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Full Papers

Getting the Facts Straight: A Reassessment of some Micro-PK Results

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Progress in parapsychology, as in all of science, depends on data that are both valid and correctly interpreted. The process goes by fits and starts and backtrackings. Consensus comes slowly and often sports an asterisk (and rightly so). But the point of reassessing interpretation is not simply to get things right. An updated view can sharpen priorities, highlight promising directions or pose new questions. This paper takes a broad look at micro-PK research with random number generators and attempts to clarify some selected issues. Some results are drawn from previous publications and others are presented for the first time. I hope that, by bringing them together in one paper, one can glean a coherence to what otherwise might appear as disparate results. I begin by recalling some contributions of Helmut Schmidt that I feel are still relevant today. Next, there is a new look at the well-known PEAR Consortium replication, which I believe has been misinterpreted. Likewise, for the meta-analysis of Bösch et al., a work that drew considerable attention in 2006 by virtue of appearing in *The Psychological Bulletin*. Lastly, I turn to the Global Consciousness Project and show how, when its main result is correctly interpreted, it harkens back to a key insight of Schmidt.

What is the Evidence that Alterations of Consciousness Relate to Enhanced Functioning?

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The relation of alterations of consciousness (and techniques to achieve them) to enhanced function has often been described in one of two poles, either proposing that altered consciousness is necessarily pathological or at least a falsification of reality, or proposing that extraordinary feats can be achieved through them. This presentation critically summarizes and integrates the research literature on the relation between altered states and traits of consciousness and enhanced psychophysiological and psi functioning. A literature review was conducted on spontaneous or induced (e.g., through meditation,

hypnosis, sensory homogenization, and psychoactive drug ingestion) alterations of consciousness and potential enhanced physiological, psychological, and psi functioning. From different levels of evidence, from systematic case studies to controlled randomized studies, there is consistent evidence for an association between altered consciousness and physiological phenomena such as: stigmata and bleeding control, heart rate control, reduced metabolism, ability to withstand cold temperature, analgesia, and change in somatic systems. Enhanced psychological functions that show a relation to altered consciousness include: perceptual sensitivity, attentional control and deautomatization, creativity, positive affect, personality change, and diagnosis and treatment of disorders. Altered consciousness has been found in conjunction with increased psi scoring in the following contexts: early mediumship studies, hypnosis, ganzfeld, meditation, and psychedelics ingestion. This review justifies a vigorous study of the potential relation between altered consciousness and enhanced functioning, although with some important caveats, among them: 1) the level of research rigor varies considerably across the literature, 2) alterations of consciousness have been frequently assumed rather than systematically assessed, 3) potential "active" ingredients of the relation between altered consciousness and enhanced functioning have been rarely evaluated, 4) state-trait interactions have been rarely evaluated.

How Smokers Change their World and How the World Responds: Testing the Oscillatory Nature of Micro-Psychokinetic Observer Effects on Addiction-Related Stimuli

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According to standard quantum theory, the occurrence of a specific outcome during a quantum measurement is completely random. However, attempts to replicate PK findings have often failed, a critique that is not exclusive to psi paradigms though. In an attempt to explain these failures, von Lucadou, Römer, and Walach (2007) proposed a theoretical model predicting unsystematic variations of such an influencing effect across replications, resulting in a decline of a predictable effect in micro-PK data over time. Maier, Dechamps, and Pflitsch (2018) slightly expanded this theory by proposing that the temporal variation of such an effect follows a systematic pattern, which can be tested and used for prediction making. In this research we generated such a prediction using data from two previous studies that initially demonstrated a strong micro-PK followed by a subsequent decline in the effect over the course of 297 participants (Maier & Dechamps 2018), we then put it to test with an additionally preregistered set of recollected data from 203 volunteers. We compared these results with 10,000 simulated data sets (each set with N = 203) each comprising random data. Three tests were applied to the experimental data: an area under the curve analysis, a local maximum fit test, and an endpoint fit test. These tests revealed no significant fit of the real data regarding the predicted data pattern. Further analyses explored additional techniques, including an analysis of the highest reached Bayes Factor (BF) over the course of the experiments, the overall orientation of the BF curve, and its transformation into oscillatory components via a Fourier analysis. All these methods allowed for statistically significant differentiations between experimental data on the one side, and the control group and simulation data on the other.

We conclude that the analyses of the temporal development of an effect along these lines constitute a fruitful approach toward testing non-random and volatile time trends within micro-PK data.

A Transportable Bench to Research on Telekinetic Effects on a Spinning Mobile: New Results With a High Signal-To-Noise Ratio

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We present in this paper a new approach for study the macro TK/PK (Telekinesis/Psychokinesis) phenomenon. Our objective here is to analyze precisely the starting conditions of the motion of a spinning target knowing that the focus is on the thermic/aerodynamic effects, others factors being eliminated. The core technique remains to evaluate the airflow speeds around the target with PIV (Particle Image Velocimetry) as described in our precedent publications. We aimed to:

- Improve as much as possible the signal-to-ratio by first using a heavier target (here we no longer focus on the speed of the target) and second, presenting a less noisy smoke generation for the PKer (person practicing telekinesis/psychokinesis) experiment.
- Develop an equipment that could be transportable and used at home,

These two directions drove us to create a "transportable PIV bench," which represents a semi-confined environment easily disassembled and transportable. The smoke generation by simple incense sticks creates lower noise on the airflow speeds than the smoke generator machine used on the static bench. We then conducted reference experiments with our static bench, where the motion of the target is obtained with the airflow issued from a pump, and PKer experiments, where the motion of the target inside the bench is triggered by the PKer. We tried, in the reference experiments, to generate the spin of the target with minimal airflow speeds, to establish the required speed in order to start the motion. The comparison between the airflow speeds of the two sets of experiments showed that the tangential airflow speeds in the PKer experiments were ten times lower than the required airflow speeds to start the target in the reference experiments. In fact, the speeds were in the same order of magnitude than without motion and without hand. In our precedent publication a potential bias and errors analysis was presented, evaluating the potential error at more or less 9% on the ratio air-flow speed/mobile speed, which is marginal against the ratios seen above. We also conducted some vertical PIV experiments to evaluate the airflow vertical speed during the PKer experiments. The results were in the same order of magnitude than the horizontal speeds. Finally, we did some artifact experiences simulating the hand and the upper body of the PKer, him being outside of the room, without causing a reaction on the target. These different elements demonstrate that the phenomenon that triggered the motion of the target was not due to aerodynamic/thermal effects and constituted a good candidate for macro-PK effects. These experiments also confirmed the efficiency of the transportable bench which can be a good way for other labs to try to reproduce these experiments with a gifted subject.

The Phenomenology and Impact of Perceived Spontaneous After-Death Communications: A Review and New Approach

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Whatever the ontological status of After-Death Communication (ADC), they have been found to allow the bereaved to assume a continued bond with the deceased that can be a medium for closure or resolution. With this in mind, we would argue that there is a need for greater recognition of their occurrence by therapists and acknowledgement of their potential for healing as part of the therapeutic process. The objective of this 2-year research project is to gain a better understanding of the phenomenology and the impact of spontaneous ADCs. Using an online survey methodology, we intend to explore the incidence and coincidence of features of ADCs and their linkage to particular impacts upon experients. The present study aims to expand on previous large-scale surveys (e.g. Burton, 1980; Guggenheim & Guggenheim, 1995; Haraldsson, 2012; LaGrand, 1999; Rees, 1971) to examine a wide range of perceived ADCs, focusing on their phenomenology and covariates. We thus set out to answer the following questions: Who has an ADC? In what form (type) are ADCs reported? Under what circumstances do they occur? What attributions do people make to their ADCs? Who are the deceased persons supposedly initiating the contact and how are they related to the experient? Are there differences between countries? The second objective is to analyse the impact of perceived ADCs on experients. The following questions will be addressed: How do experients experience ADCs? What is the impact on experients? How does it influence the grieving process? How does it influence personal beliefs? Does the national and social context influence individuals' experiences? The main themes of the questionnaire include: circumstances of occurrence, type of ADC, message conveyed, emotions and sense of reality associated with the experience, impact and implications for the grieving process; profile of the experient, and profile of the deceased person perceived (including cause of death). Data are being collected in several European countries (Switzerland, France, the United Kingdom and Spain). At the close of all three questionnaires (English, French and Spanish) a total of 1,005 questionnaires were received. Data analysis is ongoing. As with other such surveys, the primary analysis consists of presenting and evaluating frequencies of occurrence and co-occurrence. Subsequent analysis will focus on identifying experiential factors that covary with ('predict') personal impact.

The "Amneville's RSPK Case": An Illustration of Social Elusiveness

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During the summer 2014, less than two kilometers from my house, started a seemingly RSPK case which attracted media attention in France and abroad. An old couple with a teenage nephew observed unexplained displacements and destructions of objects in several rooms of their house. Neighbors, policemen, and journalists quickly arrived and added their own testimonies which deepened the strange-

ness. In a few months, the case was partly "solved," not through a scientific enquiry but by the self-accusation of an old "hysterical" woman and a trial that concluded a dismissal of all charges ("non-lieu"). Without having the possibility to interview the protagonists themselves, despite two attempts, I stayed as an observer of the social treatment of this paranormal story. I collected all press articles, video reports, online discussions, and informal local discussions to document the various socio-psychological reactions at the different steps of the case. Following the Model of Pragmatic Information's application to RSPK cases (Lucadou & Zahradnik, 2004), I illustrate the four phases of this case: surprise, displacement, decline, and suppression phases. This model allowed me to make public predictions that were verified. Then, I focus on the "suppression phase" where there is a kind of social influence to restore normality instead of the disturbing paranormality. I suggest to call this action "social elusiveness" (Evrard, 2012) and to discuss its place in parapsychology.

Blind Analysis of a New Correlation Matrix Experiment

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Mind-matter interaction or micro-psychokinesis (PK) experiments have a long tradition in parapsychology and, due to inherent difficulties of these experiments, often have become more complex in their nature over the years. One of these more complex developments was to use correlations between psychological variables of a human agent with actual physical variables of a system. For example, instead of looking for an aggregate deviation from randomness one would correlate the output of a random number generator (RNG) with psychological traits such as belief in parapsychological phenomena. Another level of complexity was introduced by Walter von Lucadou by using many such correlations between different psychological and physical variables within one experiment. Arranging these correlation factors in a matrix, he called this type of experiment "Correlation Matrix Method" (CMM). This idea was motivated in conjunction with the theory that psi may act in form of correlations than in the form of causal signal transmission. In an analogy to physics, such entanglement-like correlations could not be used to reliably transmit information, which would make it unpredictable where in a given PK-experiment significant correlations would show up. Thus the combined result of many correlations is evaluated in a CMM-type experiment, which is in essence a multiple-analysis technique. Von Lucadou performed three such experiments and reported statistical significance on each of these, which lately led other researchers to replicate this paradigm. The present experiment was built from scratch with new hardware, testing 200 participants who spent about half an hour each trying to "influence" a physical random process visualized for feedback. The analysis software was written from scratch, and conceptualized following a masked analysis protocol. Masked analysis is a more rigid form of pre-registered analysis in which the complete analysis software is written and tested before the data are actually analyzed for the effect under study. During the masked phase of the analysis development and testing, either artificial data are used, or the real experimental data are used, but in a disguised, blinded, form. The latter can conveniently be achieved in correlation-type experiments by permuting the association of psychological to physical variables between different participants. This method also yields a reliable way to correctly estimate the statistical background distribution of the statistic used. The latter is particularly important

in cases where the underlying psychological and physical variables have internal dependencies, which make analytic procedures to estimate the background distribution to fail. The unmasking of the analysis, also called opening of the box of the experiment described here was made live at the end of the presentation.

Revisiting Wigner's Mind-Body Problem: Some Comments on Possible Models of Connections Between Information, Mind, and Physics

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I will argue that understanding John Bell's real concerns, and following his advice is important if we want to make serious steps toward understanding the coupling between mind and matter as it was first addressed by Eugene P. Wigner, who was one the first great physicists who speculated that the message that quantum mechanics may be sending us is that consciousness may be the most essential part of ultimate reality. Wigner envisaged that quantum mechanics needs to be replaced by an enhanced theory, whose equations of motion are nonlinear. John Bell came to a similar conclusion albeit starting from different premises. He argued that quantum theory needs to be enhanced to accommodate real time events (which he related to what he called "beables" - things that really "are"). What is needed is explicit description, within the mathematical formalism of quantum theory, of the flow of information. I will argue that this can be done and that in order to understand and describe, using equations and algorithms, consciousness and psi phenomena - in particular of poltergeist type, further steps are necessary that involve hyperdimensional physics and Kaluza-Klein type theories, but developed for low energy phenomena and information exchanges, which is not how contemporary theoretical and mathematical physics is being developed.

