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Editor's Note. Research Briefs and workshops are excluded, as well as abstracts of papers published in full in the *Journal*. Abstracts are edited slightly to conform to *Journal* style, and references and reference citations are omitted.

IS THE GLOBAL CONSCIOUSNESS PROJECT AN ESP EXPERIMENT?

PETER A. BANCEL

ABSTRACT: The Global Consciousness Project maintains a long-term experiment which tests the hypothesis that focused attention of large numbers of people during engaging world events will correlate with deviations in a global network of physical random number generators (RNGs). The Project proposes that the correlation is due to a global consciousness field that is sourced in an aspect of shared consciousness which becomes coherent at the time of major events and that the field perturbs the physical behavior of the RNGs. A 14-year replication experiment tests this hypothesis and finds that, during event periods, RNG deviations exceed null expectation by seven standard deviations. However, the formal experiment cannot distinguish between the GCP hypothesis and a hypothesis based on psi-mediated data selection. Thus, the most pressing question the Project faces is whether the experimental result is due to global consciousness or some form of ESP.

In this paper I present a model for the ESP hypothesis and develop a model of field consciousness. Seven statistical tests are derived to distinguish the models. All tests favor the field model. Five of the tests allow calculations of precise probability values. The combination of these tests yields a z-score of 3.98 (p = .00003) against the selection model, indicating strongly that the GCP experiment measures a true PK effect and is not the result of psi-mediated data selection.

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CAN PSI RESEARCH SPONSOR ITSELF? SIMULATIONS AND RESULTS OF AN AUTOMATED ARV-CASINO EXPERIMENT

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ABSTRACT: Simulations of a 32-trial ARV experiment with a roulette outcome determining the target suggest that, for viewers that perform with an effect size of around .35 and players using a simple betting strategy, there would be an average net result of about 10 times the starting capital. A review of ARV experiments yielding about 17 experiments for which trustworthy data could be obtained suggests that the mean scoring rate in a binary situation is around 63%. If these results could be confirmed this would falsify theories that predict that it is impossible to use psi in a consistent and robust way and moreover it could be the end of the financial problems in the field of psi research.

An automated ARV-casino system is described that reduces the administrative burden in running ARV experiments. The system has been used over the years in 120 trials with three different viewers of which at least one has performed in RV trials in the past with the required effect size. However, our results

suggest a lower effect size of around a 56% scoring rate.

The system automatically calculates the Local Sidereal Times for the moment the viewer does their prediction and also for the moment that the player bets on red or black. A categorization of these times according to LST periods that have been predictive in old RV and ganzfeld trials shows that in contrast to earlier findings on free-response trials, the period from 17:00–20:00 LST has the largest scoring percentage. None of the results are significant though.

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RETRO-ACTIVE TRAINING OF RATIONAL VS. INTUITIVE THINKERS

Aron Bijl & Dick J. Bierman

ABSTRACT: Retroactive effects were investigated in the context of a master's thesis on the effect of instruction on intuitive and rational thinkers in a Go-NoGo task. During the first phase of the task, subjects were instructed to respond to two randomly chosen symbols and to ignore two other symbols. In the second phase of the task, half of the subjects got the instruction to respond as quickly as possible (speed-instruction) while the other half got an instruction to avoid errors (accuracy-instruction). Major research questions of the project dealt with the effect of both instructions on task performance and the interaction of the type of instruction with the type of processing style (intuitive *vs.* rational).

In the second phase of the Go-NoGo task, only one symbol was to be responded upon. This symbol was randomly chosen from the two that were used as stop-signals in the first phase. In accordance with the growing literature on retroactive influences on cognition and emotions, in which future events seem to have an anomalous, retroactive influence on responses and behavior in the present, we predicted that the second task would have a practice effect on performance during the first task.

This prediction was confirmed. During the first session, the subjects responded significantly faster to the symbol they also had to react to in the second session, than to the symbol they only had to react to during the first session (p = .038). The subjects with an intuitive thinking style were totally responsible for the whole effect (intuitives alone: p < .001).

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THE GOTHENBURG–KINGS COLLEGE TWIN RESEARCH: FINDINGS AND PROSPECTS

GÖRAN BRUSEWITZ & ADRIAN PARKER

ABSTRACT: For the last two years, there has been collaborative research in Copenhagen, Gothenburg, and London, involved in recruiting identical twins who report exceptional experiences of an apparent telepathic and synchronous nature. The studies have included the real time digital ganzfeld, psychophysiological recordings, questionnaires, and postal survey interviews. Psychophysiological monitoring with one twin while the other experiences random startle stimuli, offers a standard methodology and has, to date, given promising results among those selected for further study. The need to select appropriate twins has led to the development of a standardized questionnaire, the *Exceptional Experiences Questionnaire* (EEQ). Responses to the EEQ by twins attending the "twin day" in London, indicated that about 60% of these twins reported exceptional experiences with about 11% reporting telepathic experiences to be a frequent occurrence in their life. Identical twins reported having these experiences significantly more

often and had a significantly stronger attachment to each other than was the case for non-identical twins. Strong attachment was linked to the frequent reporting of more remarkable exceptional experiences. Most twins reported these experiences as having occurred in a waking state. Almost half of the twins reported the experience of telepathy concerning the bodily welfare of the other twin. However, in the postal survey group, about one-third of the remarkable events were positive events. The use of a private language and the occurrence of shared dreams seem to be further hallmarks of these experiences. The aim is to finally select a pool of twins with exceptional experiences whose experimental results will give a large effect size and findings that are not experimenter-dependent so that progress in this area can be facilitated.

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SÁNDOR FERENCZI: EXPERIENCES AND "ADVENTURES" IN THE PARANORMAL

Giulio Caratelli & Maria Luisa Felici

ABSTRACT: Sándor Ferenczi (1873–1933), a Hungarian doctor, Freud's disciple and friend and a relation—without doubt very privileged with the father of psychoanalysis—met personally for the first time in 1908. This meeting has occupied a place of remarkable importance in the context of the psychoanalytical movement. Ferenczi's work is parallel with Freud's work, with the purpose of divulgating the basic principles and doctrines and often enriched with his own original theoretical and clinical contributions—sometimes also in contrast with certain fundamental directives. In his works about the "active technique" among others, determined limits to the fundamental technique of "free association" and the use of specific instructions to give the patient are firmly sought. In addition, Ferenczi was important in the development of the so-called "short psychotherapies."

Ferenczi had a precocious attraction to some "mental" manifestations of mediumship, for the procedure of "automatic writing" and for some extraordinary phenomena—attraction moreover characterized by very interesting personal experiences—a clear interest that certainly comes many years before the meeting with Freud occurred in 1908. Ferenczi's attitude in this field, in any case, is always scientific, without "acts of faith" and without any kind of prejudice.

In this contribution, six sectors of Ferenczi's lasting parapsychological interests are pointed out, in which, among other things, he has been involved with personal experiences and direct investigations: (a) early interests; (b) further experiences with reputed "gifted" subjects; (c) a new context of experiences: paranormal phenomena during analysis; (d) the question of the so called "mathematical horses;" (e) those experiences in the family; and (f) completion of the great work on stimulus.

Ferenczi has certainly played a role of great importance about the convictions of, and the first of Freud's personal investigations about, the phenomena of "thought-transference," particularly during the temporal interval included between the end of September, 1909 and the first days of 1911, exerting a strong influence that had brought Freud—even among much caution about the phenomena and constant fears of the future of the psychoanalytical movement—to the first and clear acknowledgments about the reality of the telepathic manifestations.

Also, the function of the stimulus precociously exerted by Ferenczi on István Hollós, also a Hungarian psychoanalyst, concerning the telepathic phenomena that can occur during analysis, has to be considered all the same precocious and of primary importance. Their interaction led to the more and more progressive elucidation of the indispensable "psycho-dynamic" factors that form a causal "precondition," as well as to the occurrence of some genuine paranormal phenomena involving both the analyst and the patient.

Ferenczi, in great disagreement with Freud, had also been convinced of the possibility to know the

future paranormally.

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AISM: A 55 YEAR-OLD ITALIAN ASSOCIATION DEVOTED TO PARAPSYCHOLOGY

Giorgio Cozzi

ABSTRACT: For over half a century, the AISM, Associazione Italiana Scientifica di Metapsichica (*Italian Association for the Scientific Study of Metapsychics*), continues to support studies of and interests in parapsychology in Italy. The first international PA Convention that takes place within the borders of Italy seems to be an appropriate occasion to introduce foreign colleagues to the activities and field of action of the Association.

History. In 1946 Ferdinando Cazzamalli, psychiatrist and physician known for his hypothesis on the "radiant brain," founded the AISM, which has come to represent an important guide for Italian parapsychology. The AISM today is a bulwark of parapsychology studies in Italy.

Objectives. The AISM is committed to inquiries into paranormal phenomena, to ensure the truth-fulness and consistency of research data, to study people who seem to have ESP and PK, in order to identify new sensory skills and mental faculties, and to contribute to the scientific development of parapsychological knowledge.

Activity. The AISM has: organized, and currently organizes, international and national conventions, meetings and conferences; run training courses to develop knowledge of parapsychology; and supplied advice on the subject. The Association has a web presence the purpose of which is to spread proper knowledge of the paranormal, as well as to be notified of spontaneous cases and poltergeist events. The Association is also present on media, TV/Radio, to illustrate paranormal phenomena and describe hypotheses and theories. In addition, the AISM is available to give information and to consult on field of parapsychology and maintains a presence on several social networks to assure a correct view of parapsychology.

