RESEARCH

The Daniel Experiment: Sitter Group Contributions with Field RNG and MESA Environmental Recordings

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Abstract-In an effort to further explore ostensible macroscopic psychokinesis (macro-PK) effects like those previously reported by Batcheldor (1966), Bourgeois (1994), Owen and Sparrow (1976), and Ullman (2001) in a sitter group setting, the first author designed and conducted a series of fifteen experimental sessions in which sitters claiming exceptional abilities attempted to generate a pseudo-spirit named "Daniel," to whom physical phenomena were attributed. To explore possible physical correlates of macro-PK, two approaches to measurement were utilized. In the first, sample data from a local random number generator (RNG) continuously running as part of the Global Consciousness Project were extracted and examined for statistical deviations from randomness occurring in conjunction with the sitter group sessions. In the second, the Multi-Energy Sensor Array (MESA) was used to collect onsite environmental data during one of the sessions. While displays of ostensible macro-PK were observed during several of the sitter group sessions, the RNG data did not show a significant overall correlation with the sessions. The MESA data indicated notable drops in infrared and visual light, as well as changes in DC magnetic field strength, that are comparable to those observed in field studies of haunts.

Keywords: sitter groups—macroscopic psychokinesis (macro-PK)—random number generator (RNG)—Multi-Energy Sensor Array (MESA)

Introduction

Spontaneous case reports within the parapsychological and psychical research literature suggest that instances of ostensible macroscopic psycho-

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kinesis (macro-PK)—that is, overt displays of apparent mind–matter interaction manifesting on the level of human perception, without the need for statistical evaluation—tend to be rather scarce. Most accounts of ostensible macro-PK by psychical researchers were presented within the context of their studies of physical mediums who claimed the ability to move physical objects and produce materializations in group situations.¹ While the psychical researchers found many physical mediums to be fraudulent, they also found a certain few, such as D. D. Home, Eusapia Palladino, and Rudi Schneider, who were apparently able to produce macro-PK effects under (semi-)controlled conditions (for reviews, see Fielding, 1963, Gauld, 1968, Ch. 9 & 10, Gregory, 1985, Roll, 1982, Sect. 6.2).

Accounts of macro-PK are equally rare in modern parapsychological studies. In surveying her extensive case collection of spontaneous psi experiences, L. E. Rhine (1963) found only 178 cases of macro-PK, contrasted against the more than 10,000 cases she had of extrasensory perception. Similarly, cases of recurrent spontaneous psychokinesis (RSPK, or "poltergeist"), which involve displays of macro-PK that tend to recur sporadically around a certain individual over a brief period of time, are few in number. A survey by Roll (1977) of the parapsychological and psychical research literature found only 116 reported RSPK cases in the period between 1612 and 1974.

The apparent rarity of macro-PK has often made it, and the conditions under which it occurs, difficult to observe and document. As a way to possibly overcome this difficulty, some researchers have formed a sitter group, which may be described as a small group of individuals who meet on a regular basis under semi-informal social conditions with the intent of producing brief, spontaneous displays of macro-PK. Sitter groups that were apparently able to produce ostensible macro-PK effects with varying degrees of success have been described previously by Batcheldor (1966), Bourgeois (1994), Brookes-Smith (1973), Brookes-Smith and Hunt (1970), Campbell and Murray (2007), Owen and Sparrow (1976), Storm and Mitchell (2003), and Ullman (2001). In this paper, we report an independent attempt to observe and explore macro-PK effects similar to those described by the previous researchers in a sitter group setting. In addition, we report an initial attempt to explore the possible physical correlates of macro-PK using data collected from a local field random number generator (RNG) and a system of physical instruments known as the Multi-Energy Sensor Array (MESA).

Background

The conceptual framework for a sitter group finds its basis in the traditional séance setting that was commonplace during the height of the Spiritualism movement of the mid to late 19th century. This setting was often characterized

by a group of Spiritualist enthusiasts gathered in a dark or dimly lit space to witness various kinds of apparent physical phenomena, such as table and object movements, percussive sounds (e.g., knocks or raps), cold breezes, and materializations. These phenomena were usually attributed to the claimed abilities of a physical medium present among the group, or to discarnate spirits who were believed to communicate with the group through percussive sounds or through an entranced mental medium.

There are generally two types of sitter group. The first type attempts to closely emulate the traditional séance setting, which may include adopting some of its spiritualistic assumptions (e.g., Bourgeois, 1994, Storm & Mitchell, 2003, Ullman, 2001). Perhaps the most recognized example is the Philip group, formed and led by Iris Owen in 1973. According to Owen and Sparrow (1976), the group, composed of members of the Toronto Society for Psychical Research, had observed knockings, rappings, and table movements that were attributed to "Philip," a fictitious spirit invented by the group as a way to emulate the practice of spirit communication during séances, as well as to reduce the possible inhibiting effects of ownership resistance (discussed below). The second type may seek to develop conditions resembling the séance setting, but does not adopt spiritualistic assumptions, instead recognizing that any apparent displays of macro-PK could be due to the latent PK abilities of the group members. The groups formed by Batcheldor (1966), Brookes-Smith (1973), and Brookes-Smith and Hunt (1970) serve as examples of this second type of sitter group.

Batcheldor (1984) determined that there are two possible factors that may inhibit the production of macro-PK in a sitter group setting: ownership resistance and witness inhibition. Ownership resistance refers to the reluctance of individuals to acknowledge that they may possess the ability to produce macro-PK. Witness inhibition refers to the initial response of surprise, shock, or fear expressed by individuals that tends to accompany the first display of apparent macro-PK. Batcheldor suggests that the two factors may relate to the fear of unknown and uncontrollable phenomena, and that this may lead to emotional resistance to the phenomena by group members.