The Randomness Project: Explorations into the Nature Of Randomness

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The concept of randomness and its role in scientific research is discussed. In the Copenhagen interpretation of Quantum Physics, a physical system is described as a superposition of potential outcomes. Upon measurement the system finds itself in a definite state. The transition has been called "the collapse of the state vector." This collapse is assumed to be purely random. But what causes this collapse? Arguably, the most controversial interpretation is the Consciousness Causes Collapse Hypothesis (CCCH), which states that interaction with consciousness causes the collapse. This hypothesis has been the basic assumption in a class of psi theories called the Observational Theories. A critical prediction of this hypothesis is that conscious perception and the outcome of a quantum measurement correlate: in Schrödinger's gedanken experiment, perceiving a dead cat "causes" the superposition of a dead and alive cat to collapse into a definite state, thus "killing" the cat. We tested this idea by using a signal de-

tection paradigm in which participants from time to time *mis*perceive a stimulus. Stimulus presentation was triggered by either a pseudorandom number generator (P) or a quantum RNG (Q). CCCH predicts that the number of misperception should be lower for Q than for P-triggered stimuli This pattern was indeed found in the first 2 face detection studies (p combined < 0.0007). This anomaly might also be conceptualized as implicit PK. Subsequently, we biased conscious perception by presenting a cue prior to presentation of a stimulus, thus favoring one of two percepts. According to the CCCH, this should result in a bias in the quantum RNG, or the cueing procedure should be less effective for Quantum than for Pseudo random triggered stimuli. We observed this latter pattern as an interaction between the effect of the cue and the random source. The consequences for methods used in empirical sciences are discussed.

Becoming a Haunting Myth and a "Lost Place": An Investigation Report

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In 2005, the counseling department of the IGPP was informed about spooky events in a hotel with a glorious past in Southern Germany. Because of the complex social dynamics associated with the case, an examination promised interesting results. A team of IGPP staff members conducted a field investigation of the *Castle Hotel*. This paper provides a brief overview of the investigation and the findings gained with on-site explorations, interview data, and a historical inquiry. As is often the case in such alleged RSPK cases, it is difficult to assess the reported phenomena from a retrospective perspective with regard to their paranormal quality. In this respect, the scientific gain in knowledge regarding the supposedly paranormal phenomena remains low. However, from a sociological, anthropological and cultural-scientific perspective, the case offers interesting insights into the conditions for the emergence of a haunting myth. The focus of this paper rests on the analysis of the conditions that favor this emergence. In addition, the further development in this case shows in an exemplary manner the effect a field study can have on the investigated object. This paper aims to raise awareness of these issues among researchers investigating spontaneous cases. The case of the *Castle Hotel*, however, also shows the limits of the possibilities to minimize such effects.

Historical Perspective: Justinus Kerner's Case Study Into the "Prison Spook" in Weinsberg and Spooky Actions at a Distance in 1835–1836

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In the winter of 1835/1836, strange occurrences were reported from a prison in Weinsberg. They consisted mainly of knocking, shuffling, and roaring sounds, but also of mysterious lights and a sickening smell of decay. The prisoners and the prison guard's family attributed them to a spook. Their complaints led the representatives of the Weinsberg district court to commission Justinus Kerner (1786-1862),

the district physician of Weinsberg, to examine the reported phenomena and the imprisoned Katharina Esslinger, who appeared to be the focus person eliciting these manifestations. Kerner interrogated various witnesses about the occurrences inside the well-secured prison and also visited the prison at night in person to obtain first-hand experiences. Kerner found no indications that the prison inmates had cheated. He therefore demanded that other persons with a preferably well-educated background should be included in the examinations of the phenomena. In 1836, Kerner published the results of his investigation in a remarkable book in which the testimonies of 50 witnesses are given in writing. Many of these witnesses, including Kerner himself, reported also on how the typical, but inexplicable phenomena had followed them to their own homes outside the prison. However, especially in non-German literature on hauntings and other anomalistic phenomena, this noteworthy and pioneering case report is rarely considered. In this contribution, I present important aspects and findings from Kerner's book, and relate them to more recent approaches of single case studies on haunting and anomalous phenomena. In particular, I highlight the methods of his investigation as well as the limitations of his approach, and sketch the public and often polemical debate that Kerner's investigation into the prison spook triggered at his time. As it seems, these criticisms of Kerner's studies are still comparable to current reactions to studies of related anomalies.

RSPK 4.0 - When Ghosts Dance out of Line

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This article aims at cleaning up – or disturbing – prejudices and opinions as well as certain categories and rash explanations about RSPK, for there is not always an adolescent person at hand when, once again, cups are falling out of the cupboard...It is also a matter of embodiment (Lucadou 2010, 2018) of the affected persons, and we have to question ourselves about the potential benefit of a broken cup as sometimes "break a thing, mend you luck". We will discuss the typical development in phases (as the Freiburg-model suggests), phenomenological aspects, characteristics of the so-called focus person and the aspect of theatricality. Afterwards different cases will be presented, which are prototypical in their development, but at the same time atypical, because in some points they differ significantly from the classical Freiburg RSPK model. Atypical RSPK appears in different shaping and dimensions. For example, the so-called "old age" RSPK can be clearly distinguished from the "adolescent" RSPK; "depressive" RSPK is completely different from "neurotic" RSPK. It is obvious that a distinction concerning the phenomenology and certain personality traits makes sense. External circumstances are also play an important part when RSPK arises, as can be observed in the case of "grief" or "burnout" RSPK. To get a more differentiated view on RSPK we have decided to describe the following dimensions: Old age RSPK, Neurotic RSPK, Salutary RSPK, Protective RSPK, Depressive RSPK, and Grief RSPK. To summarize we notice that typical RSPK shows the following features: There is a focus person with characteristic personality traits, the phenomena follow a describable development, specific phenomena occur, comprising inexplicable noises, mimicry noises, movement of objects, etc. But then we observe that more or less clear deviations from the prototype can be found for almost every feature. This change can be verified comparing the age of the focus person. The study of Huesmann and Schriever (1998) show that in most of the 52

investigated cases the focus persons were adolescent. An actual study from 2016 shows a different distribution. Also, we can see that the average age of the focus persons contacting our counseling office seems to have increased. Comparing the phenomenology of adolescent RSPK and old age RSPK, we can find more differences. It seems that specific features of adolescent behavior, such as egocentricity and theatricality, also appear in adolescent RSPK cases, whereas older focus persons often are in a lack of a "stage" – which corresponds to the tendency of older people to retire and be less apparent in the public. The phenomenology itself seems to adapt to the age of the focus person: phenomena in case of adolescents often are loud, impressive and dynamic, with an increasing tendency to include the world of new media and virtual reality – older focus persons, however, experience rather discreet phenomena referring much less to virtual worlds or technology – unless the focus person has a special affinity with these things. So we can see that, comparing different age groups, there exist some deviations from current assumptions about RSPK. Besides this observation of the effects from life age on RSPK experiences, we are trying to find out whether other exterior circumstances have effects on RSPK. We present the phenomenology and symbolic language of classical grief RSPK, and the way that, on the other hand, stress-related burnout RSPK is expressed.

A Further Test of Dream ESP: Comparing Individual versus Group Judgements and Testing for Intra-Subject Effects

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The current experiment is part of an effort to encourage a renewed interest in dream ESP research. Roe (2016) described the suite of dream ESP studies undertaken at the University of Northampton. In such studies, participants sleep at home as normal but keep a dream diary. During the night a computer based at the CSAPP laboratory randomly selects a video from a pool of approximately 240 1-minute clips to serve as their target. The video is played repeatedly through the night by the computer, located in a locked and alarmed laboratory to preclude any possibility of accessing the material by normal means. In the morning the participant attends the laboratory and shares their dream diary content with an experimenter. A copy of the dream diary transcript is taken. The computer then presents the target and three decoy videos for the participant to compare with their dream content. The experimenter can facilitate this process since they are also masked to the identity of the target. Once all clips have been reviewed the participant gives similarity ratings that allow the clips to be rank ordered (with the one in first position most like their dream content and the one ranked fourth least like). Once these judgements are recorded the computer automatically reveals the actual target identity. Trials on which the target video was ranked in first place are called hits and other trials are misses; the likelihood of attaining a hit just by chance is 25%. The overall outcome from just these Northampton studies, involving a total of 183 trials with unselected subjects across 6 discrete experiments, was a 31% hit rate, statistically significant (binomial p = .03). Based on sum of ranks, the distribution of scores fell narrowly short of significance (SOR = 433, z = 1.59, p = .055). One of our preferred dream ESP experimental approaches has been to adopt a repeated measures design in which, rather than have each of a large number of participants contribute just one trial (as is typical, for example, in ganzfeld studies), they instead contribute a number

of trials in a manner similar to some of the most successful Maimonides experiments. In this study, five co-participants contributed to a series of 40 trials (divided into two phases of 20 trials to allow small changes to the protocol in between phase 1 and 2). All slept at home as normal and kept a dream diary. The following morning, they attended a group session in which each person was invited to share their dream content. Participants were allowed to 'attend' the session via Skype, but the session researcher and at least one participant had to be physically present. We pre-specified that if fewer than four of the five participants were present then the session would be designated a "practice trial" and would continue for development purposes but the outcome would not count. Participants then viewed the target clip and three decoys presented by the computer program in random order and each made similarity judgements based on their own dream content. These ratings were discussed and a consensus decision was also recorded based on a combination of individual ratings. Once these judgements were recorded the target clip was revealed by the program and any correspondences discussed for closure. For phase 1 the consensus judging hit rate was exactly at chance (25%) and four of the five participants scored close to MCE. In phase 2 all but one of the participants scored above MCE and the group hit rate was 40%. When combined the two phases give an overall hit rate of 32.5% that is non-significantly better than chance expectation (binomial p = 0.179) and is consistent with effect sizes for free response ESP studies. Group performance was superior to that for all but one of the individual participants.

Victorian Ghost Hunters in the 21st Century: Conflict, Continuity and the End of Psychical Research

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Since its founding in 1882, the Society for Psychical Research (SPR) has been the leader and model for the investigation of what we now call the "paranormal," as both a profession and the expression of a subculture. Despite that considerable history and reputation, the SPR has now largely been eclipsed by new forms of investigation into the paranormal of varying and different degrees of professionalization from academic parapsychology to popular "ghost hunting," with some groups particularly expressing ghost hunting as a media event and form of entertainment. This paper situates the continuity of the SPR against this conflict with new organizational and experiential forms, using indepth interviewing and participant observation methodologies to elucidate the evolving nature of the investigation of the paranormal at the beginning of the twenty-first century. This paper will historically chart the emergence of ghost hunting as a particular form of investigation into the paranormal, situating the foundation of the SPR against this, and showing how the SPR currently faces top-down pressure from academic parapsychology and bottom-up pressure from popular ghost hunting that threaten its continuing relevance today. The 'end of psychical research' is thus to be understood as terminological as well as organizational: with the term "psychical research" now entirely restricted to use by the SPR it highlights the growing marginalization of the SPR within its own field. Nuancing this historical approach will be a sociological investigation into the demographics, beliefs, and attitudes of those engaging in this field.

Experimenter Effect and Replication in Psi Research I, II, and III: A Global Initiative

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We hypothesized that the difficulty of replicating the original effect observed by Daryl Bem could be due to participants' and experimenters' beliefs and expectancies about psi. This is what we intended to test in this replication attempt. We conducted three large-scale, meta-experiments. Experiment 1 was a direct replication of Bem's (2011) retroactive priming experiment with 32 experimenters with 12 participants each. In experiment 2 we enrolled another set of 32 experimenters with 16 volunteers each and tested the hypothesis that positive or negative priming could influence both experimenters' and participants' performance. Experiment 3 was performed on the internet with 32 experimenters testing 12 volunteers each, and tested implicit beliefs of experimenters and participants. In Experiment 1 the procedure was identical to experiment 4 of Bem's series (2011), which is a fast-thinking protocol using retrocausal priming. Both experimenters and participants were assessed for their baseline belief in psi phenomena using five simple questions to assess belief in psi. Each experimental session consisted of 40 trials. In each trial an image was randomly selected and displayed to the subject, followed by a randomly selected incongruent or congruent priming word. Participants were instructed to identify images as "pleasant" or "unpleasant" as quickly as they could by pressing the corresponding key; after participants responded the priming word flashed briefly. A total of 20 "unpleasant" and 20 "pleasant" images followed by a randomly selected priming word (20 congruent and 20 incongruent) were shown. These images were from a standard IAPS (International Affective Picture System) set, as used in Bem's original study. The task took advantage of Bem's program with slight modification so information about the experimenter could be saved in the database. In Experiment 2 the procedure was identical to experiment 1 except that each experimenter saw either a video indicating to them that the experiment was likely to succeed or likely to fail. Similarly, prior to starting the task, participants saw a quote from a scientist indicating to them that the experiment was likely to succeed or likely to fail. In Experiment 3 the procedure was identical to experiment 1 except that we assessed experimenter and participant implicit belief in paranormal phenomena using an IAT 12-minute protocol. These experiments investigated multiple hypotheses:

- 1. Replicating the previous study by Bem, response time would be shorter for trials with congruent words than for trials with incongruent words.
- 2. The response time effects (differences) of the participants would be greater if they were with experimenters with positive expectations (belief in psi effects as assessed in the second survey)

about the experimental outcome than if they were with experimenters with negative expectations (lack of belief in psi effects).