Experiments. In the past the AISM has conducted a lot of experimental research with traditional tools (Zener cards, dice, seeds and plants for PK effects, and so on) in all of the fields examined by parapsychologists (ESP, PK, "distant healing," etc.), The Association is now equipped with appropriate technological devices (PCs, RNGs and REGs, EEG) and has performed both free-response and forced-choice tests. In addition, AISM researchers have tested psychics and talented people (e.g., Venia, Eder) and have amassed a lot of data on "empty chair precognition" and psychometrics.

Q.P. Part of AISM's efforts are now focused on projects for the realignment of some Italian parapsychological activities to experimental methods. Also, a group of AISM researchers are working on the development of a scale to measure the "Paranormal Quotient" (QP), that is the level of "Paranormal Intelligence," composed of "Logical" and "Emotional" Intelligence, and identified through an appropriate scale.

Metapsichica. *Metapsichica* is a journal edited by AISM, devoted to collecting reports of studies and experiments performed by the researchers of the Association, and to propose a "scientific view" of contemporary parapsychology. In the past, other than Italian parapsychologists, the journal has gathered contributions by a lot of foreign students and researchers. Recently, due to financial circumstances, it has been published irregularly; nevertheless a new issue has been printed on the occasion of the current PA Convention, with in-depth analyses of the meaning and the future perspectives of our discipline.

AISM International Project. The Association invites worldwide foreign researchers to identify and collect (with a set of specific data) premonitory dreams, said to be experienced by a lot of people, with the aim to make an international registry from which it will be possible to draw data for focused studies.

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HOW TO HANDLE EXPECTATION BIAS IN PRESENTIMENT EXPERIMENTS: A RECOMMENDATION

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ABSTRACT: Here we reconsider expectation bias, with a focus on how to handle it in experiments that attempt to demonstrate presentiment. Usually demonstrated by showing that significant physiological differences *precede* stimuli of different arousal levels, in presentiment experiments all stimuli are presented in a randomized order with replacement. Often the direction of these differences suggests that physiological arousal is more likely to precede arousing rather than neutral stimuli. The possibility exists that such reactions can be explained as resulting from expectation bias. Expectation bias is based on the (false) notion that the likelihood of an arousing stimulus being presented grows as the number of consecutive calm stimuli increases (the gambler's fallacy). Different ways of minimizing or avoiding the bias are discussed.

On the basis of this discussion, our recommendation is to use analysis of variance (ANOVA) to separate the effect of the bias from the hypothetical presentiment effect, preferably at the trial-by-trial level. We also recommend ANOVA to be applied to each participant separately to avoid mixing within-and between-participant pre-stimulus effects, and to use a "counting" method to test for possible presentiment effects at the group level. The favored method is illustrated using both a simulated one-participant example and real, multi-participant data. Finally, we anticipate that ANOVA can be performed to handle not only the expectation bias, but also other similar biases, like the so-called "hot hand" bias, in presentiment experiments as well as in conscious precognition experiments involving feed-back.

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FROM SYMPTOM TO DIFFERENCE: "HEARING VOICES" AS A PARADIGM FOR CLINICAL PRACTICE WITH EXCEPTIONAL EXPERIENCES

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ABSTRACT: Traditionally considered psychopathological auditory-verbal hallucinations, voices heard by patients, but also by many people from the general population, are currently the subject of much attention from researchers, clinicians, and public authorities. One might think that voice-hearing is a psychopathological experience that has little to do with parapsychological phenomenology, except when information is ostensibly acquired paranormally in the form of a voice. But paranormal and spiritual interpretations of voices are ubiquitous in many studies of voice-hearing, and even are outstanding examples of salutogenic appraisals of psychotic-like experiences. The research on the type of appraisal along the axes of internal/external or personal/impersonal provides direct guidance on clinical intervention strategies. No longer focusing on the "what" but rather on the "how" of these experiences helps to avoid some biases relative to the assessment of beliefs—especially unusual beliefs—in the clinical setting.

In this paper, I first describe the genesis of the Hearing Voices Movement, as presented by the Dutch psychiatrist Marius Romme, and then selected research is reviewed on these anomalous experiences. I argue that parapsychology has much to learn from the Hearing Voices Movement, and *vice versa*. The change of perspective on voice-hearing—from a *symptom* to an individual *difference*—may be generalized for all exceptional experiences, as the late Rhea White had begun to establish with her Exceptional

Human Experiences Network. This leads us to consider how parapsychological research is used by people searching for meaning due to their exceptional experiences, and conversely how researchers attempt to normalize these experiences. How are we to maintain a clinical approach of exceptional experiences when facing a discourse that disqualifies their psychopathological approach? As the figurehead of the broader movement of "recovery," the Hearing Voices Movement offers a *competitive clinical practice*, but fails to provide a true *differential clinical practice*, starting from a neutral name-referring to several psychopathological pathways that need to be distinguished.

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THE NATURE AND PHYLOGENETIC ORIGIN OF MIND

Antonio Giuditta

ABSTRACT: According to current scientific views, mental activity is equivalent to brain activity, and brain activity is deemed to consist of processes occurring at the molecular, cellular and system levels. In fact, an implicit assumption of the current reductionist approach maintains that the ultimate foundation of biological capacities is placed at the molecular level, irrespective of the common notion that molecules are made of atoms, atoms of quarks, and quarks of elementary particles. Because no objective threshold separates molecules from their lower components, and prevents atoms and subatomic particles from molding qualities of living organisms, that assumption lacks support.

The presumed reduction of mind to brain activity reflects the Cartesian view of the world adopted by science. It beholds the coexistence of a mental substance capable of thoughts (*res cogitans*) and a material substance extended in space (*res extensa*). Accordingly, the scientific observer perceives the outer world (which includes his living body) as made of matter, and is bound to describe and investigate it within a material paradigm. A disturbing consequence of this attitude implies that any physical brain event is supposed to coexist with its related mental event. Given the fully independent nature of mental and material substances, such coincidence is hard to envision.

The dual Cartesian view is not the only attempted description of the world. Monistic versions exist which profess unitary views, but they drastically differ in privileging the material or the mental substance as the only reality. Materialistic visions may acknowledge the existence of mental events, but segregate them in the virtual domain of epiphenomena, a subterfuge that does not provide a convincing explanation of their nature and minimizes their impact, notably those investigated by parapsychology. Conversely, spiritualistic visions emphasized by religions, philosophical systems, and some scientists maintain that mind (spirit, consciousness) is the only substance, and matter is what the subject perceives of the outer aspect of reality.

We recently came to a similar conclusion as a result of our attempt to investigate the mental qualities of living and inanimate objects using criteria based on the elementary features of human mind and their link to bodily structures. This survey has led us to the conclusion that mental aspects have been present throughout the 14 billion years of cosmic evolution which started with the appearance of elementary particles. This view opens novel perspectives to our attempts to envisage mind/body interactions, notably those investigated by parapsychology.

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Parapsychological Abstracts

REMOTE VIEWERS CORRECTLY PREDICT THE OUTCOME OF THE 2012 PRESIDENTIAL ELECTION

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ABSTRACT: Researchers designed a project to determine whether 11 remote viewers, utilizing a double blind protocol, could describe a human subject in enough detail so raters could choose between two potential candidates in order to predict the outcome of the 2012 United States Presidential Election. Remote viewers utilize intuitive yet structured protocols to obtain information that lies outside their analytic mind or current knowledge base. Unlike other intuitive disciplines that focus on human subjects, these are the least utilized targets in remote viewing.

Researchers set out to answer: (a) How a project involving a human target differs from those utilizing objects and locations? (b) Is use of human targets in remote viewing related research projects or applied precognition projects involving binary outcomes something that researchers or project managers may want to consider? (c) Why are human subjects targets typically not utilized in formal RV research studies when they are quite often the main focus for intuitive practitioners? (4) Could a viewer's unconscious preference possibly impact their session?

Methodology. 11 remote viewers were tasked only with "The target is a person." Sessions were turned in one week prior to the election. Each word and sketch from each session was input into a spread-sheet, and compared to both candidates with the use of the *Poquiz Rating System*. After the election, viewers were informed that they had been tasked with viewing the elected candidate, President Obama. Later viewers were surveyed for their candidate preference. Once the scoring had been completed, the results were sent to Alexis Poquiz who calculated the percent that matched (Correct), did not match (Wrong) and that were Unknown for both candidates.

Findings. Out of 11 sessions, eight matched Obama, and three matched Romney. The "Lower Q%" score also yielded an overall group prediction for Obama. The viewers' preference for a particular candidate was compared to their judged prediction. Seven out of 11 viewers indicated a preference towards a particular candidate. All seven voiced a preference for the candidate that their session pointed to, including one whose session pointed towards the wrong candidate.

Conclusion. (a) Human targets may be more challenging to rate than location/object-based targets due to inherent similarities between humans; viewer's subjective relational descriptors; and rater's personal biases perpetrated by competing media outlets and an inability to perceive a subject's inner life in the way a remote viewer can. (b) Humans as targets in remote viewing related research projects or applied precognition projects involving binary outcomes should not be considered unless only one photo in the set includes a human. (c) Poquiz's Rating Scale proved itself to be a superior rating tool. (d) Viewer preference may be as problematic as telepathic overlay in remote viewing research and projects. Utilizing a blind protocol does not and cannot control against this.