In order to minimize the possible effects of these two factors, some sitter groups may attempt to circumvent any feelings of fear or personal responsibility among the group members by inventing an imaginary "pseudo-spirit" to whom they could attribute any ostensible macro-PK occurrences (e.g., Bourgeois, 1994, Campbell & Murray, 2007, Owen & Sparrow, 1976, Storm & Mitchell, 2003). Alternatively, Batcheldor (1984) suggested that a social atmosphere characterized by plenty of noise, joking, singing, and casual conversation may provide a mental diversion from inhibiting feelings and thoughts among the group members, in addition to promoting social cohesion. Brookes-

Smith (1973) further suggested that resistance to macro-PK effects may be reduced through a method of designated cheating. This involves anonymously designating a member of the group to initially create spurious effects at random until seemingly genuine effects began occurring. This is meant to serve in providing some degree of relief and reassurance to the group members, in addition to promoting expectation and momentary belief in the occurrence of genuine effects.

On the basis of the previous studies, the sitter group described in the present study was intended to be a group of the first type, modeled primarily after the Philip group (Owen & Sparrow, 1976) and guided by the suggestions of Batcheldor (1984) and Brookes-Smith (1973) in producing conditions that may be PK-facilitative. However, unlike in the previous studies, the present sitter group largely comprised individuals who claimed varying levels of psychic, mediumship, or healing ability.

Macro-PK Effects and Field RNG

Sitter group settings may be akin to the kind of group situations that are seemingly conducive to possible PK-related "field consciousness" effects (e.g., Nelson, Bradish, Dobyns, Dunne, & Jahn, 1996, Nelson, Jahn, Dunne, Dobyns, & Bradish, 1998), in that they may promote a sense of social group "resonance" or "coherence" through unified group activities (e.g., group meditation, focused group concentration) and shared group experiences (e.g., laughter and excitement) that are reported as possibly being conducive to macro-PK effects in the sitter group setting (e.g., Batcheldor, 1984, Bourgeois, 1994). In addition, the results of two RNG-based PK studies (Dunne, 1991, Honorton & Barksdale, 1972) suggest that focused intention by two or more individuals can produce randomness deviations in a target RNG, which at times may be of a slightly higher magnitude than individual intentions (Dunne, 1991). On this basis, we might hypothesize that if a form of collective intention or concentration is developed among group members in order to elicit physical effects, then this collective intention or concentration might affect a local RNG to a subtle degree, even if no overt physical effects are witnessed.

A small amount of evidence suggests that some PK effects are not limited by the spatial distance between the PK subject and the target RNG, with randomness deviations in the RNG output occurring even when subject and RNG are separated by distances of one to nearly 9,000 miles (Dunne & Jahn, 1992). Some field RNG studies of both local (Hagel & Tschapke, 2004) and global events (Nelson, 2001) also seem to suggest this possibility. The findings of a natural study of group "field consciousness" effects (Nelson, 1997) further suggest that such effects may extend to the surrounding physical and atmospheric environment to some degree. It was thought on the basis of these findings that it might be feasible to explore possible sitter group PK effects even on a distant, but local, RNG.

Currently, only four studies have explored possible field RNG-related effects in relation to macro-PK and spirit-related phenomena. During a field investigation of an allegedly haunted Manhattan high-rise building, Maher and Hansen (1992) had collected random event data using a portable RNG system. They found a weakly suggestive (p = .086) difference in variance between data from reported haunt sites and data from control sites. To explore the physical correlates of apparent RSPK disturbances occurring in the home of a family in the Dutch village of Druten (Gerding, Wezelman, & Bierman, 1997), Bierman (1996) installed a continuously running field RNG in the home. Analysis of data taken in conjunction with RSPK events reported by the family indicated a significant deviation from standard randomness in the negative (psi-missing) direction, suggesting that the occurrences were associated with an increase in random noise. As part of a series of field RNG explorations, Nelson, Jahn, Dunne, Dobyns, & Bradish (1998:439, 442) collected RNG data during four channeling sessions in which group members purportedly attempted to channel an intelligent spirit entity named "Samuel." The session data were at chance overall, although at least one session produced an individually significant result (p = .002). Radin and Rebman (1996) utilized an RNG as part of a study of possible physical correlates of apparitional experiences. They found a weakly suggestive result (p = .07) in the RNG's output in relation to subject sessions. These explorations offer preliminary suggestion that RNG correlates of macro-PK may be worthy of further study, as this may help to indicate whether macro-PK and microscopic psychokinesis (micro-PK) share any similar characteristics, or whether they might simply be two different facets of the same phenomenon. The study of RNG correlates of macro-PK may also be helpful in determining whether RNG studies of macro-PK in relation to apparitional and haunting phenomena might be worthy of effort.

On the basis of these findings, the present study explored the potential of the sitter group sessions correlating with the activity of a distant, yet local field RNG operating as part of the Global Consciousness Project (Bancel & Nelson, 2008, Nelson, 2001).

Macro-PK Effects and Environmental Variables

An issue that remains relatively unexplored is whether some of the phenomena reported in sitter group settings (e.g., object movements, percussive sounds, and localized changes in temperature) are purely subjective, or whether they could have an actual physical correlate. To date, one of the only preliminary efforts to explore this issue was made by Campbell and Murray (2007), who collected DC magnetic field, temperature, and humidity data during a series of

17 sitter group sessions with an imaginary pseudo-spirit. During two of their sessions, a decrease in temperature of about 0.4 degrees was noted, as well as "large peaks" in magnetic field strength (Campbell & Murray, 2007:190). Both changes reportedly occurred in conjunction with questions addressed to the pseudo-spirit, and were unable to be artificially reproduced by the group through breathing or movement. We made a further preliminary effort to explore this issue by utilizing the Multi-Energy Sensory Array (MESA) during one of the sitter group sessions reported here.

MESA is an eight-channel computer system that was designed to gather and record data relating to six physical variables in the local environment (infrared light, ultraviolet light, visible light, seismic vibration, AC magnetic fields, and DC magnetic fields) (Harte, Black, & Hollinshead, 1999). It has been previously used in field applications to explore the possible physical correlates of the phenomena reported at allegedly haunted sites (e.g., Harte, Black, Hollinshead, & Mitchell, 2001).