- 3. The response time effects would be greater for participants with positive beliefs/expectations about psi than for participants with negative beliefs/expectations about psi.
- 4. Priming could influence participant performance.
- 5. Implicit beliefs could influence participant performance.

Experiment 1. The primary hypothesis did not show a significant psi effect. However, when the statistical power was increased by using a single-trial analysis, the primary hypothesis was highly significant (reaction time log difference between congruent and non-congruent targets of -0.07 associated with p = 0.0006). A post hoc analysis of participants who performed the test in English, based on the preplanned analysis as in the original experiment also provided a positive outcome: N = 193; p < 0.02; d = 0.15. The results did not support a correlation between study outcome and experimenter expectancy, although positive trends were observed. Experiment 2. The primary hypothesis did not show a significant psi effect, although a trend at p = 0.055 (one-tailed) in the expected direction was observed when comparing congruent image-word pairs versus incongruent ones for all participants combined. Experiment 3. Based on preliminary analysis, the primary hypothesis did not show a significant effect. We are currently analyzing secondary hypotheses. Overall, these results of Study 1 supported the feasibility of a multi-laboratory collaboration. The current results are mostly limited to the pre-registered analyses. No further exploratory analyses have been run so far.

The Effect of Context and Supernatural Belief on Cognition

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This study aimed to see if context in the form of priming can alter participants thinking style based on their level of implicit association with either a religious or paranormal belief. This was based on the theory of alief, when a person's explicit belief and behavior are mismatched. This was also linked to dual process theory, with alief being analogous to type one thinking styles (fast and automatic). One hundred and seventy-two participants were recruited from the University of Derby and social media. Implicit association was measured using a modified Brief Implicit Association Test that looked at paranormal and religious belief. Explicit supernatural belief, cognitive reflect, metacognition, and confidence were also measured. A series of MANOVAs were run on the whole sample, and then on the four types of believer: skeptics, religious believers, paranormal believers, and believers (people who had high levels of belief in both the religious and paranormal). The only group having significant differences between the DVs were the believers group. Post hoc analysis on this group revealed a profile of "positive reflectors" who were low metacognition, high in cognitive reflection, and high in confidence. Implicit association was not a key factor in this profile. The religious priming group was the most likely of the priming groups to belong to this profile. We conclude that the prime worked on a moral level and influenced someone with an already open mind to different beliefs to be more analytical, positive, and confident.

A Grounded Theory of Ghost Experiences

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This paper employed grounded theory to analyze people's first hand descriptions of their experiences with ghosts. Verbal descriptions of peoples' experiences with ghosts were collected as part of a larger survey. Participants who responded affirmatively to any (of eight) questions about ghosts were invited to answer an open-ended question that asked them to provide a detailed description of their experience and its impact on them. The url was distributed to psychology students, staff and faculty at the University of West Georgia, in several local businesses and via social media (N = 355, of which 145 shared a story). It was also distributed to psychology students at Northwest Missouri State University (N = 85, of which 45 people shared a story). A later sample consisted of additional participants from the University of West Georgia and surrounding area (N = 103 of which 57 people shared a story). Narratives were read multiple times by the first and 3rd author and coded by the first author. Refinement of the coding and themes led to the development of four overarching themes:

- 1. *Meaningful interactive experiences*: Bereavement and the continued emotional connection to a loved one contributes to increased likelihood of meaningful interactions with the loved one following their death.
- 2. Challenging complex phenomena: This theme reflects how people make sense of convincing perceptual-like experiences that strongly suggest a ghost and which are challenging to normal, socially accepted ideas about reality and psychological wellbeing. Complex perceptual experiences include patterned phenomena (e.g., sounds like footsteps and voices) and spatially present or realistic imagery of initially unrecognized detailed figures.
- 3. External presences (something unseen) energy, emotion and the body: Invisible presence experiences occur when there is a combination of emotion and tangible changes in energy in the external environment or on the body. Simple presence experiences reflect feelings that someone is at the end of a long dark hall way (often while alone) or feeling that one is being watched that is related to anxiety and paranoia. Complex presence experiences are connected to sudden overwhelming/flooding of emotion (negative) accompanied by a tangible change in the energy in the room.
- 4. Sensitivity and connectivity (boundary thinness): A trait-like sensitivity to aspects of the environment and to other unseen aspects of the world that often began in childhood and may be shared with family.

Human Intuition

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Intuition is often defined as the ability to understand something instinctively, without the need for conscious reasoning. Many psychologists believe that such an ability refers to information we already possess, but which lies below the threshold for awareness. The aim of this paper is to show that intuition actually requires contact with the future and is explained in terms of psi. Precognition is considered to

be the fundamental phenomenon of psi, and consists literally of pre-cognition referring to the future cognition of an event. The model is based on the concept of the block universe, and therefore requires a compatible version of quantum mechanics. David Bohm's theory of the implicate order is based on the zero-point energy field that extends throughout space and time. The implicate order unfolds to create successive slices of space-time, which build up to form the block universe. Bohm proposed that similar structures created at different times resonate within the implicate order, and tend to unfold in a form in which they are more similar to one another. The resonance is attributed to non-local effects of the de Broglie-Bohm pilot waves over the quantum mechanical processes involved. The principles are applied to the neuronal spatiotemporal patterns that are activated in the brain. Precognition occurs when the pattern activated at the time of the future experience of an event resonates with any similar pattern (spontaneously) activated in the present. It enables the activation of the present pattern to be sustained until the threshold is reached at which the percipient becomes consciously aware of an event similar to the event experienced in the future. Intuition occurs when there is an absence of resonance between the present and future patterns. It enables the brain to detect knowledge that a given event will not occur in the future. For example, a percipient, in the present, intends to carry out a given action, and her brain activates the corresponding pattern. However, if later she will be unable to do so (e.g., because an accident prevents her) there will be no experience of carrying out the action in the future. The present and future patterns are different and resonance does not occur. The absence of a precognition in this case serves as an intuitive warning, which indicates that she will be unable to fulfil the intention. When intuitions occur in day-to-day experience, they occasionally enable people to avoid accidents and disasters. This can apply to events that occur minutes or even hours later. However, intuitions are expected to be far more reliable over shorter time intervals (e.g., a few seconds) and they may serve as a constant aid to one's survival and well-being by guiding one's actions in moments of potential danger. Over very short time intervals (e.g., less than one second) intuition may serve as an important aid to recognition and problem solving. Tshows how we are able to recognize items in memory.

Parapsychology in France: One Hundred Years of Metapsychique

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Nobel prizewinner physiologist Charles Richet (1850-1935) popularized the term *métapsychique*, which he succinctly summarized as "the science that studies intelligent forces." Yet, despite considerable scholarly interest in this new area of research in the late 19th and early 20th centuries, *métapsychique* never took roots in the French academic scene, and Richet had to eventually abandon his hope of merging physiology, psychology and parapsychology. But while the field largely remains an outcast from academic contexts, it has been sustained for a century in France thanks to the Institut Métapsychique International. The IMI was established in 1919 thanks to the efforts of Richet and other men of science, and the generous funding of Jean Meyer, a Spiritualist who was convinced that beliefs in an afterlife must be put to the test by science. Recognized, from the outset, by the French administration as a foundation of public utility, and unconstrained by the rigidities of academic psychology, the IMI quickly embarked on an ambitious research program. The most spectacular experimental sessions were conducted with the Polish medium

Franek Kluski, leading to the production of several 'ectoplasmic moulds', still in the Institute's possession. Following his untimely death, Geley was succeeded by Dr. Eugene Osty (1924-1938), who focused primarily on ESP but also introduced an innovative protocol to test PK with the medium Rudi Schneider. This was still the "golden era" of the IMI, which flourished on both scientific and cultural levels in France, and was recognized throughout Europe for its efforts to organize psychical research. From the late 1950s onwards, research activities decreased significantly. During this period an especially aggressive form of skepticism took hold in France, and the origins of the IMI - funding by the spiritualist Jean Meyer - made it an easy target for pseudo-skeptics and the media. Nevertheless, the Institute constituted a meeting point for several French scientists and theoreticians who pursued a more literary or conceptual perspective on psi. When Mario Varvoglis became IMI president in 1998 he launched a major reorganization of the Institute, with a new, transdisciplinary board of directors, a committee of 25 honorary members (including nine PA members) and an ambitious educational and research orientation. Today, the IMI remains the only institute of reference for scientific parapsychology in France. Lectures, workshops and seminars are given almost every month with French and international scholars. Members of the Institute offer an educational online course which has been followed by about 200 individuals, as well as an accredited parapsychology course at the Catholic University of Lyon. The IMI's unique archives and library – completely re-organized with the help of the IGPP - have stimulated several academic works on the history of parapsychology in France. The IMI also has maintained a long tradition of psychological assistance to individuals who report exceptional experiences - even if this activity has not been organized as a formal clinical practice. The creation of the IMI student-group (GEIMI) in 2004, has been one of the most important of IMI's accomplishments, as it has helped fill the academic void with respect to psi and parapsychology. Somewhat in the same spirit as the GEIMI, the Institute created the A-IMI (Amis de l'IMI), an association open to the general public and intended to broaden the educational reach of the Institute. In the past twelve years, several formal research projects have also been launched. Largely funded by the Bial Foundation, these experiments shared the common objective of enhancing psi effect size, using a two-pronged approach: favoring psi conducive states and an enhanced participant experience of the testing session; and, increasing per session data collection rate, so as to increase efficiency over experiments such as the Ganzfeld. Although the Institute has managed to survive and contribute to the field for a century, it clearly remains in a precarious state. The academic outsider status does have its advantages, but it is clear that the full blossoming of parapsychology, here in France, as elsewhere, depends upon the recognition and involvement of conventional science, a good deal of funding, and "new blood" coming into the field.

A Transliminal "Dis-Ease" Model of "Poltergeist Agents"

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The first three co-authors recently scrutinized the individual and collective predictive power of several psychometric variables used in the academic literature to profile *haunters* — individuals reporting personal experiences that they attribute to ghosts or haunted houses. Contrary to much literature on the

correlates of general paranormal belief and experience, this research found no evidence that self-reported haunt-type experiences were connected to obvious cognitive deficits in the percipients. Instead, the onset or features of the haunt-type experiences were significantly associated with transliminality, i.e., "the hypothesized tendency for psychological material to cross thresholds into or out of consciousness." Thus, a transliminal model of haunters implies that these anomalous experiences are linked to a particular psychometric profile and derive from, at least partly, hypersensitivities to and amalgams of internally- and externally-generated stimuli. We explored this basic idea further via a study of transliminality in relation to "agents or focus persons" in "poltergeist" disturbances— that is, living individuals around whom anomalous and localized physical or psychological events tend to occur. These individuals are typically characterized as having a clinically dysfunctional or diseased profile. This view postulates that focus persons in poltergeist outbreaks (often teenagers) are expressing marked psychophysical anxieties via manifestations of recurrent spontaneous psychokinesis (RSPK). Parapsychological mechanisms aside, the role of psychodynamic tensions (such as childhood trauma) in these cases is a widespread supposition in parapsychology. But the "repressed teen" depiction of poltergeist-like occurrences is arguably more an overly simplistic cultural meme than a well-specified scientific model. Specifically, we found that the assumption of pathology is based on scant and circumstantial evidence that draws primarily from 10 studies involving focus persons attended by mental health professionals or administered psychometric measures. However, within this limited literature we identified eight psychological characteristics that seemingly reflect a "thin or permeable" mental boundary structure in agents. Moreover, consistent with the previous work on classic haunters, seven of these eight characteristics (or 88%) showed positive and low-to-moderate (attenuated) correlations with scores on the Revised Transliminality Scale. There is also evidence that transliminality is likewise positively and moderately associated with various forms of childhood trauma. That said, the results of some studies that examined the affect/ emotion of agents and corresponding PK-like events undermine the notion of "disease" per se, in favor of a transliminal perspective that accommodates various psychological disruptions or tensions as potential, but not exclusive, stimulants in these episodes. Thus, we strive here to ameliorate the pathological dimension commonly associated with focus persons by suggesting the more accurate and preferred term "dis-ease." Whereas transliminality seemingly mediates attentional or perceptual processes in poltergeist-like episodes, this does not negate possible parapsychological aspects per the RSPK hypothesis. Our review and meta-analysis of the available literature suggests that there is a weak but overall significant association between outcomes on tests of putative psi and scores on transliminality (mean r = .13; mean z = 0.90; Stouffer Z = 3.96, $p = 3.70 \times 10-5$). Our proposed transliminal model is consistent with many studies that identify an "encounter-prone personality" grounded in a thin or permeable mental boundary structure. Testable implications of this premise can guide future research.