COMPETITION AND INHIBITION AMONG HEALING WAYS OF CHAKRA-ACTIVATING TYPE, DNA-REWRITING (LANGUAGE-LEADING) TYPE, AND ENERGY-CIRCULATION-IMPROVING TYPE

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ABSTRACT: The authors used their gas and fluorescence measurement methods (at four wavelengths) with cucumber pieces of *Cucumis sativus* "white spine type" as a bio-sensor and found three different patterns of responses of the bio-sensor to non-contact healing (bio-PK).

Purpose. Relationships among response patterns of the bio-sensor and healing ways were studied

through principal component analysis (PCA).

Term and place. February 27 to March 30, and June 30 to August 5, 2012 at the International Research Institute.

Participants. Healers (2 males, 9 females; average age, 44.1 years) were recruited through a collaborator's list, the internet and social network systems. Many healers used their own ways of healing.

Informed consent. Explanations of the study were given to the healers.

Measurement of healing power. Healing power was measured by gas and fluorescence measurement methods. J value, which is the natural logarithm of the ratio of gas concentrations (or intensities of fluorescence) of experiment and control samples, was used as an index of the magnitude of healing power. Measured J values were calibrated by the simultaneous calibration technique (SCAT), and calibrated J values were used for analyses. Healers were instructed to increase the gas of the cucumber samples. One trial was 30 minutes, and two trials were done a day. Healers did two or four trials.

Questionnaire. Questionnaire A consisted of 26 items (H-items) to survey healing ways which were used during the trials. Questionnaire B consisted of 26 items (CL-items) to survey client's feeling and responses in usual situations.

Analyses. A combination of averages of gas and fluorescence J values was made per each trial. Next, their patterns were categorized by cluster analysis. PCA was done using J values and dummy parameters of Patterns, H-items and CL-items.

Result 1. Data combinations could be categorized into three patterns, labeled as I, II and III.

Result 2. Through PCA with H-items, three ways of healing were related to three patterns of the sensor's response: (a) Chakra-activating type, (b) DNA-rewriting (language-leading) type, and (c) Energy-circulation-improving type. Moreover, there was a competition between types (a) and (b), and (b) was inhibited by (c).

Result 3. Through PCA with CL-items, when a bio-sensor showed Pattern I, a client is expected to indicate spiritual responses. When the bio-sensor showed Pattern II, physical changes are expected. When the bio-sensor showed Pattern III, physical changes and cleansing reactions are expected.

Discussion. In energy treatments, it is considered that there are many healing ways for which mechanisms or modes differ from each other. The healer is not necessarily aware of the differences in the healing ways. When a healer uses several healing ways in a clinical situation, there is a possibility that various factors act on a client synthetically; for example, different healing ways act on different parts; cells or tissues are activated by repeating of inhibition and strengthening effects. However, researchers should make an effort to limit of the kinds of healing ways if they attempt to study the details of mechanisms of healing. CL item 08 was not considered as a good question. Fluorescence measurement method should be improved in accuracy. In the present study, use of J value was effective and also analyses, which are based on pattern analyses of sensor's responses, were effective.

Conclusion. There were three healing ways, and they were competitive or inhibitive. These findings were obtained through pattern analysis of multivariate data sets using J value. This strategy is useful to study the mechanism of bio-PK.

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Parapsychological Abstracts

EXTRASENSORY PERCEPTION, DISSOCIATION, AND MOTOR AUTOMATISMS

JOHN PALMER

I am grateful to the Bial Foundation for their support of this research.

ABSTRACT: Eighty participants completed an ESP task modeled on the Ouija Board. The board was a computer writing tablet on which was affixed a 16-square grid conceptually dividable into four quadrants, with a number 1 to 4 in each square. There were three target designations: square (P = 1/16), quadrant (P = 1/4), and number (P = 1/4). The main dependent variable was "location hits," an unweighted composite of square and quadrant hits. For each of the 36 trials, participants were instructed to explore the surface of the grid with the computer pen and indicate their response by stopping for 1 second. Beforehand, at home, participants completed Watson's *Dissociative Processes Scale*, which contains three subscales: Obliviousness, Imagination, and Detachment.

Participants were randomly assigned to four cells in a 2 x 2 factorial design. Independent variables were hand used to move the pen (Hand: right [R] vs. left [L]) and additional procedures applied during the ESP task to facilitate dissociation (Method). For one of these (Eyes-closed: E), participants were instructed to keep their eyes closed and blank the mind as much as possible. For the other (Quotations: Q), the intent was to distract the conscious mind by having participants read quotations that appeared in succession on a computer screen. An examination of record sheets containing only response sequences and corresponding reaction times indicated that on some trials many participants jiggled the pen, causing registration of an unintended response. This caused adjustments to be made to the ESP scores of 40 participants and the dropping of nine others. An ANOVA of the 2 x 2 design yielded a significant Method by Hand interaction, with significant psi-hitting in the combined ER, EL, and QR conditions (EQR) and significant psi-missing in the QL condition, attributed to frustration to the high task difficulty in this condition.

The prediction of superior performance with the left hand was not confirmed. The other hypotheses were tested using location hits in the EQR condition. As predicted, participants who reported experiencing their hand being moved by an outside force for any amount of time during the ESP task scored significantly higher than other participants. In a similar experiment by the author using a board more similar to the Ouija Board, strong psi-hitting was found among participants claiming the outside-force effect but only 1% to 40% of the time. The present result was considered a replication of the previous one because of a plausible reinterpretation of the earlier finding. Positive responses to the outside-force question were predicted by DPS Detachment. Significant positive correlations were found between location hits and DPS Imagination and Detachment. In both cases, the effects had been predicted for Obliviousness. All DPS subscales positively predicted number hits in the QL condition.

The data were interpreted as reflecting the operation of two distinct processes mediating different trials in the ESP run: (a) a (primarily) motor process restricted to location hits in the EQR condition and (b) a (purely) cognition process operative for location and number hits across all conditions.

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THE COST OF BEING DIFFERENT: THE RELATIONSHIP BETWEEN PARANORMAL EXPERIENCES AND POSITIVE/NEGATIVE SCHIZOTYPY

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ABSTRACT: The present study investigated how subjective paranormal experiences relate to positive and negative schizotypy. It was hypothesized that paranormal experiences correlate with schizotypy proneness, schizotypy sub-factor Unusual Experiences, and positive schizotypy. Undergraduate students, family members and friends, 57% females and 42.2% males (Mean age = 33 years), filled two questionnaires: the *Oxford-Liverpool Inventory of Feelings and Experiences*—which assesses schizotypy in four dimensions—and the *Paranormal Experiences Questionnaire*, which collects information on spontaneous paranormal experiences. Participants with experiences were both less cognitively disorganized and reported subjectively more pleasant paranormal experiences, were less impulsive, more social, and displayed less eccentric forms of behavior, which often suggests a lack of self-control. The majority of paranormal experiences were related with positive schizotypy scores. It is noteworthy that, in an inverse direction, some paranormal experiences are also related with negative schizotypy. In conclusion, the present study implies an interaction between schizotypal personality factors in predicting the subjective quality of odd experiences. Consistent with previous research, results indicate a potentially adaptive, and indeed protective, role for paranormal beliefs/magical thinking.

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A PHENOMENOLOGICAL EXAMINATION OF PREMONITION EXPERIENCES: A SURVEY STUDY

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ABSTRACT: A premonition is defined as a feeling or impression that something is about to happen, yet about which no normal explanation is available. The main aim in carrying out this survey was to estimate the proportion of people who claim to have had various kinds of premonition experiences, and to explore correlations between these experiences and other variables, such as content, symbols, clearness, vividness, emotional intensity, the ability to discern paranormal/normal explanations, time range, the people involved, states of consciousness, and gender differences.

Two groups were surveyed, 255 participants (mean age = 30.75) interested in paranormal topics and 429 undergraduate students (mean age = 33.97) as a "control" group. Overall, 233 participants of the paranormal group (90.7%) and 21.7% of the nonparanormal group reported having experienced premonitions in dreams, and 99.2% of people interested in the paranormal and 51.7% of students reported having experienced premonitions not related to dreams (hunches or other events). For premonitions in dreams, the paranormal group reported having experienced serious events, very real events that take place as they dreamed them, and the people involved were acquaintances. For the nonparanormal group, the content of the dreams were trivial events, and the people involved in the dreams were relatives. They also tended to be higher on clearness and vividness but lower on emotional intensity than the nonparanormal group.

The nonparanormal group, who had both premonitions in dreams and premonitions not related to dreams, tended to experience lower clearness in relation to negative emotions. For premonitions not related to dreams, the paranormal group reported having experienced serious events, and the people involved were acquaintances. The nonparanormal group reported having experienced trivial events. For the paranormal group, males, serious events, and acquaintances, and unknown scored higher than the nonparanormal group. The paranormal group also scored higher on clearness, emotional intensity, and

vividness than the nonparanormal group. The paranormal group scored higher on assaults/robberies, major accidents, events related to unknown ones, and events reported in the media than the nonparanormal group. The paranormal group also scored higher on negative emotions. The paranormal group reported having experienced a number of other premonition experiences, mainly having the experience of anticipating what another person in the conversation was about to say, having a vision of a situation, or having an experience of a sudden feeling of a future event. For the paranormal group, states of consciousness and other premonitional experiences were highly correlated. Participants who reported other premonitional experiences correlated mainly with awake state, meditating, and falling asleep or awakening.