Hypotheses

Three main hypotheses were explored in this study:

- H1. Guided by the methods used and the suggestions offered by previous researchers, it was predicted that the present sitter group would be successful in reproducing at least some of the phenomena reported in previous sitter group research.
- H2. It was predicted that the activity during the sitter group sessions would show a positive correlation with the activity of a local field RNG, as indicated by a significantly positive (i.e. upward) deviation from standard randomness in the RNG data collected in conjunction with the sessions.
- H3. It was predicted that, for the single session in which the local environment was monitored using MESA, any physical phenomena observed during the session would correlate with one or more of the eight physical variables measured by MESA, as indicated by a notable change recorded from one or more of the variable measures.

Method

Experimenters

M.W., who was the principal experimenter in the study, designed and conducted all of the sitter group sessions, kept a log of each individual session, and communicated information regarding the session dates and activities to coauthors B.J.W. and T.M.H. to coordinate periods of physical measurement.

B.J.W. gathered and analyzed the field RNG data for each sitter group session. He was not present during any of the sessions.

T.M.H. transported, deployed, and operated MESA during the single sitter group session in which it was used (Session #13), and he conducted the analysis of the resulting data. He was present only for the single session in which MESA was utilized.

W.G.R. served as the supervising parapsychologist for the present study, and acted as a consultant. He was not present during any of the sitter group sessions.

Sitter Group Participants

Participants in the sitter group were recruited through flyers distributed in a New Age bookstore, advertisements in a local newszine, and word of mouth in two local Spiritualist churches. With the exception of two individuals who were recruited through the bookstore, all of the participants were acquainted with each other prior to the study, either through shared classes or church services. In order to encourage regular participation and discourage attempts at cheating (see the Sitter Group Procedure section), participants who attended ten or more of the fifteen total sessions were each paid a modest sum for their participation following the completion of the final session.

In addition to author M.W., there were nine other regular participants in the sitter group (participant initials are pseudonyms):

T.G. is a 65-year-old male who is an ordained Spiritualist minister.

E.P. is a 45-year-old female who is also an ordained Spiritualist minister.

M.C., B.L., and R.H. are a 54-year-old female, a 25-year-old male, and a 38-year-old female, respectively, all of whom are actively studying for the Spiritualist ministry. M.C. is the wife of V.C.

V.C. is a 58-year-old male who is a Reiki Master.

A.F. is a 34-year-old female who is the manager of the New Age bookstore in which the first two sitter group sessions were held.

P.L. and L.L. are both females, 58 and 28 years of age, respectively, who are mother and daughter, and who are both Spiritualist church members.

Each of these nine participants claimed to have one or more exceptional abilities, including ESP (telepathy, precognition), mediumship, empathy, and spiritual or physical healing. Given the venues from which these participants were recruited, the fact that nearly all of them claimed exceptional abilities was the result of coincidence rather than of study design.

Two other participants, both individuals who did not claim exceptional abilities, attended the initial sitter group session but dropped out afterward due to an apparent lack of interest.

Apparatus

Sitter Group Materials. Standard card tables with plastic tops and metal folding legs were used for each of the sessions. Print copies of the Daniel character biography (Appendix 1) were produced for distribution to the participants.

Local Field RNG. The local field RNG from which data were gathered for use in this study is one of approximately 60 nodes in continuous operation as part of the global-spanning network of RNGs established by the Global Consciousness Project (GCP). We provide here only a brief description of this particular RNG node as it is relevant to the study; detailed information regarding the GCP and the RNGs that make up its global network may be found in Bancel and Nelson (2008) and in Nelson (2001).²

The field RNG comprises a hardware circuit manufactured by Mindsong, Inc.³, which uses thermal Johnson noise in resistors as its source of randomness. Identified in the GCP network as Node #2222, the RNG continuously operates on a standard PC located in Ann Arbor, Michigan, approximately 50 miles west of the two sites in Royal Oak, Michigan, and Ferndale, Michigan, where the sitter group sessions were held. The RNG is continuously sampled by the PC at a rate of 200 bits per second and the resulting data are stored on the PC's hard drive. These second-by-second data are compressed by the PC into individual packets, each containing five minutes of data. These packets are later transmitted over the Internet to a central server located in Princeton, New Jersey, for archiving. Node #2222 in the GCP network is classified as a "dialand-drop" node, meaning that its operating PC only connects to the Internet at a specific time of day to transmit its data packets to the central server. After being received and archived by the central server, the data from the individual nodes in the GCP network are made available for public access via an Internet-based data-extraction interface available on the GCP's website (http://noosphere. global-mind.org/extract.html).

MESA. The MESA system's components and specifications have previously been described in detail by Harte, Black, and Hollinshead (1999). We provide here only a basic description of the system and its use in the study.

The MESA system consists of an electronic data acquisition board containing eight separate channels to which individual physical instrument sensors are attached. Channel 1 monitors a CdS photoresistor sensitive to infrared light (Radio Shack No. 276-1657). Channel 2 monitors a second CdS photoresistor sensitive to visual light (Radio Shack No. 276-1657). Channel 3 monitors a custom-built gamma radiation sensor provided by an anonymous donor. Channel 4 monitors a Tri-Field Meter (Alphalab, Inc., Salt Lake City, UT; http://www.trifield.com) sensitive to 60 Hz AC magnetic fields. Channel 5 monitors a piezo-electric transducer sensitive to seismic vibrations (Radio

Shack No. 273-091). Channels 6, 7, and 8 monitor three static DC magnetic field sensors made by Speake & Company, Ltd. (Murietta, California), each oriented along one of the three standard axes (x = West, y = Up, z = North). A sampling rate of 40 times per second was used for each channel. The individual data streams collected during the monitored sitter group session (Session #13) each span a total period of 66 minutes.

