text and time recording. (3) Spontaneous phenomena having to do with coincidences, distance perception, and non-locality can be unobtrusively captured and studied well beyond the anecdotal quality of current practice. And (4) much greater security and protection against fraud can be provided, verified, and audited. The parapsychology community has begun taking advantage of the new tools in a number of ongoing studies where current practices can be extended. Beyond these practical considerations of the technology, however, new phenomena have also been frequently noted by software teams coding the systems and they could be profitably reviewed. They date back to the very early days of the Arpanet (circa 1975) when we developed the first social network for use by research and industrial organizations. Our observations forced us to think of the software systems we were building as tools that superseded both space and time. Since remote viewing presented itself as a convenient experimental scheme, we applied it to a series of innovative tests whose results could be re-purposed today in the current environment of widely-available, inexpensive social networks. To that end, we review here the experimental setup that was used to assess the impact of the technology on the perceptions and behavior of our users of the new software; we note the phenomena we observed during these tests; and we project these observations into proposals for the exploitation of social networking as a convenient new instrument for the study of social and individual consciousness.