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PSI AND DEATH OF THE PERSON-TARGET: AN EXPERIMENT WITH HIGHLY EMOTIONAL ICONIC REPRESENTATIONS

ALEJANDRO PARRA & JUAN CARLOS ARGIBAY

ABSTRACT: A number of psychics have gained a reputation as psychic detectives using such clues as photographs, a town map, or a piece of clothing. In fact, dowsing has long been espoused as a technique for helping individuals to utilize untrained psi abilities, in terms of unconscious muscular movements, while the pendulum acts as an amplifier of subconscious ideomotor movements. The aim of this study was to compare mental and motor conditions using images of dead people as targets. In one iteration, photographs were used of the person-targets in order to determine if the participants scored differently when using mental or motor procedures. In another, the same approach used highly emotional iconic representations, that is, images of people who had committed suicide.

The sample consisted of 214 female and male participants (mean age = 43.84; SD = 13.40) who had reported personal experiences suggestive of psi. Four trials were performed for the "mental" (psychometry) procedures and four for the "motor" (pendulum) procedures. After a number of security measures, including randomized procedures and control groups, the results showed that the "mental" (psychometry) condition scored significantly above chance (MCE = 2; mean mental = 2.39, t = 4.55; p < .001), and also scored significantly higher than the "motor" condition (p = .004). In the second group of trials, the results also showed that the "mental" condition scored significantly above chance (Mean Mental = 2.14; t = 1.44, p = .075); however, in this group, the "mental" condition did not score significantly higher than the "motor" condition.

We conclude that the study offers support for the claim that iconic representation through psychometry is psi conducive. However, in the second analysis, one tentative interpretation would be that the psi information was blocked by some psychological defense mechanism in response to an unpleasant association with the stimulus.

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THE JOURNAL OF EXCEPTIONAL EXPERIENCES AND PSYCHOLOGY

Erika A. Pratte & Jacob W. Glazier

ABSTRACT: The *Journal of Exceptional Experiences and Psychology* (www.exceptionalpsychology. com) is an online, international, and scholarly journal dedicated to the exploration and advancement of

exceptional psychology, which is a field that studies experiences and phenomena traditionally germane to parapsychology and yet, goes beyond in breadth. Some examples of experiences under investigation by exceptional psychology include survival after death, out-of-body experiences, extrasensory perception, psychokinesis, poltergeists, mediumship, and hauntings. Also included are cryptids, abduction scenarios, possession, psychic healing, and synchronicity.

Exceptional psychology approaches these phenomena from a neutral and bracketed stance. Simply put, exceptional psychology uses an integrative and phenomenological approach. This includes embracing the varieties of inquiry such as experimentation, ethnography, phenomenology, personal narratives, art, and poetry. Each seeks to reveal, in its own way, the essence of the exceptional experience. What is more, exceptional psychology encourages the application of helpful aspects of certain exceptional experiences to clinical praxis. This is just as much a part of the project as research and theorizing. For instance, clinical approaches include the use of psychic healing practices and the application of mediumship to the bereavement process.

The *Journal of Exceptional Experiences and Psychology* encourages the submission of manuscripts, creative writing, artwork, and video related to exceptional experiences. The journal is peer-refereed; submissions will be blindly reviewed and a recommendation for acceptance, revisions, or denial will be made to the editors. *JEEP* is published biannually and welcomes submissions all year. Technical manuscripts should conform to APA style. Creative writing and narrative accounts do not need to adhere to a professional style, although proper citation of sources is required. All written documents must be sent as a Microsoft Word file (.doc /.docx). Visual submissions should be sent as separate attachments, preferably in either .jpeg or .pdf format. Video and/or audio submissions should be sent as a YouTube link. Authors will be notified by email of the review board's decision.

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FOLLOW-UP STUDY OF THE RELATIONSHIP BETWEEN LOCAL GEOMAGNETIC ACTIVITY AND PSYCHIC AWARENESS

SERENA M. RONEY-DOUGAL, ADRIAN RYAN, & DAVID LUKE³

ABSTRACT: For the past three decades, research in parapsychology has found evidence that psychic experiences are related to fluctuations in the Earth's magnetic field; these fluctuations are termed geomagnetic activity (GMA). This research, however, exhibits an anomaly: in some studies psi is related to higher GMA and in some with lower GMA. Most research has used global measures of GMA, and it has been suggested that this anomaly may be clarified by studying local, high time-resolution, measurements of the geomagnetic field.

In order to explore this possibility, a four-year investigation has been conducted with long-term meditators. In the preliminary study from 2008–2010, throughout the whole period of experimentation, solar activity, and consequently GMA, was at the lowest level seen for 100 years. The psi data collected did, however, exhibit seasonal effects similar to those found by Sturrock and Spottiswoode in their 2007 paper.

For this follow-up study the experimental design was identical to that in the preliminary study. After a 15-minute meditation period, the participant attempted to identify a "target," which was a pseudo-randomly selected video clip. The computer program (PreCOG) chose a target set at random from a pool of 25 sets, and a target video clip at random from the four-clip set. PreCOG also pseudo-randomly selected whether the target would be chosen before the participant saw the set (clairvoyance), or after (precognition). Each participant completed a minimum of eight sessions (trials) each year. There were 22 participants, all meditators residing at Kagyu Samye Ling Tibetan center or in the nearby village, who had

practiced meditation for at least ten years.

Three questionnaires and one psychological test were completed: the *Meditation Attainment Questionnaire* (MAQ) is a measure of the level of meditation attainment achieved; the *Freiburg Mindfulness Questionnaire* (FMI) assesses the level of mindfulness attained; the Necker cube test is a measure of focus of attention; and the *Temporal Lobe Epilepsy Questionnaire* (TLE) assesses temporal lobe lability, which may indicate both a participant's propensity for psi-type experiences and the degree to which the person is affected by GMA. The meditation and psychological data will be presented in a separate paper.

Geomagnetic field measurements were supplied by the British Geological Survey's Eskdalemuir observatory, which is located two miles from Samye Ling.

There were two formal hypotheses: (a) Psi scoring for sessions conducted during periods with high band 3 (.025–.1 Hz) GMA would be lower than during low band 3 GMA. (b) Psi scoring for sessions conducted during high band 1 (.2–.5 Hz) GMA would be higher than during low band 1 GMA.

Results for both the preliminary and follow-up studies combined were: Levels of GMA were at their lowest for 100 years, and lower than the normal minimum level. This was totally unexpected and prevented the planned analyses to explore psi scoring across a range of conditions. By the pre-planned analysis, there was no significant difference between sessions conducted during periods with high or low band 3 activity. But with a post-hoc analysis using a lower high/low threshold, psi scoring was significantly lower at high levels of band 3 GMA (p = .03, two-tailed); in a separate analysis scoring was also significantly higher during periods of very low GMA (p = .01, two-tailed). There was no enhancement of psi scoring during periods of high band 1 activity, possibly due to the extremely low GMA.

Overall, males scored significantly negatively (mean psi score = -0.15, p = .02, two-tailed), whereas females scored at chance levels (mean psi score = 0.02); the difference was significant (p = .03). An exploratory hypothesis that the participants responding most strongly to GMA would be those with the highest scores on the TLE questionnaire was marginally significant (p = .06). But this was primarily due to one outlier and was only observed in precognition sessions, and so should be treated with caution. A second exploratory hypothesis postulating a link between seasonal effects and psi scoring was not significant, but did show a correlation with previous research.

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THE NATURE OF PRECOGNITION

JON TAYLOR

ABSTRACT: This paper describes a theory explaining precognition as a connection with the percipient's brain in the future—a link with his or her future experience of the event. The theory considers precognition to be the fundamental phenomenon of ESP.

The meta-analyses performed on the results of precognition experiments give outstanding evidence for contacts with events that actually occur in the future. This suggests that the future events must "already exist" in some sense, and it conforms to a block universe model in which past and future events already exist in the space-time continuum, in accordance with the special theory of relativity. However, this conflicts with the orthodox interpretation of quantum mechanics, according to which the outcome of a quantum process is probabilistic, so that it would be impossible to know the nature of the outcome until after that outcome has been produced. Nonetheless, some modern interpretations do conform to the concept of a determined universe. David Bohm proposes the existence of an implicate order which extends throughout all space and all time, and out of which the successive "slices" of space-time are unfolded to form the block universe. Bohm suggests that similar structures "resonate" in the implicate order, with the

result that they are unfolded in a form in which they are more closely similar to one another. This would enable information to be transferred without requiring a "transmission" of information through time.

The principles are applied to the neuronal spatio-temporal patterns that are activated in the brain. For example, a precognition would occur when the pattern activated at the time of the future experience of an event resonates with any similar pattern that is (spontaneously) activated in the present. This might enable the activation of the present pattern to be sustained until the threshold is reached at which it produces the conscious awareness of an event similar to the event that will be experienced in the future. Thus, precognition is explained as a transfer of information from the brain in the future to the brain in the present. Telepathy could similarly be explained as a transfer between different brains. However, telepathic contacts may be extremely difficult to obtain, on account of the differences between the neuronal patterns involved. Furthermore, the possibility of clairvoyant contacts being made directly with an inanimate object or event is eliminated, because of the dissimilarity between the object and the pattern activated in the brain.

The structural replication tendencies responsible for the information transfer refer to *processes* that occur in the environment. These processes are represented in the brain by processes in which the neuronal networks are connected together (by association) to form spatio-temporal patterns of activation. A precognition refers to the information contained in the association between a pair of networks. For example, in the case of an event caused by the percipient, the networks may refer to the percipient "doing something to cause the event." Thus, if a percipient intends to cause an event in the present, and he does cause the event in the future, a resonance occurs, and he may precognize the fact that he will successfully fulfill the intention. However, if he is unable to cause the event to occur in the future, a resonance does not occur, and the absence of a resonance may serve as an *intuitive warning*, indicating that something will prevent him from fulfilling the intention. This enables him to decide to do something else, without a risk of confronting the intervention paradox.