The input from each of the eight sensor channels is fed into an analog-todigital converter and stored on the hard drive of a portable laptop computer for analysis.

During the monitored session, the MESA system was supplemented by an infrared videocamera made by Clover Electronics (http:///www. cloverelectronics.com) and a pressure zone microphone (Radio Shack No. 33-1090B) connected to a VHS video recorder, which documented the session.

Sitter Group Procedure

A total of fifteen sitter group sessions were conducted from June 5 to December 11, 2005. Sessions 1 and 2 were held in the back room of a New Age bookstore located in Royal Oak, Michigan. Sessions 3 through 15 were held in the basement of a Spiritualist church located in Ferndale, Michigan.

Prior to the first session, author M.W. formed the background for a fictional character named Daniel O'Dugan, who served as the "pseudo-spirit" for the sitter group (Appendix 1). From the outset of the study, group participants were made fully aware of the fictional nature of the character, and each participant acknowledged his or her understanding that the character's fictional biography contained several historical inaccuracies.

During the first two sessions, the group participants were asked to read and familiarize themselves with the Daniel character biography. As a way to help them relate to the character, the participants were asked to point out certain key characteristics of the character's life and personality with which they identified, and to empathize with the difficulties he had faced in life.⁴ To help them gain a better understanding of sitter group dynamics, the participants were given an introductory background to the Philip group (Owen & Sparrow, 1976) and the elements that seemed to be conducive to macro-PK in a sitter group setting. Instructions concerning the ways in which witness inhibition and ownership resistance may be reduced were also given.

Throughout each of the subsequent sessions, the participants sat around card tables with their hands lightly placed on top of the table. The initial sessions were conducted under conditions of full room lighting, and the lighting intensity was gradually diminished over the subsequent sessions.

For each session, the participants were allowed maximum discretion in determining the session's direction and format. In general, each session opened

with a short period of quiet meditation or prayer, in which participants focused on the Daniel character and the success of the session. The participants also discussed the progress of the Philip group and how a similar goal of producing macro-PK might be met among the present group. The aim of continually keeping thoughts and communication positive, as well as creating a lighthearted and relaxed atmosphere, was emphasized.

Following this opening period, the participants generally engaged in activities that would encourage group cohesion, as well as possibly facilitate macro-PK events. These activities included meditation, invocations, singing, joking, and calling out encouragement for the Daniel character to reveal himself. To aid in the facilitation, as well as to set the atmosphere, some participants occasionally elected to present Irish cultural items to the group that they felt would have been familiar to the Daniel character, such as Irish whisky, blarney stones, and shamrocks.

As in previous sitter group research, a concern for the present experiment was the potential for cheating during the sessions. As an added means of possibly facilitating macro-PK events early on in the sessions, the group participants made use of the designated cheating method. Prior to each session in which this method was used, individual playing cards were distributed at random to each of the participants, with the participant receiving the "joker" card being the designated cheater. This participant was asked to artificially mimic a macro-PK event at randomly chosen times using any means available to him or her while sitting at a table, without indicating to others that he or she was producing the event.⁵ The designated cheater was instructed to stop whenever an event occurred that was not of his or her doing. At the end of the session, the designated cheater was revealed to the other participants, along with the means he or she used to produce an event.

Designated cheating was acceptable within these defined limits, but intentional (i.e. non-designated) cheating was strictly forbidden. To help reduce the potential for intentional cheating, each of the group participants was asked during the initial session to sign an affidavit that defined the limits of designated cheating and stated that intentional cheating was unacceptable. In addition, the affidavit required that the sitters immediately and verbally accept responsibility for any artifactual event they unintentionally produced (e.g., by accidentally kicking a table leg) that could be misinterpreted as genuine by others in the group. In his role as principal experimenter, M.W. continually observed the group members for intentional cheating during the sessions, and participants not acting as the designated cheater were asked to watch for others who might be tempted to intentionally cheat.

To further discourage intentional cheating, participants were given a motivation against doing so, other than their own inward ethics to comply with the group rules, by being offered a modest monetary sum that was to be paid at the end of the study. Participants were warned that any participant caught engaging in intentional cheating would be immediately removed and banned from the sitter group, and that he or she would forfeit receipt of the offered sum. In addition to this motivation, the offered sum was also intended to help motivate the participants to regularly attend the sessions.

Field RNG Procedure and Analysis

Following each sitter group session, experimenter M.W. provided coauthor B.J.W. with the exact time and duration of the session. On the basis of this information, B.J.W. used the GCP's Internet-based data extraction interface (http://noosphere.global-mind.org/extract.html) to download the data file containing the individual second-by-second samples for each RNG node in the GCP network for the corresponding time and duration. The samples for Node #2222 were then manually extracted from the file for analysis. The individual GCP RNG data files are logged in Universal Coordinate Time (UTC), and to ensure that the correct data were being extracted, proper time conversions from U.S. Eastern Time to UTC were applied to the times supplied by M.W. prior to data extraction and checked for accuracy using a standard Internet-based time zone converter (http://www.timezoneconverter.com). The individual nodes in the GCP RNG network regularly fluctuate in their operation times, with some occasionally going off-line for brief periods due to local power failures, Internet connection and server problems, maintenance, or the required use of the host computer for other tasks. Given this, the possibility existed that data from Node #2222 for each individual sitter group session either might not be immediately available, or might not be reported at all. In the case of the former, three checks were made by B.J.W. for a given session's data over the course of three days following the session by downloading the given session's data file and rechecking the column corresponding to Node #2222 to see if the blank entries were filled. In the case of the latter, there was only one session (Session 14) in which RNG data from Node #2222 were apparently unavailable, and thus data from 14 of the 15 total sitter group sessions are reported here.