A Physiological Examination of Perceived Incorporation during Trance

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Numerous world cultures believe channeling provides genuine information, and channeling rituals in various forms are regularly conducted in both religious and non-religious contexts. Little is known about the physiological correlates of the subjective experience of channeling. We conducted a pro-

spective within-subject design study with 13 healthy adult trance channels. Participants alternated between 5-minute blocks of channeling and no-channeling three times while electroencephalography (EEG), electrocardiography (ECG), galvanic skin response (GSR), and respiration were collected on two separate days. Voice recordings of the same story read in channeling and no-channeling states were also analyzed. The pre-laboratory survey data about demographics, perception of the source, purpose and utility of channeled information reflected previous reports. Most participants were aware of their experience (rather than in a full trance) and had varying levels of perceived incorporation (i.e. control of their body). Voice analysis showed an increase in voice arousal and power (dB/Hz) differences in the 125 Hz bins between 0 and 625 Hz, and 3625 and 3875 Hz when reading during the channeling state versus control. Despite subjective perceptions of distinctly different states, no substantive differences were seen in EEG frequency power, ECG measures, GSR, or respiration. Voice parameters were different between channeling and no-channeling states using rigorous controlled methods.

Abstracts of Research Briefs

Attachment Among Uk Twins – A Survey

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This paper explores the attachment between twins and this attachment possibly being of importance for the exceptional experiences that many twins report. Attachment between twins is an area where there has been almost no research. The same is the case for twin telepathy, and since in parapsychology there is support from many studies that the bond between sender and receiver is important, the present study, with a questionnaire on the web, was designed to investigate the attachment between twins and the ostensible relationship between attachment between twins and twin telepathy. By applying the concept of attachment from developmental psychology, this becomes a separate study in the thesis "Attachment and exceptional experiences amongst twins" to explore the degree of attachment between twins as a potential dependent variable relating to their apparent telepathic connection. In this study, attachment data were collected from more than 2000 twins in UK, with personalized links being sent in emails to 5,060 twins, inviting them to participate in this survey on the web. Two questionnaires were used, a modified version of WHOTO and ANQ with regard to four attachment features and functions and a modified ECR-R with regard to attachment-related anxiety and avoidance. Exceptional experiences in this study included telepathy-like experiences, shared physiological responses to illness, injury or accident, i.e. remote sensing the other twin's pain, accident, or state of mind. The attachment between twins in general turned out to be very strong, and for attachment-related anxiety and avoidance stronger than the published norms. The attachment between identical and non-identical twins was found to be significantly different, valid for five out of the six sub-scores, as was the case for the difference between the genders - female twins being found to report a stronger and more positive attachment when compared to male twins. For age, the attachment was found to be strong in early ages, and then it slowly decreased for five of the six sub-scores. 71%, 1,488 twins, reported to at least once

or twice having had a so-called exceptional experience with their twin, including 8% (119) when it had happened more than 50 times. 550 twins, 27 %, reported it never had happened. Twins reporting having had exceptional experiences with their twin, reported a stronger and more positive attachment to their twin than those who do not, with support from five out of six possible attachment scores. Many twins, 28% (583) also reported having had exceptional experiences with other than their twin at least once or twice. From these, 407 twins reported it to have happened only once or twice, while 38 reported it to have happened more than 50 times. This other person varied between children, friend/s, partner, sibling and parent/s. The reliability for the questionnaires was investigated, internally, towards each other, and factor analyses were conducted. Results from the two questionnaires were compared, supporting each other.

Psychoanalysis and Mediumship: The Case of the Italian Medium Pasquale Erto

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The two authors present the long story of the debated and controversial Italian medium Pasquale Erto, born in 1895 in Castellammare di Stabia, in the province of Naples, Italy and disappeared around 1958, a subject that constantly tended to break free from the experimental constraints imposed by experimenters and whose fundamental peculiarity was the production of many diversified luminous phenomena. In particular, the paper discusses the numerous séances carried out in Paris with Gustave Geley and collaborators, in the years 1923-1924, at the Institut Métapsychique International of Paris, at the Institut du Radium and the Sorbonne University. In those contexts, the main characteristics of the various luminous manifestations were observed, with the final conclusion that many of them were due to a fraud carried out by fragments of ferrocerium and steel nibs rubbed against each other. Geley, from his part, convinced of having revealed and detected a repeated voluntary fraud, nevertheless considered in a positive way another main category of phenomena visible in presence of Erto, that is, certain spots similar to luminous impressions and certain hand prints and fingerprints found on sensitive photographic plates enclosed in well-sealed frames. The paper, besides the subsequent séances carried out in Naples by Emanuele Sorge's team and the ones in London led at the end of the year 1931 by Harry Price at the National Laboratory of Psychic Research, deals with some séances carried out in Rome in 1932 and organized and directed by the psychoanalyst and parapsychologist Emilio Servadio. A range of extraordinary manifestations, like distant light phenomena, lowering of temperature, telekinetic movements of objects occurred in Rome several times, and Servadio deemed them true, genuine, although honestly he could not exclude that - at least occasionally - the medium resorted to expedients. This Italian scholar afterwards proposed also an interesting symbolic and psychoanalytical interpretation of the different mediumistic manifestations personally observed, that is, such manifestations could somehow express, in a completely extraordinary and presumably paranormal language, aspects of the unconscious conflicts and deep sense of guilt of the subject.

Intuition and Remote Viewing: Ten Years of R&D and Applications for Public and Private Organizations

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The use of intuition to answer concrete problems, for both private and public organisms, and in a masked way with regard to the explored problems, has been a reality since the 1970s. This is the field of operational remote viewing. Since the mid-2000s, a few commercial enterprises have emerged and developed, some with success, conducting an increasing number of operational projects. iRiS Intuition in France is one of them. Operational projects conducted by these companies are more and more diversified and original in their field of application and in their implementation framework. This general context, and the particular context of iRiS intuition, tends to show that the remote viewing protocol can be a tool to produce information and ideas, quite suitable to address a large number of real issues of contemporary world. To this day, iRiS has led more than one hundred interventions for private and public organizations. This paper addresses research and development and operational remote viewing via five applied projects led by iRiS in the course of the last 10 years. These projects were led for underwater archeologists, an international bank, an innovative high-tech company, a high court in justice, and artists. This paper also addresses the methodology used for such projects. For iRiS, since the constitution of the team in 2007, consulting projects have always had, as primary objectives and modus operandi, to respond to clients' requests, and to answer them by leading the projects internally at iRiS. Since 2014, the team has also facilitated workshops during which intuitive information were produced by non-trained individuals, having, in most cases never been in contact with this type of methodology, and sometimes not even thinking about the existence of intuitive capacities. Aside the expertise and training of the iRiS team members, the success of these projects is also due to the development of software solutions that would analyze remote viewing sessions. This article discusses these aspects. In the discussion part, the article shows that operational remote viewing projects are a fertile ground to investigate further the nature and phenomenology of intuition and perceptive psi. For instance, among the classical questions and debates relevant to psi phenomena is elusiveness. The repeated success of applications, implying numerous actors and variables, lends us to think that psi is not elusive by nature, but that, possibly, attitudes, mind states, and methodological considerations have induced such thinking. Operational remote viewing also seems to show that the use of intuition can be developed at the individual as well as the collective levels.

Visual Categorization of Images of Live and Deceased Face Photographs by Intuitive Individuals

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Anomalous psychological phenomena have been documented, which involve apparent reception of accurate intuition about future events or spontaneous telepathic communications. A subset of the population, called mediums in English, seem particularly sensitive to this type of phenomenon. Several

mediums during an initial experiment mentioned that they were most easily able to connect to a deceased individual if they could see their photograph. This connection usually happened instantaneously. To test if mediums could obtain information of deceased individuals, we ran two experiments. In both experiments, we collected 64-channel electro-encephalography data using a BIOSEMI device. Experiment 1. We invited 12 mediums to see if they could determine if a person was alive or dead based solely on a brief examination of facial photographs. All photos used in the experiment were transformed into a uniform gray scale and then counterbalanced across eight categories. Participants examined 404 photographs displayed on a computer monitor, one photo at a time, each shown for a maximum of eight 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 press a button if they thought the person in a photo was living or deceased. We presented 404 photos of faces, half of which will be from deceased individuals. All of the photos were standardized in size. The task of the participant was to press a button to indicate if they felt that a given person was alive or had passed. Experiment 2. We invited 12 mediums and 12 controls to perform an experiment in which participants examined 180 photographs displayed on a computer monitor, one photo at a time. All of the individuals in the photos were deceased: 1/3 were in a car accident, 1/3 had a heart attack, and 1/3 were shot. As in experiment 1, all of the photos were balanced across seven different features and the task of the subject was to press a button (1-3) to indicate the cause of death. Experiment 1. Behavioral data appear to indicate that some individuals are capable of correctly classifying photos of alive vs. deceased people(five mediums independently significant and average combined performance was 53.6%, resulting in p = 0.005 with 11 degrees of freedom). EEG data from the 12 professional mediums tested suggests that there is a biological basis for the behavioral data at a latency of about 100 ms, which occurs prior to the mediums' conscious assessment of the photo. Experiment 2. By the time of the parapsychology conference in Paris, the data were analyzed and presented.

Dimensions of the Exceptional: Studies with The "Questionnaire for Assessing the Phenomenology of Exceptional Experiences" (Page-R)

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Even if patterns of exceptional experiences (EE) appear tremendously varied, a suitable and comprehensive classification system for EE can be developed on the basis of some key postulates of Metzinger's theory of mental representations. According to Metzinger, human mental systems produce a phenomenal reality-model (PRM) that comprises all mental states consciously experienced at a given time. The PRM consists of a mental self-model and a world-model as fundamental complementary components. Two of the phenomena classes refer to deviations that are localized either as external phenomena in the world-model or as internal phenomena in the self-model. External phenomena are for example visual, auditory, tactile, olfactory or kinetic phenomena or the feeling of an invisible presence. Internal phenomena include somatic sensations, unusual moods and feelings, thought insertion, inner voices or inner images. In addition to these two possible localizations of exceptional phenomena in the PRM, relational deviations can occur: Coincidence phenomena are exceptional connections between or-

dinarily separate states of the self-model and the world-model, which are, for example, interpreted as extrasensory perception. On the contrary, dissociation phenomena manifest themselves as a separation of normally connected elements of the self-model and the world-model, such as automatisms, sleep paralyses or out-of-body experiences. A number of studies with the revised Questionnaire for Assessing the Phenomenology of Exceptional Experiences (PAGE-R) developed at the IGPP (Fach et al., 2011) confirm this classification system. The items of the PAGE-R ("PAGE" is the German acronym for "Phänomenologie Außergewöhnlicher Erfahrungen") are formulated to capture the frequencies of certain phenomena of the four basic phenomenon classes. Meanwhile, data from seven PAGE-R samples, collected between 2011 and 2017, have been analyzed: People seeking advice because of EE (n = 395), people reporting near-death experiences (n = 176) or sleep paralysis (n = 367), experienced meditators (n = 59), German students (n = 800), a sample of the Swiss general population (n = 1351), and a sample of the US population (n = 148). The results show that EE are widespread and continuously distributed in their intensity and frequency. EE occur in different populations and in varying frequencies but in a comparable proportional distribution of the basic phenomena classes: Coincidence phenomena are the most frequent, internal phenomena and external phenomena are approximately equal in second and third place, while dissociation phenomena are the rarest. The US sample indicates that this distribution even holds for non-European populations. Theoretically it was postulated that all extraordinary phenomena constituting EE can be traced back to phenomena of the four basic classes. Factor analyses, cluster analyses, item analyses and scale analyses were used to examine the reliability and validity of the PAGE-R. After reducing the item pool to 20 variables by selecting problematic and weak items, stable factors and largely identical factor loading patterns were found in all samples. The theory-compliant extraction of four factors turned out to be the most robust and best-generalizable model. Internality, externality, coincidence and dissociation thus prove to be fundamental structural determinants of the mental representation of EE. Based on the four factors, reliable and valid scales were formed. The newly designed PAGE-R-II is a compact questionnaire with 20 randomized items for the assessment of EE. The Cronbach-a coefficient in the various samples is generally between .70 and .85 on the subscales. All 20 items form a global EE scale with a between .86 and .92.