The mechanism is applied to the target-guessing experiments in precognition. The participant intends for his selection of a given target option to cause the effect of "scoring a hit." In the case of an incorrect selection, there is no resonance and an intuitive warning is produced. The percipient unconsciously moves on to another option. When he comes to the correct option, a resonance occurs and he registers the option. That is because his future experience will be one in which he does associate the option with the knowledge of scoring a hit, when he receives feedback of the target information. In a free-response experiment, the participant may have to identify a combination of target elements that he can associate with "producing a successful result," in this case when feedback of the result is given. The mechanism suggests some important conclusions concerning the nature of the precognitive contact:

- 1. Precognition is the fundamental phenomenon of ESP. Telepathic contacts would seem unlikely to be detected in the laboratory; the results of telepathy and clairvoyant experiments are explained in terms of precognitive contacts with the participant's future knowledge of the target information. This means that feedback about the target (or about the result of the experiment) must be given to the participant in the future. Replication problems may have occurred when this was not done. By giving feedback, it enables the participant to collect and encode the target information *via* his ordinary senses. Selectivity is obtained because the information refers to the actual target, and the participant does not have the task of trying to distinguish between the target and the "decoys."
- 2. Precognition is more likely to occur when the experience of the event in the future produces a stronger emotional impact. If the future experience corresponds to an "emotional" event, the degree of activation of the pathways through the networks is increased. This produces a stronger resonance which is more likely to have influenced the networks activated in the present. For example, the pre-stimulus response experiments detect an "emotional" stimulus given to the participant in the future, but not a "calm" stimulus. The target-guessing experiments detect the participant's future emotional experience of "scoring a hit." When the participant becomes bored with the experiment, the future experience no longer produces an emotional impact and the results fall closer

to chance expectation (i.e., the decline effect).

- **3.** Precognition is more likely to occur when the time-interval up to the moment of the future experience is shorter. The synapses forming the present and future patterns of activation are subject to constant changes due to brain plasticity. Closer matching and a stronger resonance are therefore to be expected when the *precognitive interval* is shorter. A meta-analysis shows that the results are highly significant for precognitive intervals of a few hundred milliseconds, and they fall to non-significance only when the interval is increased to more than one month.
- **4.** The results of an experiment go in the direction of the percipient's "belief" towards obtaining those results. This is the well-known sheep-goat effect, in which a believer in ESP scores above chance, whereas a non-believer scores below chance. That is because the non-believer makes intuitive decisions to try to select the target options which lead to the future experience of scoring "misses." He therefore produces a larger proportion of misses, and the number of hits falls to below chance expectation.
- **5.** The results of REG experiments may be due to precognition, and *not* to PK. Experiments have been performed in which REG outputs are ostensibly influenced in accordance with the operator's conscious intention. However, the results can be explained in terms of intuitive decisions to achieve an optimum sampling of the data stream, in accordance with Edwin May's data augmentation theory. This would tend to refute the observational theories which have been used to support the clairvoyant interpretation of the target-guessing experiments, because they suggest that the participant's consciousness might be able to collapse the wave-function of the target to the state that is reported.

The predictions of the theory are subject to testing, and they suggest that a new approach may have to be taken in the design of ESP experiments if better repeatability is to be expected in the future.

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RE-EVALUATING MENTAL ABSORPTION IN ANOMALOUS EXPERIENCES: AN INFORMATION PROCESSING MODEL OF PSI AND ITS CONCOMITANTS

MICHAEL TREMMEL

ABSTRACT: Certain personality traits and disorders correlating with paranormal experiences also correlate with one another and have been assimilated to higher-order concepts, like *anomalous sensitivity*, *anomaly-proneness*, *boundary thinness*, *environmental sensitivity*, and *transliminality*. Such neologisms have little explanatory value. These concepts are missing a mechanism that causes mental content to cross from unconscious into consciousness, between different mental functions or processes in general, or a mechanism that causes persons to become sensitive or prone to anomalies. This poster presents two possible mechanisms that could cause all that.

Not all of the traits and disorders may be related directly to psi. Their relation may be based on underlying processes. Such processes may be *mental absorption*, *cognitive dedifferentiation* (CDD, including eidetic imagery and synesthesia), and something to be termed *sensory-processing amplification* (SPA, to be found in hyperaesthesia, sensory-processing sensitivity, sensory defensiveness, and sensory over-responsivity). A variety of findings and anecdotal reports suggest that these processes are concomitants of psi and that psi and its concomitants co-vary from weak and temporary forms to strong forms and traits or even disorders. Tellegen and Atkinson conceptualized absorption as a trait marked by the proneness to experience episodes of total attention. Re-evaluating absorption, it is assumed that this trait is a weak form and strong forms include absorption as a trait marked by rather consistent total attention (to

be found, e.g., in cases of autism spectrum disorders) and absorption as a skill mastered through intensive focused attention meditation.

Psi, CDD, and SPA all result in experiences involving some kind of anomalous perception. Because attention moderates perception, in the information-processing model introduced here, absorption moderates the intensity of these experiences. It amplifies and dedifferentiates mental input (emotions, imagery, memories), psi input, and sensory input.

While strong forms of absorption are assumed to result rather consistently in strong forms of CDD leading to strong synergetic experiences as well as in strong forms of SPA leading to strong high-sensitivity-related experiences, this may not necessarily be the case for psi and paranormal experiences. A gatekeeper mechanism may inhibit psi input. It is hypothesized that the inhibition of this gatekeeper mechanism moderates the frequency of paranormal experiences. If psi input with personal meaning is subliminally perceived and captures attention bottom-up, the gatekeeper mechanism may be temporarily inhibited, resulting in a spontaneous paranormal experience (e.g., in a case of crisis psi), and a conscious one, too, given that absorption is strong. If the gatekeeper mechanism gets disintegrated and absorption is strong, psi input may reach constantly conscious perception (as can be found in some psychics), resulting in consistently conscious paranormal experiences.

Possible implications of this model are discussed.

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TESTING THE IMPLICIT PROCESSING HYPOTHESIS OF PRECOGNITIVE DREAM EXPERIENCE

MILAN VALÁŠEK, CAROLINE WATT, JENNY HUTTON, REBECCA NEILL, RACHEL NUTTALL, & GRACE RENWICK

We are grateful to the Perrott-Warrick Fund, which has made this research possible. Valášek is partly supported by the Parapsychological Association Research Endowment.

ABSTRACT: It has been proposed that experiences of putatively precognitive dreams might be a result of a person's picking up on subtle environmental cues without being aware of it and having an implicit inference based on these cues manifest itself in the person's dreams. Here we present two studies exploring the predictions of the implicit processing hypothesis of precognitive dream experience.

Study 1 investigated the relationship between implicit learning ability, transliminality, and precognitive dream belief and experience. Participants completed the Serial Reaction Time task, a widely-used method of assessing implicit learning, and a battery of items. We predicted a positive relationship between the variables. However, this prediction was not supported.

Study 2 tested the hypothesis that in the absence of a relationship between implicit processing and precognitive dream belief and experience, a difference in the ability to notice subtle cues explicitly might account for these beliefs and experiences. Participants completed a modified version of the flicker paradigm used in change blindness research. Their task was to detect a change in two stimuli presented in quick succession. If they failed to do so, they were asked to indicate a change or lack thereof using their "gut feeling." We predicted a negative relationship between the ability to detect explicitly changes and reported precognitive dream belief and experience. This relationship was not found in the data. There was also no relationship between precognitive dream belief and experience and performance on the "gut feeling" trials, thus further supporting the findings of Study 1.

Results and limitations are discussed and potential alternative implications of the implicit processing hypothesis for future research are identified.

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THE SHAREFIELD: A NOVEL APPROACH FOR FORCED-CHOICE GESP RESEARCH

Mario P. Varvoglis, Peter Bancel, Djohar Si Ahmed, Jean-Paul Bailly, & Céline Béguian

We would like to express our deep gratitude to the Bial Foundation for its support of the Sharefield project. We thank Annie Diot for her enthusiastic involvement, her critical spirit and positive contributions to the project. We also thank Sophie Kim for her melodious voice in the Relaxation procedure. Dr. Paul Smith generously granted permission to use images posted on his website www. rviewer.com. The Heartdrone music was composed by Dr. Harold Moses.

ABSTRACT: While the ganzfeld paradigm is still among the most reliable protocols in free-response GESP research, it is in the long term interest of our field to continue to explore alternative approaches that are more efficient in terms of data-collection rates. Both the ganzfeld and other free-response protocols involving noise reduction procedures, are time- and resource-intensive experimental approaches. Despite their respectable effect size, they are not well-suited for process oriented research—especially in a field of limited resources. This may account for the fact that an abundance of non-standard ganzfeld studies, that do not adhere closely to the original protocol, have emerged in the past few decades. It is argued here that a plausible alternative to the free-response/noise-reduction approach would be one using noise-reduction—or optimization—procedures—in a forced-choice context.