Analysis of the RNG data was done following the method employed by Nelson (2001) for GCP data analyses, which is based on conventional statistical approaches (e.g., Aron & Aron, 1997, Snedecor & Cochran, 1980): The raw data were first normalized as *z* scores using the equation $z = (x - 100)/\sqrt{50}$, where *x* is the individual RNG sample for a given second, 100 is the theoretical mean for a binomial distribution, and 50 is the trial sum variance. These *z* scores were then squared to create a mean deviation value with one degree of freedom (*df*) that is Chi-square distributed. Since Chi-square values are additive, a cumulative summation of all of the scores was taken across time (with *df* = number of

values summed) to represent the overall measure of mean deviation, and an associated probability value was obtained based on the resulting cumulative Chi-Square and *df* values.

MESA Procedure and Analysis

During Session 13, the MESA system was deployed on a three-foot-by-sixfoot table placed along the wall of the sitting room in the church basement. This table was located approximately fifteen feet from the position of the card table at which the participants sat. The system was activated using the controlling laptop computer and allowed to continuously sample each of the eight channels for 66 minutes at the standard sampling rate of 40 times per second.

The resulting data were analyzed using a fast Fourier transformation written into customized Linux software to produce graphical displays of 1-second averaged data from each of the eight channels.

Due to schedule changes to accommodate the participants, as well as limited opportunity for travel and transport of the MESA system, only one session was monitored.

Results

Sitter Group Results

The following is a concise summary of the ostensible phenomena that were noted to occur across the fifteen sitter group sessions. A slightly expanded account of the sessions, extracted from the log of the session proceedings, can be found in Appendix 2.

Sessions 1–5. Following a few initial sessions with no apparent phenomena, rapping sounds and intermittent knocking were heard by the participants, which were reported to come from various areas in the ceiling and walls of the sitting room. During alternate sessions, loud crashing sounds, "as if a pile of heavy boxes had collapsed," were heard. However, no boxes or other objects were found to be displaced or fallen during searches made after the session had ended.

During group attempts to communicate with the Daniel character in Sessions 3–5, some of the participants claiming mediumship abilities were observed to enter apparent trance states, bringing forth pseudo-communicators who claimed to be either relatives/acquaintances of the Daniel character, or a secondary Daniel who was out-of-character as described in Appendix 1. Information allegedly provided by the communicators was noted to be inconsistent with the Daniel character biography, and differing views among some of the group participants regarding the nature of this information and its

alleged sources seemed to lead to a social difference among the participants that seemed detrimental to the intended positive social atmosphere of the group. As a result, three participants opted out of the study. An attempt was made to remedy the situation and to restore the intended atmosphere in subsequent sessions.

Sessions 6-10. Rapping sounds from the table were commonly reported, as were localized decreases in temperature and the sudden appearance of cool breezes. Tactile sensations were reported by two participants: One claimed that he had felt an unseen hand grab his thigh, while the other subsequently claimed to have had her shoulder grasped by a firm unseen hand. In later sessions, group attempts at communication with the Daniel character were reportedly met by a wider variety of auditory events, including raps, loud clock ticking, electrical buzzing, and loud, abrupt crashes.

Sessions 11–15. Session 11 was noted to be the most pronounced with regard to the occurrence of ostensible phenomena. Brief instances of table tipping were reported during the session, with one end of the table rising up on one or two legs, and the table apparently "walking" on two occasions. During the second occasion, the table legs reportedly struck the floor with heavy force, and would rise on one leg when shifting direction.

In addition to occasional instances of table tipping and "walking," several other forms of auditory phenomena were reported during Sessions 12–15. Multiple footsteps were heard to move across the floor of the church sanctuary situated above the sitting room, despite the church being locked at the time of the session. Chimes similar to those of a doorbell were heard on a separate occasion, although the church is not equipped with a doorbell. Low, tinny voices similar to those heard on an old radio were reported, although the voices were too low to be intelligible.

RNG Results

Table 1 shows the RNG data results from 14 of the 15 sitter group sessions. The results indicate that, overall, the RNG data hovered very close to chance expectation, and thus the general prediction of an overall significant positive deviation from standard randomness in the RNG data was not supported. It may be of some note that the RNG data from a few of the individual sessions produced weakly suggestive (e.g., Session 4: p = .103; Session 7: p = .093) to significant (Session 11: p = .008) results, including one that was significant (Session 1: p = .986) in the negative direction. These results are similar to those found by Nelson, Jahn, Dunne, Dobyns, & Bradish (1998) in relation to the channeling sessions, where notable individual sessions were also found.

Session Date Time (ET) Location **Chi-Square** df p-Value 1 5 Jun 2005 12:00 – 14:00 New Age bookstore – Royal Oak 1829.34 1965 0.986 2 26 Jun 2005 13:00 - 15:00 New Age bookstore - Royal Oak 7081.44 7200 0.838 3 10 Jul 2005 13:00 - 15:00 Church basement – Ferndale 7072.54 7200 0.856 24 Jul 2005 13:00 - 15:00 Church basement – Ferndale 7351.88 7200 0.103 4 5 10 Aug 2005 18:00 - 20:00 Church basement – Ferndale 7200 0.294 7264.36 21 Aug 2005 15:00 - 17:00 Church basement - Ferndale 7206.30 7200 6 0.476 7 10 Sep 2005 14:00 - 16:00 Church basement - Ferndale 7359.18 7200 0.093 8 24 Sep 2005 20:00 - 21:30 Church basement - Ferndale 5278.26 5400 0.879 9 7 Oct 2005 20:15 - 21:30 Church basement - Ferndale 4500 4391.54 0.874 10 20 Oct 2005 20:15 - 21:40 Church basement - Ferndale 5088.48 5100 0.542 11 4 Nov 2005 20:00 - 22:00 Church basement – Ferndale 7490.78 7200 0.008 12 14 Nov 2005 20:15 - 21:20 Church basement – Ferndale 3759.48 3807 0.705 13 28 Nov 2005 20:15 - 21:50 Church basement - Ferndale 5670.70 5700 0.605 4 Dec 2005 15:00 - 17:00 Church basement - Ferndale 14 0 0 0 15 11 Dec 2005 20:15 - 21:30 Church basement - Ferndale 4467.16 4500 0.630 81311.44 0.559 Total 81372

TABLE 1 "Daniel" Sitter Group Session Field RNG Results

Note: No RNG data were available from Node #2222 during Session 14. All times are in U. S. Eastern Time (ET).