A Reconsideration of Sheldrake's Theory of Morphic Resonance

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Rupert Sheldrake continues to be one of the most influential thinkers with respect to phenomena that are difficult to account for in terms of conventional models of psychology and physics. His most significant contribution might be an empirically testable theory for anomalous communication among genetically similar organisms, which he calls morphic resonance (Sheldrake, 2009). Sheldrake's theory describes how the thoughts or behaviors of physically isolated individuals might converge in a manner that is reminiscent of ESP because they are able to draw on a 'morphic field' that acts as a record of an organism's or species' previous behaviours. Sheldrake's potentially powerful theory makes testable predictions that until recently have resulted in surprisingly few formal experiments. Those that had been conducted gave a fairly consistently positive picture, tending to confirm predictions derived from mor-

phic resonance, but were undermined by the tendency for results to be reported in popular accounts rather than peer-reviewed journal papers. We felt it important to replicate this work with word-based stimuli in a laboratory-based study that was designed to meet stringent scientific standards so that it could be submitted for journal publication as a full paper, irrespective of outcome. In our first such study (Robbins & Roe, 2010), 60 participants were exposed to genuine and imitative Chinese characters and then had to identify which characters they could recognize from a sheet that also included decoys. As predicted by the theory of morphic resonance, participants accurately recognized significantly more of the genuine than false characters, but also were more likely to report false memories (i.e. claim that they recognized items that were never presented) that were genuine characters than false ones. Participants' transliminality scores were also significantly related to their performance with presented characters but not with decoy characters. In a replication study (Roe & Hitchman, 2011) we addressed these shortcomings by drawing upon a larger set of more systematically-manipulated genuine and imitative characters, and using a more comprehensive system of randomising across participants. One hundred and one participants were shown eight genuine and eight imitative characters and then took part in a distractor task before being presented with symbols in pairs (one genuine and one imitative) matched for complexity. Contrary to the previous study, participants correctly identified a similar number of real and imitative characters, and in fact exhibited more false memories for the imitative; no relation was found between performance and scores on measures of transliminality and openness to experience. The present study was designed to account for the discrepancy between experiments 1 and 2 by discriminating between competing interpretations. This was achieved by adding the symbols from experiment 1 to those used in experiment 2 to determine whether participants would continue to show better performance for the former stimuli when they are presented to the same participants under the same experimental conditions. We have also explored the effect of the form of recognition task on performance by including three recognition conditions: selection from among an array of simultaneously presented symbols, as in experiment 1; selection from between paired symbols as in experiment 2; and rating of familiarity for symbols when presented singly. These variables are investigated using a 2x3 mixed design in which participants experience both sets of stimuli (from experiment 1 and experiment 2 respectively) and one of three recognition formats. We have retained the individual differences measures utilized in experiment 2, namely transliminality and openness to experience.

You Get What You Are: The Effect of Unconscious Needs on Micro-Psychokinesis

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Quantum-based models of psychophysical substance dualism offer an attractive solution to the hard problem of mind-matter-interaction. Therefore, we tested observer effects on a quantum-based RNG by using pre-conscious motive states of incongruence within the participants as an independent variable. We expected significant deviations from randomness with participants who exhibit high incongruence (HI) characteristics but not with individuals who show low incongruence (LI). The direction of the effect was predicted by the emotional transgression model (Maier, Dechamps & Pflitsch, 2018),

claiming that the core affectively laden subconscious belief determines what is more likely to happen to an individual. Our first experiment (N = 295) with a specific micro-PK test for the psychological basic needs attachment, self-esteem protection, and control revealed anecdotal evidence close to the threshold for the moderate classification within the HI group only for self-esteem protection (n = 133, BF =2.95). The second experiment (N = 507) is a post hoc continuation of the effective condition concerning the further sequential evidence for self-esteem protection and oscillative changes across time. Our significance criterion (BF = 10) was initially reached with the target group. Shortly thereafter, a decline - similar to other experiments in this field- to a final result of anecdotal evidence occurred (n = 236, BF = 2.24). As volatility might lie in the nature of micro-PK effects, explorative sequential Bayesian analyses comparing the maximum Bayes Factor, the curve's Energy, and a Frequency Spectrum analysis of both groups to 10,000 simulations were added post hoc as an attempt to distinguish systematic sequences from random fluctuation. These analyses show that the data of the HI subsample are highly unlikely produced by chance in contrast to the LI subsample. Therefore, this study revealed promising analytical approaches to distinguish volatile effects from randomness. In conclusion, the results suggest, that core affectively laden subconscious beliefs can express volatile but still statistically detectable and meaningful deviations from quantum randomness if they are precisely triggered by an adequate micro-PK task.

An IPA Study of Anomalous Experiences in Temporal Lobe Epilepsy

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This study forms the second part of a mixed methods PhD, exploring spirituality in epilepsy. This second study's aim was to record and formally compare the phenomenology of anomalous experiences in epilepsy Since the beginning of modern epileptology in the 19th century, case studies have been published about individuals with epilepsy reporting non-shared, exceptional experiences that include: conversation with spirits, religious conversion, precognition, understanding the meaning of the cosmic order, conversations with God, out of body and near-death experiences. The nature of the experience is very like those described in parapsychology, with one experient stating that they felt the experience was psychic in nature. Discussion of case studies of anomalous experiences in epilepsy offer limited qualitative information about the phenomenology of the experience, as they are primarily concerned with differential diagnosis and appropriate medical interventions. In this second study, we focus on the phenomenological elements of spirituality in TLE from the perspective of the meaning that they have for experients. The study employed Interpretative Phenomenological Analysis (IPA), a qualitative methodology that focuses on the phenomenology and meaning of experiences. The participant experiences in this IPA study include descriptions of precognition, near death and out of body experiences. The value and status of preliminary findings are at variance with the neuropsychiatric literature, which regards such experiences as problematic seizure- related events that require medication and need to be stopped. The medical model assumes that individuals will not want these exceptional experiences, and a desire to keep them is a contributory factor of epilepsy-related psychosis. However, the likeness of the spiritual experiences described by the participants in this IPA study to altered states of consciousness and exceptional experiences of individuals without epilepsy suggests that, in fact, not all spiritual

experiences in individuals with epilepsy are merely undesirable symptoms of the condition. Having TLE may, as others have claimed, mean that the temporal lobes of individuals with epilepsy are more sensitive than non-epileptic populations and that this is the source of highly valuable abilities, which are of interest to parapsychologists.

Unconscious Avoidance of Negative Stimuli: A Multi-Laboratory Replication Study of Retrocausal Influence

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There is an ongoing debate of whether present human behaviors can be affected by events randomly generated in the future (i.e., retrocausal influence). Previous meta-analyses have shown evidence for retrocausal influence, but there is a lack of pre-registered multi-laboratory studies that have large power to independently replicate the purported effect and are less likely to be affected by selection biases. This ongoing project aims to replicate a study showing evidence for retrocausal influence (Maier et al., 2014), specifically, unconscious avoidance of negative stimuli. On each of 60 trials, participants were asked to press two buttons as simultaneously as possible, and these responses were registered as left or right depending on which button was pressed first. Subsequently, a quantum-based number generator determined whether the left or right response for that trial would yield a neutral or negative picture. The psi hypothesis states that individuals will be more likely to press the button that corresponds to the neutral than the negative picture (mean chance expectation is 50% neutral pictures). At present, five laboratories have contributed data (N = 1,563). The results indicated a mean of 50.07% neutral pictures. The Bayesian analysis favored the null hypothesis with a factor of about 3.7 (Cauchy prior, r = .1), indicating moderate evidence for the null hypothesis. However, the pre-registered cutoff has not been reached (a Bayes factor of 10). The frequentist analysis revealed a p = .343 (one-sample t-test, one-tailed). In sum, the results did not provide support for retrocausal influence (unconscious avoidance of negative stimuli).

Thomas Mann and Physical Mediumism — A Historic Miniature where Literature and Parapsychology Intersect

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Baron Schrenck-Notzing, then leading German parapsychologist, was in the habit of inviting reputed scientists of various fields and other prestigious persons to witness the phenomena studied in his laboratory, and to secure their testimonials as a means of gaining broad scientific recognition of the real existence of telekinetic phenomena. Thus, in 1922/23, Thomas Mann, then a future Nobel laureate, participated as an independent witness in several sittings with the young Austrian medium Willi Schneider

at Schrenck-Notzing's laboratory where he observed phenomena of physical mediumism (telekinesis, ectoplasm). He duly submitted three narrations of his observations that were eventually printed among some sixty others in Schrenck's Experimente der Fernbewegung [Experiments in Telekinesis] in 1924. Not only did Mann describe his observations for Schrenck and in a different version for the general audience, he also used these experiences for the poetic presentation of a mediumistic séance in one chapter of this famous novel "The Magic Mountain". Mann, in these Three Reports, initially covers Schrenck's precautions against deception and then describes in some detail Willi's trance: different phases, mostly agitated, heavily breathing, waving, panting like a woman in labor, yet interspersed by some calm and quiet periods; the trance personalities; of particular interest phases of sexual arousal during trance periods. The phenomena that occurred include various forms of telekinesis of light-weight objects and of ectoplasmic structures like fragmentary limbs (pseudopodia). The "Thomas Mann Phenomenon" was the name given to the elevation of a handkerchief by an (incompletely) materialized hand. The basic phenomenon underlying telekinetic effects is the production of ectoplasm and shaping it to serve the intended purpose (ideoplasty). One particularly important case is a typewriter placed on the floor being operated by invisible hands as this was not only audible during the sitting but resulted in two lines of letters printed on the paper constituting a permanent object corresponding to the sensations of the participants. This counteracts the argumentation by some "skeptics" that participants were hypnotized and fantasized about their observations. Until his death, Mann maintained his conviction that the phenomena he has observed were "genuinely" paranormal. Mann's own Publications related to his Experiences at Schrenck's: Besides the "Three Reports", written by Mann but published by Schrenck-Notzing, Mann used these experiences for two publications of his own:

- 1. "An Experience in the Occult" condenses the three séances into one. The stuff is reworked; the style is markedly different from the factual "Three Reports": more distant, mockingly, ironical.
- 2. Mann's masterpiece novel "The Magic Mountain" contains a séance during which the materialization of a deceased person appears, going well beyond the phenomena experienced at Schrenck's.

Mann had extremely ambiguous feelings towards the paranormal (labeling it cranky, fallacious, unaesthetic, disdainful, dishonorable, sinful, obnoxious, and even spiritually uninteresting and unworthy of human exploration), nonetheless he stuck to the reality of his experiences in his "An Experience in the Occult" and in his correspondence with various persons.

Changes, Struggles, Triumphs of Life After Near-Death: Preliminary Findings of a Thesis

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This article details the preliminary statistical findings of the first study for a doctoral thesis, nin which a 67-item online questionnaire was employed. Fifty-one people who identified as near-death experiencers (NDErs) participated. Questions were a mixture of multiple choice and open response regarding the NDEr's life before their NDE, during, and after, particularly changes that were difficult to

experience, how those difficulties expressed themselves, and if mental health services were sought. The initial statistical findings suggest that regarding depth of the NDE, there is a positive correlation with the variable of "personal significance of the NDE," a positive correlation with the view of one's "life's purpose having changed," and with change in "mood." Furthermore, high significance with age (under 20) compared to social negative aftereffects of an NDE was found.

Teleportation: The True Nature of Motion?

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A single object moving across space could be a myriad of look-alike objects. For classical physics, and to the naked eye, there is only one single object travelling a given path, likely undergoing chemical or physical changes. Even if this single object were standing still within a frame of reference it may still be numerous look-alike bodies that change rapidly, possibly at Planck frequency tP-1. In fact, changes in the physical/chemical structure and changes in position may solely mean that an entirely new universe has emerged in physical reality. This seems to be predicted by Schrödinger's global wave function Y(x,t): unbounded continuously fluctuating quantum fields are all there is. Furthermore, this implies that as Y(x,t) does not require discontinuities in time, space nor space-time objects are not exactly as they appear. The confusion lies in the definition as quantum fields exhibit particle-like features. The seeming boundaries defining the so called objects are readily described objectively by a continuous process of field decoherence occurring locally on a very short time scale according to Schrödinger equation for interacting systems. Therefore, bosons, electrons, quarks, atoms, etc. correspond to quanta i.e., local quantum field disturbances of highly unified or "coherent" bundles of energy arising from nonlocal quantum field interactions. Quantum Field Theory (QFT) puts matter on the same all-fields footing as radiation yet scientists still argue about discontinuities. QFT developed from classical electrodynamics and extended the quantized field notion to matter. It predicts quanta of matter fields rather than quanta of force fields. Quanta as superposition of different frequencies, can be more spatially "packed" and thus more "localized" but always of infinite extent. Thus, matter, and all phenomena emerge locally from nonlocal quantum field interactions via dynamical decoherence; possibly at tP-1. As energy is quantized, it must become "physical" through Higgs bosons springing from infinitesimal white holes permeating "reality"; matter, space-time and all phenomena emerge briefly. Then, energy momentarily stops being "physical" i.e., non-local quantum state; everything collapses through infinitesimal black holes. Therefore, from this standpoint, a local quantum perturbation may briefly emerge (tP) at a contiguous point in space (IP) or it might as well swiftly (tP) teleport light-years away. This phenomenon in fact resembles teleportation. Furthermore, unlike classical physics, QFT requires the presence of conscious observers in the description of reality. Therefore, what could really determine where in space "objects" will be may not be the laws of physics but consciousness. This implies that objects in motion are being teleported all the time beyond our awareness. Currently consciousness apparently precludes teleportation greater than IP yet that does not mean that awareness cannot be expanded; the issue is how.