As shown by a recent meta-analysis, forced-choice studies, while yielding lower effect sizes, have produced positive results over the course of 70 years. While the trial effect sizes associated with this research is clearly inferior to that of free-response studies, the data collection rate is far higher, and replication rates are still adequate for process-oriented research. Above all, as argued in the present paper, a systematic introduction of participant optimization procedures may considerably improve forced-choice effect sizes. We thus present a novel approach for combining forced-choice protocols and participant optimization procedures, within an automated testing framework. A first study exploring this approach is reported, involving a dyadic-ESP or telepathy protocol named the Sharefield. We outline here some of its most salient characteristics.

No mentation, multiple trials. Unlike free-response approaches, individual trials are short, and involve no mentation period; a full experimental trial, including judging, is completed in two minutes. This allows for multiple trials during a 45-minute experimental session.

An immersive environment. Both participants wear an audiovisual head-mounted display (HMD) which immerses them in a slowly animated starfield and meditative soundtrack. This audiovisual background is present across trials, and across the different phases of each trial (instructions, sending/receiving and judging).

Symmetric participant roles. Participants alternate sender/receiver roles on a trial-by-trial basis; at the beginning of each trial, the software announces the participant's role on his/her screen and accordingly launches either sender or receiver tasks.

Simplified judging task and target sets. Compared to typical free-response studies, the participant's judging task here is relatively simple. Essentially, the percipient's ESP task is to sense whether the agent is experiencing a visually complex and stimulating photograph (randomly selected from an image pool) or a relatively neutral gray form, that remains the same throughout.

A training process and baseline condition. Participants in a Sharefield session find themselves in a cognitively complex situation—involving multiple trials, alternating sender/receiver roles, and multiple

phases within each trial (sending/receiving, judging, feedback, and inter-trial breaks). Furthermore, given the fully automated protocol, they go through the session without any guidance from the experimenter, while potentially in an altered state of consciousness. To better prepare them for all this, we decided to have participants first go through a training session that would familiarize them with the ESP tasks and phases of the protocol. We also conceived this training session as a way to collect data on participants' "baseline" psi performance, which could then be compared to their psi results under the optimization conditions. Thus, the participant pair first went through a 10-minute Non-Optimized Experience (NOE) session, that involved the basic ESP task (with alternating sender-receiver roles, judging, feedback, etc.), but no relaxation, immersive audiovisual displays, or HMD system (a standard computer monitor was used instead). They then went through a 45-minute Optimization Experience (OE) in which the monitor was replaced by the HMD, and the ESP tasks situated within relaxation suggestions and the immersive audiovisual environment.

We report here the results of the first Sharefield study. Its principal objective was to assess empirically the viability of the overall approach, and thus contribute to the development of future protocols. Nevertheless, we did formulate three formal hypotheses for this experiment: (I) the trial effect size for the OE condition would be statistically significant; (II) the trial effect size for the OE condition would be significantly superior to the NOE effect size; (III) the OE session effect size would be significantly superior to that established for the ganzfeld.

Twenty-five participant-pairs (50 participants) were run in the laboratory of the Institut Métapsychique International (IMI). Prior to arrival, each completed online versions of two questionnaires: the *Big Five Inventory*, measuring five personality dimensions (Extraversion; Agreeableness; Conscientiousness; Neuroticism; and Openness to Experience); and a questionnaire concerning participants' attitudes and experiences as related to psi phenomena, mental disciplines, and dreams and absorptive states. Upon arrival at the IMI, and following introductory procedures, participants were first run through the NOE session; then, following a brief pause, they went through the OE session. Finally, a half hour debrief allowed us to collect qualitative participant impressions concerning their experience of the Sharefield.

None of the three hypotheses were confirmed to a significant degree, although a near-significant trend was shown for Hypothesis II. Post-hoc analyses did produce some suggestive evidence that, in the OE condition, the null averaged trial results may have been due to high variability in scoring (i.e., hitting and missing), rather than a total absence of psi. In particular, we focused on three factors known to impact effect sizes in psi tasks (target quality, subject ability, and position effects) and, for each of these, applied two tests assessing scoring variability. We obtained statistically significant results in two of the six tests; by contrast, applying the identical test matrix to the NOE condition yielded no significant results. For the hit rate variability tests in the OE condition, we ran a Monte Carlo simulation to estimate the probability of finding two out of any of the six tests with P-values of .03 and .02, or less. The simulation yields a significant overall p-value of p = .012.

Post-session debriefings with participants allowed us to establish potential problems with the protocol, at least from an experiential perspective. In particular, over half the subjects reported considerable physical discomfort with the HMD system, and found the trial-by-trial hit/miss feedback stressful and distracting.

These quantitative and qualitative data will be quite useful in terms of our long-term objective, which is to develop a viable tool for process-oriented psi research. Our modular software approach facilitates implementation of protocol improvements (e.g., with respect to the judging and feedback procedures). More generally, the software allows the creation of protocols addressing a range of research issues. In this context we intend to quickly develop single-subject versions of the software, geared toward clairvoyance or precognition protocols.

Above all, we are encouraged by the successful use of optimization procedures and multiple-trial psi tasks within an automated protocol. The optimization procedures fluidly integrated into all stages of the experimental trials, and participants' reports during debriefings suggest that the relatively sustained

rhythm of 20 trials/session did not perturb their experience of the OE. Indeed, nearly all under-estimated the duration of their sessions (a sign that they found the experience engaging rather than tedious) and a clear majority expressed interest in returning for more sessions. This suggests that the general approach is sound, and has potential as a long-term tool for process-oriented research.

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PSYCHOLOGICAL FACTORS IN PRECOGNITIVE DREAM EXPERIENCES: THE ROLE OF PARANORMAL BELIEF, SELECTIVE RECALL AND PROPENSITY TO FIND CORRESPONDENCES

CAROLINE WATT, NATALIE ASHLEY, JACK GILLETT, MEGAN HALEWOOD, & REBECCA HANSON

We are grateful to the Perrott-Warrick Fund, which has made this research possible. We would also like to thank our research participants for contributing to these studies, Dr. Scott Madey for kindly granting permission to use and adapt his study materials, and Milan Valášek for his helpful comments on an earlier draft.

ABSTRACT: We report two studies into psychological factors that have been proposed to contribute to the experience of having had a precognitive dream.

Study 1 investigated the role of selective recall in precognitive dream experiences. Participants read two diaries, one purporting to be a dream diary, and one purporting to be a diary of events in the dreamer's life. The events either confirmed or disconfirmed the reported dreams. After undertaking a distractor task, participants were given a recall test. As predicted, a significantly greater number of confirmed than disconfirmed dream-event pairs were recalled. Study 1 also investigated whether paranormal belief moderated the selective recall effect, but no relationship was found.

Study 2 investigated the hypothesis that paranormal beliefs may in part arise from a propensity to associate unrelated events. Participants undertook two tasks, one "contextual" that was designed to simulate precognitive dream experiences in which dreams and events are seen to coincide, and one "neutral." For the contextual task, participants were asked to find correspondences between randomly-paired world news articles taken from a public broadcaster's online archive, and dream reports taken from an online dreambank. The neutral associations task invited participants to produce a noun that would provide an associative connection between two unrelated nouns. As predicted, paranormal belief and precognitive dream belief were found to correlate significantly with ability to find correspondences between the dreams and news event pairs. Contrary to prediction, no relationship was found between belief and performance on the neutral association task.

Together, these studies illustrate the operation of mechanisms that, when present in individuals having dreams and experiencing subsequent events, would tend to lead to an increase in the number of experiences of a seeming coincidence between dreams and events that can be interpreted as precognitive.

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PANEL: ALTERATIONS OF CONSCIOUSNESS AND PSI

CHAIR: ETZEL CARDEÑA

Throughout history, ostensible psi phenomena have been related to qualitatively distinct states of consciousness or procedures associated with them, including meditation, dreams, and states of possession by spiritual beings. Although the research program of J. B. Rhine did little to evaluate this reputed association, various studies, found that some altered states of consciousness did seem to increase psi abilities in controlled studies, a conclusion that was generally held in a more recent review by Luke. This general idea was a catalyst for the development of one of the most successful psi research paradigms, the ganzfeld, which homogenizes sensory stimulations and, presumably, affects the state of consciousness of various participants. An unfortunate side effect of the success of the ganzfeld paradigm has been the neglect of systematic research on other procedures and states, and psi research in general has failed to keep up with developments in the study of consciousness, including appropriate measures to use and multivariate analyses. In this panel we will center on three techniques to affect consciousness and their effects on psi performance: hypnosis, meditation, and psychedelic drugs. We will discuss what has been found so far and, as importantly, what additional questions remain to be investigated systematically.

HYPNOSIS, DISSOCIATION, AND PSI

Etzel Cardeña

ABSTRACT: Dissociation has been related to psi functioning in different ways: as the lack of integration between conscious and non-conscious processes (implicit measures of psi); the psi ability of some mediums who, by definition, experience a dissociated identity; and the correlation between dissociation as a trait and reports of ostensible psi experiences. There have also been anecdotal reports of psi abilities among people diagnosed with dissociative identity disorder (erstwhile known as "multiple personality disorder"). However, there has been no concerted attempt to evaluate whether dissociation as a trait correlates with psi performance in controlled experiments. Similarly, from its inception, mesmerism and later hypnosis was related to reports of psi abilities. Although many of these reports could nowadays be explained away through deficient experimental controls, some remain a challenge for skeptical interpretations. More recent meta-analyses continue to find that hypnotic conditions seem to increase psi performance, although the mechanisms through which this may happen are debatable. We are attempting to elucidate how dissociation and hypnosis may relate to psi in controlled protocols. So far, the pattern seems to point out to a complex interaction between these variables, experienced alterations of consciousness, and other variables. Finding personality traits and consciousness states that facilitate psi performance should help in the search for the elusive conditions that may produce more reliable psi results.