MESA Results

Notable changes were observed on five of the eight channels of the MESA system during Session #13:

Channel 1 indicated three separate transient decreases in infrared light in the recording period from 42 to 47 minutes into the session, ranging in magnitude from five to seven footcandles.

Channel 2 indicated five separate transient decreases in visual light, occurring at 16, 36, 40, 49, and 52 minutes into the session. Four of the changes were from 70 to near 50 footcandles, while the fifth was from 70 to 40 footcandles.

Channel 3 registered no notable changes in the ambient background radiation of the room.

Channel 4 registered no notable changes in 60-Hz AC magnetic field strength, with the ambient background fluctuating between 0.75 and 4 milliGauss. The fluctuation was likely due to electrical wiring present in the wall of the room.

Channel 5 registered two subtle vibrations in the table on which the



Figure 1. Graphical representation of the piezo-electric voltage recorded by Channel 5 (seismic sensor) of the MESA system during Session 13, with the two attenuated vibration events indicated.

MESA system was deployed (Figure 1). The first vibration was recorded at 24 minutes into the session, and the second at 45 minutes, lasting until the end of the recording period. The card table at which the participants sat was noted to bounce up and down several times as the session progressed, and it is thought that these events may reflect attenuated vibrations in the concrete floor produced by the card table movements.

Channel 6 indicated an increase in DC magnetic field strength along the x-axis (West), from -7 to -2 milliGauss (Figure 2). The onset of the increase was at 28 minutes into the session, and had an approximately seven-minute duration.

Channel 7 indicated a modest increase in DC magnetic field strength along the y-axis (Up), from -7 to -4 milliGauss. This increase occurred within the first five minutes of the session, and remained steady for approximately 45 minutes. At approximately 46 minutes, the magnetic field slightly decreased from -3.5 to -6.5 milliGauss, and then remained steady at about -5 milliGauss until the end of the session.

Channel 8 indicated a steady increase in DC magnetic field strength along the z-axis (North) throughout most of the session (Figure 3), with an increase from -2.5 milliGauss to approximately 5 milliGauss occurring within the first 19 minutes of the session. The field strength peaked at about 8 milliGauss



Figure 2. Graphical representation of the DC magnetic field strength recorded along the West axis by Channel 6 (x-axis DC magnetic sensor) of the MESA system during Session 13.



Figure 3. Graphical representation of the DC magnetic field strength recorded along the North axis by Channel 8 (z-axis DC magnetic sensor) of the MESA system during Session 13.

approximately 49 minutes into the session before steadily fluctuating around 7 milliGauss until the end of the session.

In addition, several instances of floating spherical lights ("orbs") that appeared to have no clear source were noted on the infrared video recording of the sitter group session, and several percussive sounds (thumps and cracks) were recorded by the pressure zone microphone both before and during the session.

Discussion

Sitter Group

In general, the sitter group sessions described here displayed both successful and non-successful elements. One successful element related to session attendance. Some previous sitter groups, such as the Philip group (Owen & Sparrow, 1976), had some difficulty in maintaining a regular group of participants over time, and this problem was circumvented in part by offering a financial motivation to the participants in the present group. In addition, it was felt that prior acquaintance among most of the participants was helpful in maintaining the stability of the group, as it may have allowed the participants to be more comfortable around familiar people and thereby more rapidly facilitate a sense of group rapport than if the participants had initially been strangers. The group participants were further noted to have shown respect to one another and applauded whenever another participant had offered insightful ways to improve on the group situation such that macro-PK might be encouraged, another possible sign of group rapport that may have aided group stability. If group rapport is one of things that is crucial to the facilitation of macro-PK in the sitter group setting, then this element may be particularly important for future experimental groups.

While allowing discretion to the participants with regard to the situation, direction, and format of each session seemed to be beneficial in that it may have allowed participants to speak their mind and have a sense of involvement in the experiment (within the confines of the rules), it may have also been something of a non-successful element in that it may have contributed to the social difference that arose between the participants claiming mediumship abilities and those not so claiming, where it seems that differing viewpoints may have given rise to negative opinions of character among these participants, a situation that seemed detrimental to the intended goal of the sessions. While an attempt was made to carefully remedy the situation through positive refocusing, it did result in three participants opting out of the study and seemed to hinder the sense of group rapport that was forming at the time. Future sitter groups should perhaps take

heed of this example and carefully monitor group interactions to help prevent it, particularly if some or all of the participants claim exceptional abilities, as was the case here.

In addition, following the suggestion by Batcheldor (1984), a continual effort was made to keep group thoughts and communication positive in order to encourage a group rapport, as well as the facilitation of macro-PK through momentary belief. Campbell and Murray (2007) found a significant tendency for phenomena to occur when their sitter group participants felt positive, suggesting that this element may also be particularly important.

From a subjective perspective, the success of the present sitter group in reproducing the phenomena reported by other groups was mixed. Several phenomena, including percussive sounds, table tilting, and tactile sensations, were observed, but these seemed to be relatively mild compared to the pronounced phenomena reported by seemingly more successful groups (Batcheldor, 1966, Owen & Sparrow, 1976, Ullman, 2001). For instance, rapping regularly occurred under the hands of the participants of the Philip group. In contrast, the rappings and knockings heard by the present group did not always occur on demand, and never under the participants' hands. Brief levitation of the table was reported by the Philip group and by Batcheldor's group, while the present group observed brief table tipping. The Philip group had comprised participants who claimed no exceptional abilities, while nearly all of the participants of the present group made such a claim. Even with the potential benefit of the participants' claimed exceptional abilities, the inadvertent creation of a second Daniel character by the participants claiming mediumship abilities again led to a social situation that seemed to hinder the group's progress. In this sense, it seems that the difficulties that the Philip group had in keeping regular participants was conceptually matched in the present group by participants who held opposing views on how the Daniel character should be perceived.