Influence of the Global Geomagnetic Field on Map Dowsing Performance in an Online Psi Experiment

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Dowsing typically involves locating an object of interest, like underground water, in a field. Map dowsing is similar except the object of interest is located on a map of the field. From July 2002 through December 2018, an online test similar to a map dowsing experiment collected 63.3 million trials over 5,749 days from an estimated 120,000 people around the world. The user's task was to select a location in a 300×300 matrix as close as possible to a randomly selected target chosen immediately afterwards by the web server. Overall performance was in the predicted direction, but not significantly so. However, the correlation between performance and global geomagnetic field (GMF) flux on the day of the test, as well as the three days prior to the test, were in significant agreement with previous observations of the psi-GMF relationship.

Mediumship Research in the 21st Century: An Update on Collaborations with the Spiritualists' National Union

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Stansted Hall was gifted to the Spiritualists' National Union (SNU) by J. Arthur Findlay MBE in 1954 with the intention that the buildings be used to establish a 'College of Psychic Science' [emphasis added]. Stansted Hall was named 'The Arthur Findlay College' and has established an international reputation for its educational programmes in mediumship practice and philosophy. Despite Spiritualism being among the most evidence-based of the major religions, these programmes have not always sought to engender a scientific approach to the evaluation of empirical evidence gathered during mediumistic demonstrations. The President of the SNU, Minister David Bruton, has begun to address that shortcoming, initially by organizing a Science Day at the SNU's Arthur Findlay Centre in 2013 that was intended to introduce the Spiritualist community to the scientific research that had been conducted on the subject of mediumship and to suggest ways in which they might adopt a more scientific approach to their own practice and experiences. A condensed workshop programme was run at the SNU's Stafford Centre in 2015, and the authors contributed to residential weeks in 2016, 2017 and 2018. The ultimate aim of these initiatives is to encourage collaboration between the Spiritualist and scientific communities to further our understanding of the nature and phenomena of mediumship. As a next step in the rapprochement between mediums and academics, the SNU Executive Committee agreed to convert space at the Arthur Findlay College into a permanent laboratory that could be used to conduct research with the community of mediums who attend programmes at the College. Funding from the Society for Psychical Research has enabled the space to be refurbished and for equipment to be procured. The intention is that the space would be made available to serious academics for them to conduct their own research (subject to approval from the SNU). To facilitate this, we identified a study of mediumship by Delorme,

Beischel, Michel, Boccuzzi, Radin, and Mills (2013) that could showcase the technical facilities available at the lab and to encourage the wider academic community to make use of this resource. Delorme et al. had collected psychometric and brain electrophysiology data from six individuals who had previously reported accurate information about deceased individuals under double-masked conditions. Each experimental participant performed two tasks with eyes closed. In the first task, the participant was given only the first name of a deceased person and asked 25 questions. After each question, the participant was asked silently to perceive information relevant to the question for 20s and then respond verbally. Responses were transcribed and then scored for accuracy by individuals who knew the deceased persons. Of the four mediums whose accuracy could be evaluated, three scored above chance (p < .03). The correlation between accuracy and brain activity during the 20s of silent mediumship communication was significant in frontal theta for one participant (p < .01). In the second task, participants were asked to experience four mental states for 1 minute each: (1) thinking about a known living person, (2) listening to a biography, (3) thinking about an imaginary person, and (4) interacting mentally with a known deceased person. Differences (at p < .01 after correction for multiple comparisons) in electro-cortical activity among the four conditions were obtained in all six participants, primarily in the gamma band (which might be due to muscular activity). These differences suggest that the impression of communicating with the deceased may be a mental state that can be distinguished from ordinary thinking or imagination.

Experimental Parapsychology as a Methodology for the Study of Religious Discourse in the Work of Joseph Banks and Louisa Rhine

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Although the phenomena being studied and what people often take to be the spiritual implications of their existence date back thousands of years to the very origins of human civilization, the scientific nomenclature of parapsychology was not established until the nineteenth and twentieth centuries. Joseph Banks (J.B.) and Louisa Rhine, the founders of laboratory parapsychology, recognized this and argued that their experimental findings were evidence for the existence of phenomena that have traditionally been the domain of religion. For the Rhines, parapsychological research necessarily fostered discussions of the traditional religious answers to the survival question, such as reincarnation and the nature of an incorporeal spirit. They discuss visions of saints in terms of extrasensory perception via hallucination. The Rhines wrote about prayer in terms of telepathy and used experimental findings to demonstrate that what seem to be answers to petitionary prayer might be best understood as psychokinesis. They recognize what scriptures term prophecy as being equivalent to the modern concept of precognition but also demonstrate that it might not be as uncommon as the world's religions claim. The Rhines' work often contradicts claims made in the history of religions that portray such phenomena as miraculous, evidence for the existence of supernatural entities, or validation of the truth claims made by a religious figure. Their work necessarily engages with the history of religions. However, it also shifts the traditional narrative of such events, as framed in the world's religions, from being the action of divine agency to a study of human abilities.

Exceptional Human Experiences Beliefs Scale: An Exploratory Factor Analysis

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The aim of this study was to create a new measure of paranormal beliefs, the Exceptional Human Experiences Beliefs Scale (EHEBS), and explore its structure and internal consistency. Exceptional human experiences (EHE) or exceptional experiences (EE) - also commonly referred to as anomalous, paranormal, or unusual experiences - are usually rare, spontaneous or induced experiences that imply, from the point of view of the people experiencing them, a non-ordinary interaction with their environment. It is estimated that one in two people has these experiences at least once in the course of his/her life. Although the frequency and form of those experiences may be influenced by cultural context, significant and similar rates have been found in surveys conducted in Europe, Asia, and Australia. In addition to research done on these experiences, attention has also been paid to the study of paranormal beliefs. What is understood by paranormal belief is not consensual and culture should, ultimately, be taken into account. In the present study, beliefs and disbeliefs about EHE are understood as whether one believes or not in the actual existence of these experiences. Eleven experiences considered in EHEBS were based on the phenomenological classification proposed by Rabeyron (2010): telepathy, clairvoyance, precognition, apparition, out-of-body experiences, near-death experiences, mediumship, mystical experiences, abduction, reincarnation, and psychokinesis. The inclusion of these experiences and the remaining two (psychic healing and apparitional clairaudience) comes from a literature review. Data were analyzed by means of a principal component factor analysis, which produced a 2-factor model, 12-item assessment explaining 67% of the variance. The two factors correspond to the two classical areas of scientific parapsychology studies: Survival Hypothesis and Psi-related experiences. The EHEBS does not contain items of religious and superstitious nature; does not confuse paranormal beliefs with paranormal experiences, and has very good psychometric qualities. Therefore, it constitutes an alternative to be used by researchers interested in beliefs about phenomena of interest in scientific parapsychology, and by clinicians who want to access their clients' beliefs.

Using a Psychomanteum to Explore the Nature and Correlates of Subjective Apparitional Experiences

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This study explored the nature and correlates of experiences in a psychomanteum procedure (e.g., Moody, 1992; Moody & Perry, 1993) and is an extension of Radin and Rebman's (1996) research. Our work explored several correlates of exceptional experiences (ExE) in the psychomanteum. Hypotheses compared synesthetes and non synesthetes on ExE and the rated vividness, reality and spatial nature of ExE. We also planned to explore correlations between the presence of anomalies and their experiential qualities and RNG output (*Z* scores), measures of electromagnetism (EMF meter output and AP values)

and psychophysiology (Heart rate variability or HRV). Creativity and boundary thinness will correlate with the experiential qualities of ExE. The qualitative nature of ExE will also be explored. Participants completed the Fantasy Questionnaire (Weibel, Martarelli, Häberli, & Mast, 2017), the Rasch version of the revised Transliminality scale (Lange, Thalbourne, Houran, & Storm, 2000); the Boundary Questionnaire (short) (Hartmann, 1991), one question about synesthetic experiences (Hartmann, 1991). Synesthetes also provided details about their synesthesia and completed the Synesthesia Battery (Eagleman, Kagan, Nelson, Sagaram & Sarna, 2007). Materials included; an intention questionnaire, art materials, a post session questionnaire and a semi-structured interview schedule. Apparatus included a voice recorder, Emwave (by Heartmath) to measure HRV, a Psyleron RNG, a GQ electronics EMF meter (380), an infrared camera, a dimmable lamp, a small keyboard and simple experience sampling program that enabled a time stamp for experiences reported during the session; and a reclining chair and mirror (positioned at a 45 degree angle) that were placed into a psychomanteum chamber. A track playing nature sounds and the track Weightless by Marconi Union were employed and a house plant was placed outside the chamber. Thirty people participated (15 reported a prior experience with apparitions and 15 also had synesthetic tendencies). Baseline readings of EMF (in milliGauss) and RNG were taken and the empty chamber was filmed for 45 minutes. Nature sounds were played as the participant arrived. The study was described and participants signed a consent form. Then, baseline HRV measurements were taken. During a 15-minute intention session, participants listened to relaxing music and attempted to bring a deceased person into their mind. Suggestions and art materials were provided. Participants entered the psychomanteum and were fitted with the HRV sensor. A voice recorder was placed in the room. Participants were asked to relax and gaze at a tilted mirror, keeping the person they wanted to experience in mind and being open to experiences. They were given a small keyboard and invited to press a button if they had a sense of presence or visual experience. An infrared camera and RNG were started and the levels of electromagnetism were monitored for 45 minutes. Participants were interviewed and art materials were provided. Then, a post session questionnaire was completed. A follow up questionnaire was sent 1 week later. Data collection was completed at the end of April, 2019. The findings will shed light on individual differences, physiological and environmental correlates of intentional apparitional experiences.

What's in a Name? A Lot, Actually

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A field of research and practice is largely defined by its terms. Parapsychology is no exception. In this paper I consider recent calls to change some long-standing terms in the field, primarily "parapsychology" and "extrasensory perception" (although I address others). I first specify desiderata that we should expect in terms that we want to use in identifying the nature of our field and the phenomena we explore, then discuss some of the reasons the changes in question were proposed, including an exploration of some of the goals and motivations for those proposed changes. I then present counter-arguments to these reasons, along with justification for preserving the current terminology, and argue that, although well intended, the strategies and alternatives presented do not achieve the intended goals. I defend the two terms that are under pressure, explaining why they remain the best candidates to use. One undisclosed motivation for such changes may be what I call "Parapsychology's Stockholm Syndrome." Borrowed from the concept of

"identity with the aggressor" manifested by captives of terrorists or other abusers, where such captives often come to embrace the agendas and causes of —and identify with— their captors, I suggest that some of the motivation for such name changes is our own desire to "fit in" with mainstream science, which for so long has tried to dismiss and marginalize the field of scientific parapsychology. I argue that, rather than rebranding or renaming, we should as a field instead fight for our terminology, defending it from attacks, whether direct or indirect from "aggressors" in mainstream science or from dedicated skeptics.

So-Called Kundalini Experience and its Relation to Attentional Absorption States: First Results of an Interview Study

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Altered states of consciousness (ASCs) and meditation have long been associated with psychic experiences and anomalous experiences more generally. Consequently, they have been the object of parapsychological research. However, whether during meditation practice an altered state is induced is rarely assessed and, if so, what kind of state, let alone how different ASCs can be differentiated. The study Varieties of Contemplative Experience by Lindahl, Fisher, Cooper, Rosen, and Britton (2017) investigated difficult and unexpected meditation-related experiences, using a mixed-methods approach and interviewing Western practitioners and experts in different Buddhist traditions. Based on the methodology of this original study, we attempt to replicate its findings with a German-language sample, additionally interviewing practitioners of Buddhist-derived secular meditation techniques. Here we present as first results three related themes: 1) an involuntary circling of the body that originates from the pelvis; 2) a feeling of being boosted, uplifted or energized, leading to an involuntary shift in state of consciousness from the normal waking state to a state of attentional absorption; 3) two distinct states of absorption, one experienced as spacious consciousness, the other felt or internally perceived as a bright all-embracing light. The involuntary circling has exclusively been described as part of an intense experience that includes sensations rising up the spine. This experience may qualify as what transpersonal psychologists call kundalini awakening. The shift in state of consciousness, possibly happening repeatedly, has typically been described as happening after a kundalini awakening had occurred and/or in the context of intensive concentrative meditation and the experience of energetic sensations and vibrations. The two distinct states of absorption are usually described as succeeding one another. We discuss the advantages of detailed descriptions of phenomena resulting from in-depth interviews.

A Test of Telepathy Using Immersive Virtual Reality

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The aim of this study was to enhance the signal of telepathy Senders by immersing them in a virtual reality (VR) environment and exposing them to a positively arousing experience as opposed to a

static target image. For example, the immersive VR scene of a rollercoaster ride. The aim of this study was to elicit a telepathic effect by recruiting pairs of participants and measure the accuracy of the Receiver's responses when the Sender is immersed in a VR environment and whether this effect would be related to the level of belief in psi and strength of the relationship between Sender and Receiver. Eleven pairs of participants were opportunity sampled from psychology students. Nine pairs were friends or classmates with the remaining two being married. Each pair worked as both sender and receiver, with conditions counterbalanced.