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PSI AND PSYCHOACTIVE SUBSTANCES

DAVID LUKE

ABSTRACT: This presentation will discuss the relationship between psychoactive substances and psi, although focusing mainly on so-called extrasensory perception (ESP)—telepathy, precognition, and clair-voyance—rather than psychokinesis (PK), because this latter phenomenon suffers from a paucity of research in relation to psychopharmacological agents. The review is based on research borrowed widely,

but by no means exhaustively, from parapsychology as well as transpersonal studies, anthropology, ethnobotany, phytochemistry, psychiatry, psychotherapy, psychopharmacology, and neurobiology, particularly neurochemistry. The overview will cover: (a) field reports of intentional and spontaneous phenomena incorporating anthropological, historical and clinical cases, and personal accounts, (b) surveys of paranormal belief and experience in relation to substance use, (c) experimental research on drugs and psi, and (d) a methodological critique of the experimental research with recommendations for further work.

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MEDITATION AND PSI: RESEARCH REVIEW

SERENA M. RONEY-DOUGAL

ABSTRACT: During the 1970s interest in maximizing conscious awareness of psychic information focused on the effects of altered states of consciousness. Part of this program of research investigated meditation as a state of consciousness that was potentially psi-conducive. Sixteen studies were run, with mixed results, that Honorton (1977) found gave a highly significant finding of improvement in psi scoring after meditation ($p = 6 \times 10^{-12}$). Between 1978–1992 there were six more studies, which Schmeidler summarized with the conclusion that meditation may be psi-conducive when the meditators accept the testing procedure. Most of the research used beginners in meditation and looked at the effect of meditation on receptive psi using both forced-choice and free-response methodologies. More recent research has also looked at the effect of meditation on active psi, such as a study by Radin et al. looking at the effect of mental intention on the double-slit experiment in quantum physics, which found that meditators affect the outcome. One series of research looked at the effect of distant influence on quality of meditation. Schmidt (2012) did a meta-analysis of the twelve studies run between 1993 and 2006 again finding significant results (p = .009). Some of this research was done with Western meditators and some in Bali, this being the first time that a series of research studies were done with non-Western participants. There were clear cultural differences, with Eastern meditators showing far less distraction. Four studies run between 2002 and 2008 looked at the difference between beginners and advanced meditators in India, working both with Yogis and Tibetan Buddhist monks. The results indicated that years of practice correlated with increasing levels of psi scoring. Another recent study, working with advanced meditators, looked at the effect of meditation on presentiment (the unconscious physiological response to a forthcoming stimulus), again with significant results.

Overall though, research with meditators has been fairly sparse despite the clear effect of meditation on both psi awareness and psi influence. However, a huge variety of types of meditation have been used and only one preliminary attempt has been made to compare different types of meditation. It is necessary now to start exploring the characteristics of meditation that makes it psi-conducive. Nor have the cultural differences been explored—is this another effect of belief or some other characteristic of meditation? This is a promising line of research that needs far more attention.

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PANEL: THE CONTRIBUTIONS OF ITALIAN PARAPSYCHOLOGISTS TO INTERNATIONAL PARAPSYCHOLOGY

CHAIR: ALEJANDRO PARRA

Interest in psychic phenomena in Italy has a long history. A list of renowned Italian psychical researchers includes Cesare Lombroso and Enrico Morselli, known for their studies of medium Eusapia Palladino and their psychological and psychiatrically-oriented observations of mediumship, as well as such figures as Ferdinando Cazzamalli, Giovanni Battista Ermacora, and William Mackenzie, whose research and theories of psychic phenomena were important developments in the history of parapsychology in Italy. However, none of them achieved the fame, published so much, or explored so many diverse areas of the field as Ernesto Bozzano, considered by Nandor Fodor to be "the dean of Italian psychical researchers and spiritualists."

In Italy, the coordinated planned study of Italian parapsychology started in November 1901, when Angelo Marzorati founded the *Società di Studi Psichici* (Society of Psychical Studies) in Milan, and started a series of experimental studies with the mediums Charles Bailey, Augusto Politi, Eusapia Palladino, and Lucia Sordi. Among the members, there were such well-known personalities as the anthropologist, psychiatrist and criminologist Cesare Lombroso; the physiologist Filippo Bottazzi; and the neuropsychiatrist Enrico Morselli, whose book *Psicologia e Spiritismo* (*Psychology and Spiritism*) is certainly a classic in our field. We must also cite Luigi Barzini, Antonio Fogazzaro, Luigi Capuana, Ernesto Bozzano, Antonio Bruers, William Mackenzie, and Rocco Santoliquido who were interested in parapsychology at different levels.

In Rome, in 1937, four well-known scholars—Ferdinando Cazzamalli, Luigi Romolo Sanguineti, Giovanni Schepis and Emilio Servadio—founded the Società Italiana di Metapsichica (Italian Society of Metapsychics), which, on January 23rd, 1941, was recognized by a State Government decree. In 1946, after the war, a section of Italian Society of Metapsychics led by Professor Cazzamalli left the Society and formed the present Associazione Italiana Scientifica di Metapsichica (AISM, Italian Scientific Association of Metapsychics) in Milan. Later on the Società Italiana di Metapsichica changed its name to Società Italiana di Parapsicologia, using the term "parapsychology" instead of the more traditional "metapsychics." In 1948, the Centro Studi Parapsicologici (Center for Parapsychological Studies) was established in Bologna. The founders were Dr. Buscaroli, Dr. Marabini and Dr. Cassoli. At first it was a section of the AISM of Milan; then it led an autonomous life asserting itself as the most active center, particularly in the experimental field.

In 1959 in Naples, the magazine *Uomini e Idee* (Men and Ideas) started publication. In 1965 it was replaced by *Informazioni di Parapsicologia* (News on Parapsychology), as an organ of the Centro Italiano di Parapsicologia (Italian Center of Parapsychology), a new association that joined the other three already in existence. At the end of 1968 there was established in Pavia the Centro Italiano di Studi Metapsichici (Italian Center of Metapsychic Studies), with a more limited program: the organization and study of psychic healers in Italy. Finally, in Rome, in 1960 the Facoltà di Scienze Psichiche e Psicologiche (Faculty of Psychical and Psychological Sciences) of the Academia Tiberina was established.

This concludes the historical survey of the associations interested in parapsychology in Italy. I think it is appropriate now to present an idea of the work of each of these associations, and of the trends, too often not very clearly stated, of the association itself or its members.

Parapsychological Abstracts

PARAPSYCHOLOGY IN ITALY: AN OVERVIEW

Massimo Biondi

ABSTRACT: As well as in other European countries, in Italy psychical research sprang from an interest in hypnosis and the phenomena that can be obtained in hypnotic trance. After some isolated antecedents around the half of the 19th century, it was in 1885–1886 that some neuro-psychiatrists began to observe and experiment with such unorthodox topics as the reversal of the states of mind because of magnets and the "transmission of the will," as showed by "artists" in theaters. These beginnings were completely autonomous from the foundation of the Society for Psychical Research (SPR) in 1882 and from the activities in the field of Spiritism. However, within a few years, most of the studies of, and interest in occult matters applied to the mediumship of Eusapia Palladino, and in the subsequent 30 years, this was the issue most discussed, debated and experimented on (with committees, instruments, rigorously planned tests) by a lot of men of science and medicine. It should be noted that those who dealt with Eusapia were split between supporters of the genuineness of her supernormal powers (and of the intervention of the spirits at her séances) and critics, who believed that the woman was cheating, if not always, at least very often. The question remains unresolved.

Only a few of the "psychical researchers" of that time broadened their studies to embrace other kinds of phenomena. Between these, we have to remember Cesare Lombroso (telepathy, poltergeist/hauntings), Enrico Morselli (telepathy, mediumistic phenomena with Eusapia Palladino and other people), Giovanni Battista Ermacora (all psi phenomena, poltergeists). Ermacora also founded a journal, on the example of the *Proceedings of the Society for Psychical Research*, and was the first one to carry systematically in Italy the interests, the debates, and the criteria of analysis of the SPR. In a few years after his death (1898), however, his work was dispersed and none had the interest or the skill to resume it.

From the second decade of the 20th century, with the decline of the activities of Eusapia Palladino, new topics and new men did emerge in Italian psychical research. The biologist and philosopher William Mackenzie examined the "clever horses" of Elberfeld and other animals that seemed to possess the ability to communicate with humans. Mackenzie also studied a few mediumistic cases. The physician Rocco Santoliquido, head of the Italian Administration for Health and Medicine, was involved in a strange case of mental mediumship, after which he became interested in psychical research, so that in subsequent years he was instrumental in strengthening the spiritistic monthly journal, Luce e Ombra (Light and Shadow), and in the creation of the Institut Métapsychique International in France. The psychiatrist Ferdinando Cazzamalli experimented with various kinds of "energetic" phenomena, like cases of psychokinesis, dowsing, and the presumed effects of the laying on of hands on the sthenometer of Paul Joire, and was convinced that he had found evidence that electromagnetic brain waves coincided with supernormal activities of the mind. From a historical perspective, Cazzamalli was lucky to have founded (thanks to aid from Fascist authorities) a Society, the first one of this kind in Italy, that was not only active for decades in promoting and spreading a good public opinion of many parapsychological themes, but also attracted to this field many personalities and students coming from various areas of the Italian main culture: between them, a lot of physicists and physicians, and such eminent figures as Emilio Servadio, Ernesto de Martino, Alighiero Naddeo, Vincenzo Nestler and others. Almost all of these men conducted field investigations, and experimental research on different "psychical" topics.