In general, phenomena reported by other sitter groups were observed by the present group, although they did not seem to approach the levels initially anticipated by the participants, which included table and object levitation, communication by raps, apportation/deportation, and materializations.

Field RNG

Overall, the attempt to explore possible field RNG correlations with the sitter group sessions was largely unsuccessful. However, a few individual sessions did appear to produce findings that may be of some note, comparable to other field RNG-related explorations of macro-PK and spirit phenomena (e.g., Nelson, Jahn, Dunne, Dobyns, Bradish, 1998:439, 442). Perhaps the most notable of these was the significant positive RNG result observed in

conjunction with the highly productive Session 11. While we recognize that this result was highly significant (p = .008), we also approach it with a high degree of caution, as it appears to be the only result of its kind within the session data, and therefore could have likely been an expected chance occurrence.

There may be three considerable alternatives in attempting to account for the overall null result. The first alternative, as stated by the null hypothesis, is that there is simply no effect. However, the participants of the present sitter group did report several ostensible macro-PK events and physical phenomena during the sessions, which argues against this. It is therefore argued that one of the other two alternatives may be more likely.

The second alternative may be the effect of distance between the field RNG and the sitter group sessions. Although there is some data to suggest that PK effects on RNGs are not limited by distance (Dunne & Jahn, 1992), there may be some limit on PK-related "field consciousness" effects, in that the effects may be attenuated to some degree with increased distance from the source. Some events explored by the GCP in relation to local RNGs at a distance seem to suggest this possibility (Nelson, 2001).

In addition, it may be important to consider the distance factor in ostensible macro-PK. In reported cases of RSPK (Roll, 1972, 1975, 1977, 2003), the object displacement events are often localized to a certain area where phenomena repeatedly occur. This localized space is often very small in diameter, and this suggests that RSPK effects, when they occur, may often be limited to such space. This may seem sensible if one considers that RSPK may involve highly concentrated forms of energy as proposed by Roll and Persinger (1998), and that some macro-PK effects may only involve localized negentropic effects in the surrounding environment, as suggested by the tests of Puthoff and Targ (1975). The distance of Node #2222 from the locations of the sitter group sessions, while relatively short (50 miles), may have been considerably large in terms of the scale of possible macro-PK boundaries where the phenomena are focused. In other words, if macro-PK events are highly focused, then they may be limited to only small diameters of space, and the location of Node #2222 was much too far outside the boundary of this diameter to be sensitive to macro-PK effects.

The third alternative is one that follows from the second: that macro-PK and micro-PK, though related in form, are different facets of the same phenomenon. There has been a suggestion that micro-PK effects (which have been the focus of RNG studies), rather than involving a kind of "mental force" acting upon a target object to make it move, may instead involve a kind of "information exchange" that is statistical in nature, and which may act only on the quantum level of subatomic particles, thus allowing for the possibility of nonlocal effects (e.g., Jahn & Dunne, 2001, Jahn, Dobyns, & Dunne, 1991,

Schmidt, 1987). Macro-PK effects, on the other hand, may be more akin to the "mental force" concept, in that they may display characteristics more similar to known physical fields (e.g., attenuation with distance from the central person, object displacement trajectory patterns similar to magnetic vector fields, and correlates with electromagnetic fields; see Roll, 1972, 1977, 2003). While it may be possible that macro-PK effects to some degree involve negentropic effects like micro-PK, it seems that these may operate on a much wider scale than the purely statistical (e.g., the idea that macro-PK effects are negentropic by "acting" on the surrounding environment and somehow modulating surrounding energies in the environment). Because macro-PK effects are more overt, they may be more local rather than nonlocal. These ideas currently remain speculative, but if they have any degree of validity, then they may shed light on the possible difference between macro-PK and micro-PK. Following this argument, although there were local macro-PK effects reported by the present sitter group in the immediate vicinity of the test room, Node #2222, being a noise-based RNG perhaps more sensitive to nonlocal micro-PK effects, may not have been very sensitive to them.

We feel that these latter two alternatives may factor considerably in the null field RNG results observed here, and should be considered further in future studies of ostensible macro-PK using RNGs (particularly the factor related to distance).

MESA

During the session in which it was used, the MESA system registered notable changes in visible and infrared light, as well as changes in DC magnetic field strength. The changes observed in these variables are comparable to those observed in previous field investigations of allegedly haunted sites (Braithwaite, Perez-Aquino, & Townsend, 2004, Harte, Black, Hollinshead, & Mitchell, 2001, Persinger & Koren, 2001, Roll & Persinger, 2001). Changes in DC magnetic field strength were also noted in the sitter group sessions conducted by Campbell and Murray (2007), suggesting that monitoring of DC magnetic fields should be a part of future sitter group studies. The specific interactions within the surrounding environment that may have led to the observed changes currently remain unclear, and any possible insight can only be guided by further research.

Notes

¹ A physical medium should be distinguished from the more familiar *mental* medium, who claims the ability to communicate with deceased individuals through extrasensory perception.

² In addition to the publications cited here, detailed information may be found on the

GCP's Internet website: http://noosphere.global-mind.org/.

- ³ The Mindsong RNG is no longer manufactured; additional details on the device are available at http://noosphere.global-mind.org/gcpdata.html#normalizing.
- ⁴ As an additional way to help them relate to the character, the participants were provided with a 19th century black-and-white photograph showing the portrait of a man, which the participants were asked to imagine was the Daniel character as he looked in life. This was meant to help the participants view the character as a focus of attribution for any ostensible macro-PK occurrences. Since it was obtained from the Internet and we do not own the copyright for it, we are not reproducing the photograph here.
- ⁵ These means included slightly tipping the table by pressing down on the edge of it, pushing against a table leg to displace the table, and quickly slipping a hand under the table and rapping on the underside.