The target pool consisted of 50 images from the IAPS database depicting positive physical activities (e.g., skydiving, rollercoaster ride etc.). These were separated into two batches each containing five sets of five images matched for valence and arousal. From each set a single image was identified as the target and a 30-second 360o video depicting the image was used to play on the VR set. On arrival each pair of participants completed the RPBS (Tobacyk, 2004) and the IOSS (Gächter et al., 2015) with order counterbalanced across pairs. They then swapped a personal item to keep as a reminder of their partner and were taken to separate rooms where the Sender was set up with a VR headset and viewed one of two video batches showing five 30-second active target videos each one interspersed with a resting clip lasting 45 seconds. A trial was considered a hit if the Receiver ranked the target image as 1. Across all trials Receivers exhibited a mean hit rate of 26% which was not significantly above chance (one-tailed): t(20), 1.101, p = 0.14, 95% CI (-0.051, 0.0165), d = 0.24. There was a positive correlation between mean hit rate and the psi sub-scale of the RPBS (p = 0.04) though no other correlations were significant (all ps > 0.3). A post hoc exploratory examination of the mean hit rate for the top two rankings showed that the mean hit rate of 52% was significantly higher than chance (one-tailed): t(19), 2.259, p = 0.018, 95% CI (0.008, 0.231), d = 0.50. Results of the main analysis found no evidence for telepathy, with hit rates not differing significantly from the expected chance rate. However, a post-hoc analysis did find some evidence for an effect when participants top two choices were considered, nevertheless these results must be interpreted with caution considering the failure of the primary analysis. The only questionnaire measure found to have a significant relation with hit rate was the psi sub-scale of the RPBS, with higher levels of belief in psi phenomena correlating positively with success in the main task.

Abstracts of Posters

The IONS Discovery Lab: A Big Data Study of Parapsychological Phenomena

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Subjective psi experiences are common in various populations. Furthermore, a recent review demonstrated that the evidence for psi phenomenon is growing and is similar in terms of effect size to that of other established phenomenon in psychology and the social sciences even after accounting

for the quality of the studies, potential fraud, and selective reporting. Although subjective experiences are common and the evidence for them as a real phenomenon is growing, few studies have evaluated the factors associated with psi experiences and abilities, such as the demographics, well-being, interconnectedness, or overall health, to name a few. This current study aims to fill this gap by conducting a large, prospective cross-sectional study evaluating which factors are associated with psychic experience and performance. Thousands of people each year come to the Institute of Noetic Sciences' EarthRise Learning Center to participate in transformative-type interventions and workshops. This research study is currently administering a 25-minute-long survey assessing the participants' well-being, health, demographics, beliefs towards psychic phenomena, creativity, and compassion. Furthermore, a series of short psychic tasks measure the participants' performance at remote viewing, precognition, intuition, and psychokinesis. Additionally, 4-channel electroencephalography (EEG) activity of the participants is recorded during a breath-focus exercise at the end of the survey. In collaboration with workshop organizers, we incorporate the measurement process into their workshop registration. Each participant has their own carrel containing the necessary equipment to maintain high focus and privacy. Participants complete the measures and then attend their workshop. After their workshop, they complete the same assessments. This poster will present preliminary results of a broader, long-term pilot study that investigates what experiences and conditions account for observed effects, the nature of non-local consciousness, and its relation to our physical world. Preliminary analyses will focus on: 1) evaluating the relation between the factors; 2) examining the efficacy of each experiential learning at developing specific noetic qualities; and 3) assessing any potential predictors.

Unconscious Social Interaction Coherent Intelligence as Another View on Extrasensory Perception

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The theory of Coherent Intelligence explains the modality of implicit collaboration in colonies of animals and groups of people (Collective Intelligence), as well as the essence of anomalous perception (ESP), within the framework of existing laws of physics. Coherent Intelligence is an effect of unconscious collaboration provided by inter-connection of many brains united by the entanglement state of their neurons – the phenomenon of quantum entanglement of particles –stimulated by common emotional arousal. The main arguments and features of this concept are based on research on the decision-making of social insects, the study of Collective Intelligence, a recent meta-analysis of ESP studies from 1987 to 2010, and recent research in quantum mechanics. The research examined an improvement of thinking in groups. The hypothesis is that in the situation of strong emotional contagion when people (independently from one another) are dealing with the same problem at the same time, it is possible to create a coherent mental process. Experimenters tested whether knowledge on the problem of some group members may facilitate the thinking of other participants. Sixteen tests were conducted with 1,055 trials. These trials differed by tasks of varying complexity, which is probably why their results are also different. The thinking abilities of the groups also differed from group to group, as well as the involvement of their participants in the collective process of different tests. The increased performance of

the teams meets the estimation of the theoretical assumption on them and corresponds to the essence of the phenomenon. The ratio of increased scores of different groups varies from 2% to 37%; it should be noted that an increase in scores of even just 2% can make a contribution to group collaboration if applied to the decision-making and learning process. The effect of anomalous unconscious collaboration, which is weak for extrasensory communication, is substantial for Coherent Intelligence. The theory suggests a new approach for evaluating the results of the research on ESP. We affirm that unconscious social interaction Coherent Intelligence plays an important role in social reality formation and it permeates all social textures and configurations. We believe that long-term and substantial studies on Coherent Intelligence may explain different sociological and psychological phenomena.

NDEs and Creative Artistic Mediation: How to Symbolize Extreme Affects?

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The feelings of people who have experienced a near-death experience (NDE) can often be associated with traumatic experiences. According to a psychodynamic approach, NDEs are psychosomatic reactions to the surprising perception of the proximity of death. These psychosomatic reactions may have an adaptive function to prevent certain adverse effects of trauma and thus have a protective role against the development of symptoms of post-traumatic stress disorder. Artistic skills are often and spontaneously revealed following an NDE, but no psychological research has explored this aftereffect. Artwork produced by people with NDEs may reveal their emotional reactions, such as levels of concrete or abstract thinking processes related to the NDE event through the use of means such as painting. These productions can contribute to greater psychic integration of thoughts and feelings associated with the experience. Our research aim is to investigate the integration of NDEs and their aftereffects into the lives of NDErs through creative artistic psychotherapy. A larger aim is to better understand the links between NDE, artistic mediation, and symbolization processes, within the framework of a clinical approach of exceptional experiences, while renewing the psychoanalytic questioning on artistic activity. In our first exploratory study we will analyze the repercussions of different NDEs in the emergence of a spontaneous artistic activity, as well as in the case of artists having lived a NDE in childhood (e.g., Bill Viola), by analyzing their artistic productions in connection with their type of personality. More interest will be given to their relation to art before and after the NDE. In our second study, we will analyze the productions and the personality characteristics of artists declaring themselves mediums with extraordinary faculties related to their artistic activity. For our final study, we will develop an artistic mediation setting in an art studio for a psychotherapeutic purpose. We will review the works of at least 15 volunteer participants who will each report an NDE within a psychoanalytic interpretative framework. The aim is to show how artistic mediation can initiate processes of symbolization to contribute to the integration of NDE and related difficulties, taking into account the various factors already mentioned above. Participants will complete pretest and posttest assessments. We will also collect the participants' artistic creations during sessions to identify pictorial themes and discuss methodological benefits of using artistic tools.

Understanding Psi by a Model that Unites Consciousness, Mind And Matter

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The idea that the universe might be a computer simulation is being taken increasingly seriously by scientists, philosophers and technology leaders. However, before a real theory can be developed some basic questions need to be answered:

- Where does it come from?
- What is it made of?
- How is it built?
- What are its properties?
- Who is the programmer?

The answers come in the form of the so called "Metacomputics Model". As it is presented here the operating computer is assumed to exist in the Platonic realm. The physical universe and all its contents are then formed by the processing output of this Platonic computer. According to the Metacomputics Model, consciousness itself exists as the fundamental and irreducible basis to the universe. It is defined as the abstract power to conceive, to perceive, and to be self-aware. The content of the universe comes into existence from consciousness via the computational processes of the Platonic computer which is itself made by, of, with, and from Consciousness. One advantage of this model is that it serves to bridge between the views of the world as the state of non-duality and of duality. It gives us also an intellectual understanding of the origin of time and space. It provides a means of understanding the creation of the apparent material universe from consciousness through a computation process. This paper presents that the Metacomputics model can be applied to explain psi-phenomena in terms of accessing "meta-database" (for ESP) or alteration of the "meta-programs" (for PK) through a form of human-machine interaction by psychic individuals.

Tolerance of the Unknown: Negative Capability, the Problem of Demarcation, and the Truzzi-Gardner Dialogue

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The poet John Keats coined the term *negative capability* to describe the kind of open mindedness capable of tolerating the unknown or only half-known. He also described a similar idea regarding our ability to disregard our own knowledge and allow the mind to become a thoroughfare for all thoughts.

This capability may be considered from the perspective of the psychology of science as an epistemic virtue, which plays an important role within the scientific study of anomalous phenomena or what might be more succinctly termed anomalistics. Have scientists developed sufficient negative capability to deal adequately with the claims of the paranormal? As an illustration, we analyze the role of negative capability within the recently published correspondence between sociologist Marcello Truzzi and mathematician and science journalist Martin Gardner. Gardner defended a kind of hardline skepticism favoring prejudice and pejorative labels whereas Truzzi promoted a softer skepticism with more symmetry and a courteous effort toward those who strive diligently to follow the rules of science. Both forms of skepticism have different epistemological grounds and this inner-demarcation is analyzed through the perspective of the psychology of science and its assessment of individual's epistemic vices and virtues. This inner-demarcation has an impact on the wider issue of demarcation between science and pseudoscience. We conclude that negative capability should be a salient factor in future research and may be encouraged and developed by the educational opportunities provided by anomalistics and its characteristic skeptic-proponent dialogues.

The Amyr Amiden Phenomena: Physiological and Geomagnetic Correlates

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My first encounter with Amyr Amiden was in 1993. During our time with Amiden, members of our group reported the sudden appearance of small polished stones as well as the putative transmutation of tinfoil into gold foil. Weil invited me to return for a more formal study of Amiden's phenomena. In 1994, I returned to Brasilia. Amiden met with us for eight days, following his work. At day's end, each unusual event was scored on a 5-point scale by me, A total of 95 unusual events were observed; 91 were scored as "apparent anomalies." We used the Spearman rank order correlation method to investigate associations between variables. The means from the AOS were paired with the corresponding pulse readings, yielding non-significant results There were 12 systolic blood pressure readings followed by apparently anomalies yielding non-significant results. There were 13 systolic blood pressure readings with antecedent anomalies yielding non-significant results. There were 12 diastolic blood pressure readings followed by apparent anomalies, the results were non-significant. When 13 diastolic blood pressure readings were paired with antecedent apparently anomalies, the results were statistically significant, the higher the diastolic blood pressure readings after the event, the higher the mean rating on the AOS. There were 15 geomagnetic readings followed by apparently anomalies yielding non-significant results. There were 17 geomagnetic readings preceded by apparently anomalous events with significant results suggesting that atmospheric electricity and geomagnetic activity provide favorable conditions for anomalous events. When the mean ratings on the AOS of each daily session were paired with daily geomagnetic activity for South America, the results were not significant. When the mean AOS ratings of each session were paired with daily geomagnetic activity for the Southern Hemisphere, the results were significant. The objects that appeared anomalously included polished stones, coins, medallions, onyx, jewelry, gemstones, and a pair of metallic linked rings. Laboratory tests identified some of the stones as agate, amethyst, a low-grade emerald, and a small diamond. The linked rings are currently in a safety deposit box

at Lal Arora's university in Fortaleza, Brazil. Two years later, I met with Amiden and Weil in the latter's office. Weil asked Amiden if he could find an important book that had disappeared from his bookshelf. Immediately a blue-green rock cascaded onto the floor; Weil remarked the color was the same as the missing book's cover. I was called into another office to take a telephone call. While on the telephone a polished stone fell at my feet. Returning to Weil's office, Weil informed me that the missing book had reappeared in his bookcase. The cover was the identical color of the rock.

Nine years after our investigation, I was at the City of Peace Foundation with Crema, waiting for Amiden to arrive. As he left his automobile, I asked if I could photograph him with my flash camera. He agreed, and when the flash went off, a colorful medallion fell onto the ground. It portrayed Joan of Arc. When a staff member photographed the three of us, a polished stone appeared on the ground when the flash went off. During our meeting in a Foundation office, a musky smell permeated the air. I noticed a pool of liquid and collected it in a tissue. Upon returning to the United States, I gave the tissue to an expert on perfumery. She told me that the smell was reminiscent of a perfume popular in the early 1900s, originating in France.