After World War II, other societies similar to Cazzamalli's arose in different towns of Italy, and research and other types of studies were conducted almost everywhere. Of main relevance were, however, the works done in Rome (Naddeo, Nestler etc.) and Bologna (Piero Cassoli, Enrico Marabini), which consisted of analyses of spontaneous cases like hauntings, telepathic dreams, religious apparitions and other phenomena (weeping statues of the Virgin Mary and the like); tests with psychics and "spiritual healers"; and experiments on ESP and PK. These men often used procedures somewhat different from those used by Rhine and his followers, such as representation of animated scenes, new methods to re-submit targets

to subjects in ESP tests, among others. Continuous in those decades (as in the last twenty years of the 19th century) a number of journalists have also been active, often biased toward a spiritistic view of the discussed phenomena, but open to all the topics of psychical research. Their writings in the main newspapers and magazines, and ultimately their participation in radio and television programs, greatly contributed to the dissemination of information on parapsychology. The birth and activities of a committee of skeptics, similar to the American CSICOP, around the end of the 20th century, produced in Italy a clear cutback of space for and interest in parapsychology and the activities of the parapsychologists. As a result of this and other social crises, at the beginning of the 21st century, the research (observations, surveys, experiments) and discussions (conferences, seminars, courses) in the field of parapsychology declined significantly, Today this activity is practiced with difficulty and by a small number of people.

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THREE IMPORTANT ITALIAN PARAPSYCHOLOGICAL PERSONALITIES OF THE FORTIES AND FIFTIES OF THE PAST CENTURY

Giulio Caratelli

ABSTRACT: There are three personalities, serving inside the Società Italiana of Metapsichica (SIM), founded in 1937 and from 1955 called the Società Italiana of Parapsicologia (SIP)—nowadays no longer active—who are worthy of a renewed consideration for their constant engagement in the investigation of paranormal phenomena, their proposals, and the specific contributions they made to the parapsychological community. Moreover their work takes place in a period that is considered very important for that organization of research, that is the years between the 1940s and the 1950s. These individuals are Tito Alippi (1870–1959), Giovanni Schepis (1894–1963), and Francesco Egidi (1880–1969).

Tito Alippi, a physicist, tried to address the problem of the possible physical and material foundations of some paranormal manifestations. He stressed the need not to interrupt the investigation of great physical mediumship in favor of the so-called "statistical-quantitative" approach. The ability to find reliable mediums to investigate is often not considered favorably, as such mediums were not easily an object of experimental research.

Giovanni Schepis, a statistician, mainly studied in an in-depth way the different topics and methodological levels involved in the the investigation of paranormal manifestations, mainly applying statistics to the results of laboratory experimental tests.

Francesco Egidi, a man of letters, studied mediums in-depth. He was particularly interested in Daniel Dunglas Home and the Roman mediums Vincenzo Sassaroli and Augusto Politi. Egidi was also involved in the relations that can exist between painting and parapsychology, asking himself about what are often called "modified states of consciousness" in artists, researching the features of produced works, and the possibility that perceptions of other realities may be determined by internal and individual stimuli towards artistic work.

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THE BOLOGNA CENTER FOR PARAPSYCHOLOGICAL STUDIES (CSP): RESEARCH BETWEEN 1970 AND 1985

FERDINANDO BERSANI

ABSTRACT: In this talk I will try to summarize the research activity carried out by the CSP between 1970 and 1985, mainly focusing on the work in which I was directly involved, which is a significant part of the entire activity. Unfortunately the results of these studies were only published in Italian, and thus are practically unknown to the international community of parapsychologists, except their mention in a book on the history of parapsychology by John Beloff.

In the beginning of the Seventies most of the research was directed toward the observation of spontaneous cases, including psychics; one of the most gifted was Luisa Godicini, an exceptional Italian clairvoyant. In the same period, many well-known psychic healers were studied by Piero Cassoli, who reported his medical observations and results in a seminal book on this topic. Another extraordinary case studied by the CSP was that of the mediumnistic painter Giuseppe Lanzillo, who produced something like 230 paintings of exceptional quality in a restricted interval of time (about 12–14 months) while in a nocturnal trance-like state, and before stopping as suddenly as he had started. Also at the beginning of the Seventies, the Raudive Voices phenomenon (or "metaphonia") attracted the CSP's attention, it became popular in Italy and among many people, usually individuals who had lost children or other loved ones, then wrote books about or otherwise publicized their experiences.

A group of the members of the CSP, including myself, were deeply investigating the phenomenon. We tried to obtain anomalous voices with different techniques and to simulate them in different ways. After about a decade of observations and experiments, the most unusual conclusion was that the phenomenon could be explained in terms of psycho-acoustic illusions, a sort of acoustic "Rorshach inkblots." In the middle of the Seventies, the self-proclaimed psychic star Uri Geller came upon the scene and became popular all over the world. We had a few informal meetings with him in which we tried to make non-systematic observations, some of them were very exciting at first sight. But the possibility of a systematic study was offered by a number of children (the so called "mini-Gellers"), who, watching Uri Geller on TV, started to imitate him, obtaining apparently paranormal metal bending and other anomalous effects. In particular, a small group of the CSP (myself as a physicist, Aldo Martelli as a chemist, Angela Peduto as a medical student, Anna Bononcini as a psychologist) followed four mini-Gellers, three of them for at least five to six years, making observations both in spontaneous situations and in systematic laboratory experiments.

A critical report summarizing these numerous experiments was published in *Psychoenergetics:* The Journal of Psychophysical Systems in 1983. We considered these experiments (together with those performed in the UK by John Hasted) to be the most accurate research on this kind of phenomenon. At the end of the Seventies, a systematic study was conducted by Bersani and Peduto on mediumnistic painters, which was the basis for a University thesis that reported an attempt to compare this kind of artistic production with that of schizophrenics. Other studies were also conducted in this period on different cases of poltergeists. Except for some isolated reports in Italian journals and some papers in CSP's publications, most part of these investigations were published in internal reports.

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THEORETICAL AND EXPERIMENTAL CONTRIBUTIONS AT THE LEVEL OF PUBLIC AND PRIVATE INSTITUTIONS

PATRIZIO TRESSOLDI

ABSTRACT: I will present a description of the status of theoretical and experimental contributions at the level of public and private institutions now active in Italy. At present there are only three people working in public institutions and universities: one at the Dipartimento di Psicologia Generale (Department of General Psychology) at Padua University, one at the Dipartimento di Fisica (Department of Physics) at Bologna University, and a third at the Dipartimento delle Scienze Biologiche (Department of Biological Sciences) at Naples University. In contrast, there are at least four independent private groups with an interest in parapsychology now active. What impact does this have on their scientific activity in mainstream science and on informing lay people?

The private groups play an important role in the dissemination of information related to different parapsychological arguments, allowing them the possibility to meet and exchange information with people who have the same interests. However, this level of activity does not contaminate in any way the scientific community and the media that disseminates scientific findings. Simply put, it flows as it was in a parallel world.

At the level of mainstream science the situation is similar to all European countries, except England. That is, there are no formal courses for undergraduate or graduate students and the word "parapsychology" must be banned or used with much care so as to prevent aversive reactions, and mental and emotional associations with pseudoscience. This well-known situation is comprised of a combination of multiple negative components, that, in my opinion, are mainly caused by theoretical and experimental parapsychologists, the rest being a result of the dominant theoretical paradigms related to the functioning of the human mind.

Which problems are caused by active parapsychologists? I see basically the following: That their scientific contributions are almost exclusively disseminated by specialized journals with restricted accessibility. The consequences of this is that they are simply ignored (i.e., "We originally set out to survey the 12 studies referenced in Storm et al. [2010] that yielded z scores over 2.0. Unfortunately, it is difficult to obtain these studies as they are neither carried by many academic institutions nor available through interlibrary loan." Personal communication, Rouder, Morey and Province, 2013). The solutions are: (a) Specialized journals must be open access; (b) Parapsychologists must disseminate their findings by using mainstream journals preferring those with open access. The second solution will force parapsychologists to move mainstream science, psychology in particular, towards their theoretical models and experimental protocols instead of waiting for the contrary. In my view, this is the only strategy that could break the wall of prejudice against the types of phenomena that apparently violate commonly held assumptions about the functioning of the mind.

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INVITED ADDRESS: WHERE DOES CONSCIOUSNESS COME FROM?

SIMON THORPE

ABSTRACT: We all know what it is to be conscious. But how did this consciousness appear during evolution? The standard scientific view is that our consciousness results from the activity of the billions of neurons in our brains. If that is the case, there must have been a point in evolution when nervous systems because sufficiently sophisticated to allow consciousness and we can ask when this point occurred. Is it

limited to primates? Or mammals? Or vertebrates?

These are tricky questions. But another problem is inherent in the idea that consciousness can be understood in the standard information-processing model common to much scientific thinking. According to this view, consciousness allows some specific functions to be implemented, functions that can be modeled in software simulations. But a major problem with that idea is that if those functional explanations are true, why are our brains not just sophisticated computers? Why do we need to be conscious, if all that is happening is stuff that can be run in software?

In this talk I will discuss some of the reasons why I believe that even hard-nosed materialists will at some point be forced to admit that there is more to consciousness than just neuronal activity. Recent developments in psi research seem to be making this change more and more inevitable.

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