Sleep Paralysis: First Results of an Online Survey

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Sleep paralysis (SP) is a phenomenon with a rather high lifetime prevalence of about 8% for the general population, with a culture-independent experiential basis. For parapsychology, SP is interesting in two respects: It includes experiences that are often interpreted as paranormal or supernatural, e.g. perceiving ghosts or supernatural entities; and SP can be part of more complex occurrences such as a poltergeist case with a series of various paranormal phenomena. By now a reasonable amount of knowledge of the phenomenology as well as plausible theories of the (neuro-)physiological underpinnings exist. However, this knowledge has by no means become common in the public, and even in practical sleep medicine it is rather poor, at least in Germany - the latter due to its low clinical relevance. The focus of previous research on SP rested on the one hand on its phenomenology (which physical or mental phenomena are experienced during such an episode?), and on the other hand on the context conditions under which SP occurs (state and trait variables). With regard to the former, a relatively clear picture exists by now, while for the latter the state of knowledge is still rather. Therefore, we prepared a questionnaire that included also questions dealing with the desideratum mentioned above. Our questionnaire consisted of 35 items. Several items were supplemented with space for a free text commentary. Further questionnaires we used were: Fragebogen zur Phänomenologie außergewöhnlicher Erfahrungen (PAGE-R-II; [questionnaire on the phenomenology of extraordinary experiences]), a German translation of the Belief in the Supernatural Scale (BitSS), and a German translation of the Tellegen Absorption Scale. A final set of 11 items collected sociodemographic data. Our sample consisted of 380 fully completed questionnaires. The decisive criterion for participating in the study was having at least one SP experience. Our sample differs significantly from those found in the literature because we directly addressed

people who have experienced SP. The proportion of participants with very frequent SP experiences was significantly higher in our sample than in other studies. 70% had at least six episodes of SP and 40% had 20 or more episodes. For many of our participants SP is not a rare event, and therefore we were able to obtain a clearer picture about the possibilities of experiencing this remarkable phenomenon.

Finding Meaning in Anomalous Experiences and their Impact on the Evolving Self Using a Phenomenological Analysis

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The purpose of the study was to investigate how people make meaning out of anomalous experiences and what is the resulting impact on their identity. Two participants who had anomalous experiences of different types (one After Death Communication (ADC) and one mystical experience) were interviewed using face to face semi-structured interviews. The data were analyzed using a phenomenological perspective. The identity of both participants evolved significantly as the result of their experience. Though not associated with a life-threatening situation, the transformations were found of similar amplitude and characteristics of those already described in Near Death Experience (NDE) experients. Additionally, the transformations went through similar stages for each participant, as reflected by the emergent themes. These included the duration of the meaning making process, the importance of sharing with others, and the emergence of a new world view (framework). This similarity suggests common psychological processes independent of the nature of the experience. Subtle differences suggest the influence of the biographical context that may warrant further investigation.

The Paranormal and the Aesthetics of Resistance

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This presentation consisting of a visual display of artworks and ensuing discussion addresses a post-colonial approach to the study and procurement of psi phenomena via performative, sculptural, and intuitive creative practices. The art works on display are informed by the works of contemporary psi research, contemporary occulture and both West African and Asian divinatory systems of knowledge. Divinatory and intuitive practices such as Jungian active imagining, Chinese geomancy and iChing consultation, and Diasporan Hoodoo practices directly inform the creation of the works themselves, while the texts of notable parapsychology and comparative religions scholars including Jeffrey Kripal, George P. Hansen, Dean Radin, Ingo Swann, and Lynne McTaggart create a context for conceptualizing these practices within a contemporary empirical framework. Works on display: *Chick House* (2019), *Intention Room* (*Pray for Whatever You Want to Whatever You Want*) (2019), and *Baubo and the Baobab Thangka* (2018).

The Theoretical Analysis and Curriculum Development of the Sixth Sense Used in the Training of Blind Childrens' Living Ability and Survival Ability

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The sixth sense is the additional sense of human beings besides sight, hearing, smell, taste, and touch, which has been used in human life since ancient times. Blind children, due to their loss of vision, have experienced many inconveniences in life. The pineal gland may be sensitive to light, which has the potential to compensate for visual function. Based on the application principle of the sixth sense, we designed a curriculum to activate the sixth sense of blind children by stimulating the pineal gland of photosensitive ability. After training, it can replace lost vision, enhancing the ability of blind children live alone and survive, benefiting blind children and human beings.

An Explanation of the Powers of Franz Mesmer

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In his lifetime Franz Anton Mesmer was branded a charlatan by the scientific community on account of his claim of being able to cure many maladies and medical problems through animal magnetism. Notwithstanding this, although his specific claim to possess the power of animal magnetism has been discounted, his methods have had a vast influence in every branch of mental healing and spiritual healing and healing through hypnotism, as well as New Age techniques that involve not only "the power of suggestion" but also the physical "laying on of hands." The list of actual movements that have adopted Mesmer's techniques include eclecticism, phrenology, Spiritualism, mind cure, Christian Science, homeopathy, transcendentalism, New Thought, Theosophy, psychoanalysis, osteopathy, chiropractic, anthroposophy, holistic health, positive thinking, New Age healing, hypnotism, biophysics, biomagnetism, magnetobiology, and psychiatry. This article reviews Mesmer's techniques, and gives a broad overview of all the other branches of mental and spiritual healing where his methods are still used in one way or another, and presents recent scientific research that completely vindicates Mesmer's original claim to possess the power of being able to manipulate the "magnetic fluid" in the living organism. In a research article entitled Remote Regulation of Glucose Homeostasis Using Genetically Encoded Nanoparticles (2014) it has been found using techniques in radiogenetics that the ferritin in our bodies (a paramagnetic material) can be manipulated not only by low-frequency electromagnetic waves (radio waves) but also by magnetic fields. Brain waves are also low-frequency electromagnetic waves, and as it is well known that the brain waves of a healer/hypnotist become synchronized with that of the patient, it is proposed that brain waves play a part in what Mesmer originally called animal magnetism.

Abstracts of Panels

Clinical Parapsychology

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The science of parapsychology in the West has historically been limited to seeking scientific validation for "psychic", "exceptional human experiences" and anomalous phenomena, while clinical work had been left to licensed practitioners in psychiatry, clinical psychology, and transpersonal psychology. It is not uncommon for a health care provider to suggest medication or even hospitalization for someone who reports dreaming about future events, remembering a "past life" event, or claiming to have heard the voice of a departed loved one. These reports are rarely veridical, but we believe that they are equally unlikely to be pathological. However, thanks to steady advances in sciences such as neurology, cellular pathology, and physics occurring alongside the public increasingly seeking assistance ranging from mediums and indigenous healers, New Age shamans and the energy-medicine community to deal with anomalous phenomena, we see that clinical parapsychology is finally positioned to address a full spectrum of phenomenology as a foundational science to:

- 1. Offer counsel on exceptional experiences.
- 2. Review clinical applications and case studies.
- 3. Provide guidance and education to scientists, professionals and laypersons on scientific evidence for psi, combined with culturally sensitive awareness concerning the use of psi methodologies (psychic, intuitive, spiritual and 'energy healing / energy medicine') as relates to exceptional human experiences including: psi disturbances, spiritual emergencies, trauma induced spiritual awakenings and other anomalous phenomena.

Current Status of Psi Theory: Report From a Recent Workshop

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This panel reports on the presentations and conclusions of the Workshop on Psi Theories, a meeting held over two days prior to the PA Convention. The Workshop brought together several dozen scientists either actively engaged with or interested in psi research. The Workshop's premise is that the basic claim of parapsychology is solid: empirical evidence from both laboratory research and spontaneous-case studies establishes that anomalous phenomena related to consciousness oc-

cur. These include, but are not limited to, informational transfers and correlations that challenge our notions of time and causality. However, while the body of evidence is strong, albeit complex, the disparate attempts at psi theory are partial at best. The very fact that we refer to these phenomena as "anomalies" shows that the outstanding challenge of the field, at this point, is theoretical rather than empirical: establishing models that can account for data, while delineating how psi accommodates, or challenges, accepted scientific frameworks. Responding to this challenge demands a multi-disciplinary approach, drawing on diverse fields such as consciousness research, psychology, neuroscience, and physics. The task is further complicated by the sheer breadth of phenomena that need to be integrated in any comprehensive theory— from physiological presentiment data to reports of macroscopic PK.

We summarize below the kinds of questions each panelist sought to address.

Mario Varvoglis: Theoretical Models of Psi: Deep Structure and Relevance

How do different theoretical approaches measure up in terms of explanatory breadth and relevance when confronted with our data? In particular, what is their explanatory power when faced not only with statistically significant databases, but also with reliable field accounts of large-scale psi?

Dick Bierman: The Role of Retrocausation and Non Locality in Theoretical Frameworks

Psi has been negatively defined in the past – essentially as "that which we cannot explain." Instead of framing psi negatively, and calling it an unexplained anomaly, improving theories helps to give a positive definition of what we mean by psi. Which underlying principles from physics can or should guide theoretical frameworks? How can retrocausation, non-locality, or other fundamental theoretical notions be used to define psi in a positive way?

Peter Bancel: Towards a Programmatic Approach to Psi Theory

Advancing psi theory is a long-term project that will require contributions and insights from different areas of science. This is not likely to happen by itself and more needs to be done to facilitate inter-disciplinary crossover. While the Workshop is an effort in that direction, real progress calls for some strategic thinking. In general, we can reflect on two questions: What are the theoretical resources outside of parapsychology that can be most useful and how can those be brought in? What efforts are needed within parapsychology to further its theoretical program?

Thomas Rabeyron: Theoretical Insights from Psychology and Natural Expressions of Psi

The study of naturally occurring psi, including cases of anomalous cognition, experiential reports from gifted subjects, and psychological data is a rich source of information about psi phenomena. How might these complement or inform theory? Does this information force a wider explanatory purview for theory, or does it in some way demand fundamentally complementary approaches?

Invited Addresses

Parapsychological Association Presidential Address 2019: Making Sense of Psi

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This talk addresses seven clues that may be useful in developing a more comprehensive understanding of psi. The first is based on the core theme of both Eastern and Western esoteric traditions, namely that consciousness—not matter—is fundamental. This clue, suggestive of an idealistic philosophy, provides a much easier way to understand psi than any materialistic model. The second clue is that there are more comprehensive forms of logic than Aristotle's "excluded middle," including logics leading to such odd concepts as imaginary and negative probabilities. The third is preliminary evidence suggesting a biological basis for psi talent, as observed both in brain morphology and in genetics. The fourth is a recognition that the so-called replication crisis in mainstream psychology is very closely related to some of the difficulties of replication in parapsychology. The fifth is that psi phenomena and quantum mechanics share exactly the same property that cause both topics to be called "weird" in the popular press, i.e. nonlocality. This similarity is not an explanation, but it is almost certainly not a mere coincidence. The sixth clue is the rise of quantum biology, which allows us to predict with increasing confidence that the brain may have quantum properties. If that turns out to be true, then from a mainstream perspective psi becomes vastly more plausible. The seventh clue is that psi is metaphorically like Indra's Net, i.e., we are studying a holistic phenomenon where everything is nonlocally connected with everything else. Conventional epistemologies do not apply to such systems, which is why capturing psi in the laboratory is a chronic challenge. Consideration of these and similar clues may be useful in helping to form models of reality where psi is not considered anomalous, but obvious.

Towards a NON Neuronal Conception of Consciousness

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Two thousand and five hundred years after the Delphic Oracle advice "know yourself," we still do not know if we are "nothing but" a neuronal secretion created by our brains, or if consciousness has a much wider dimension. The first position, the one that dominates in the field of neurosciences, will be strongly supported in the coming years by the development of various transhumanist ideologies. In this lecture, I will present a full range of elements, other than those pertaining strictly to parapsychological research, that aim to back up the second position: the existence of a consciousness in part independent from the brain. Such findings are destined to reinforce and complement the results that have been revealed by current parapsychology findings.

What Is and Is Not Possible for Human Experimenters

Antoine Suarez

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I will argue that:

- 1. All interpretations of quantum physics (Copenhagen, de Broglie-Bohm, Many-Worlds, QBism) are basically equivalent and amount to state that not all that matters for the physical phenomena is contained in space-time.
- 2. The "laws of physics" actually arise from the maximal number of experiments that humans of all times can in principle perform.
- 3. On the basis of a recent no-go theorem, Schrödinger's cat can be declared brain-dead. This means that at measurement something irreversible happens and registered results or visible things (like cats, the sun, etc.) do ordinarily follow deterministic world-lines.
- 4. Nonetheless (as QBism highlights) nothing speaks against admitting deviations as well from the ordinary visible regularities (e.g., "miracles") as from the quantum mechanical distributions predicted by the Born Rule (e.g.: "free-willed"; bodily movements like speech). "Miracles"; and "speech"; do not break any "inexorable law of nature," but only those regularities that hold in absence of purposeful authorship.
- 5. On the basis of these conclusions I finish by discussing the conditions for the possibility and reproducibility of psychophysical phenomena.