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Appendix 1

Background of the Sitter Group "Pseudo-Spirit"

Below is the biography for Daniel O'Dugan, the character representing the "pseudospirit" for the sitter group described in the present study. We note that the biography is entirely fictional and was derived from M.W.'s imagination. It was modeled after the fictional biography created by the Philip sitter group (Owen & Sparrow, 1976). Some inaccuracies contained within the biography include misinformation about the Irish Potato Famine, which lasted from 1847 to 1852. The Daniel character left his native Ireland because of the famine in 1886, several decades after the famine had ended. The port town of Dubhgail, New Jersey, where Daniel lived, has never existed, and D. D. Home had died two years before Daniel was born.

The Daniel character history included elements that were intended to elicit empathy for the character from the group participants. These elements included the character becoming a geographical orphan for a short time, owning pets, doing charity work for the homeless, and having an ambiguous sexuality.

Life of Daniel O'Dugan

Daniel O'Dugan was born in 1880 in a small farming borough in Cork, Ireland, to Bridget and Patrick O'Dugan. His parents were poor farmers. When he was six they saved their money and sent him to New York to escape the Potato Famine. His aunt was

supposed to meet him at the dock. She was often drunk, had gotten her days mixed up, and was several days late. Being six years old, Daniel did not know what to do when she did not show up. He wandered the streets for several days in the cold October weather, begging for food and shelter. A kindly woman—a gentle person and keen Spiritualist—found him, took him in, and raised him as her own in Dubhgail, a nearby small port town on the New Jersey coast. Daniel found work at age 12 scrubbing the decks of the ships coming in to dock. He listened to the sailors talk about news events, their adventures at sea, and mediums, which were all the rage.

When Daniel was 14, his aunt recognized him by chance at a market and took custody. In his Aunt's home, Daniel's interest in the Spiritualist movement clashed with his Aunt Martha's Christian sensibilities. In a drunken rage she kicked him out after only a week, leaving him to go back to his former household. His foster parents were delighted, and welcomed him home by throwing a party for him.

Throughout his life, Daniel loved to read. As a youth he would read to his mangy dog, Randy. Randy wasn't very smart or amazing, but Daniel insisted that even the most pathetic of animals and humans deserve compassion. Later he owned a dog named Hansen, a dog that, despite its intelligence, would snarl and snap at anyone within biting distance for no discernible reason. He had a pattern of taking in unwanted stray animals and taking care of them.

As an adult, Daniel earned a respectable position working as a boilermaster for incoming ships. Others noted his preference for being friends with men, although he had many women friends. He never married, saying that marriage would prevent him from helping others as much and that he was not the marrying type. He became active in progressive causes such as women's rights, and education for all. He used much of his money to buy gloves and blankets for the homeless. Twice he took in orphaned children off the street, one boy and one girl, and provided a stable home life so they could learn their letters. The boy, Joseph, later became elected to city council for Dubhgail and presented Daniel with a humanitarian award. He was very proud of that.

Daniel also tried to learn what he could about the afterlife by attending séances. Twice he was able to sit with D. D. Home, the famous psychic of the day. Near the time of his death from pneumonia in 1945, Daniel promised that he would give seven years of Irish luck to anyone who could contact him after he died, and that he would do everything he could to let them know he was there. On December 21, 1945, Daniel passed on, surrounded by his many friends.

Appendix 2

Daniel Sitter Session Accounts

Sessions 1-5

The initial sessions did not produce any raps when sitters called out to Daniel. Eventually raps did occur, gradually becoming intermittent knocking. The sitters established a method of communicating: One knock meant no and two meant yes. The knocks appeared to come from the ceiling and walls. When the knock was a yes, it seemed to come from two different areas of the room—on a wall or on two different sides of the ceiling. Every other session or so, there were loud crashing sounds as if a pile of heavy boxes had collapsed. Nothing, however, was found to have been moved or shifted when the place was inspected after the session was over.

There were apparent indications that some of the participants who were claimed mediums were attempting to preside over other mediums, as inferred by their taking an active part in answering questions aloud when other mediums asked questions of Daniel. In addition, several of the mediums seemed to go into trance during Sessions 3 and 4. They allegedly reached characters who claimed to be relatives, friends, and fellow church members who knew Daniel. The mediums were reminded after these sessions that the intention was not to approximate Daniel by reaching pseudo-characters he may have known, but to reach the devised Daniel.

During Session 5, A.F. brought through Daniel, but the alleged Daniel who addressed the participants did not reflect the personality outlined in the fictional character biography. The alleged Daniel seemed to express contempt toward the participants for trying to get him to respond. Through A.F., the alleged Daniel reminded the participants that he would come through in his own time, and that he (Daniel) attended séance sessions with D. D. Home, and therefore knew what was expected.

W.G.R. suggested that the participants be reminded that the sessions were to be upbeat, positive, and emphasize the caring aspects of Daniel. Future sessions had this added to the procedure before each session.

Sessions 6-10

Following Session 5, the instructions changed so that participants were not to speak for Daniel, but to let Daniel speak for himself. This in effect would hinder attempts by the mediums to answer questions they were not asked when other mediums asked questions of Daniel. Some of the mediums appeared at odds with the suggestion that they could not represent Daniel directly by speaking for him when not in trance. The intent was to get Daniel to produce anomalous effects without having the participants speak for him.

There was an ongoing attempt through singing and discussion to keep the attitude consistently positive. Throughout the sessions, when negative comments or doubts were raised, participants were reminded to keep a positive attitude. This seemed to diminish what momentary momentum the experiment had as it directed attention away from the phenomena.

The group became smaller as some of the participants opted out of the experiment for various reasons. As a result, the group size ranged from five to ten people during this period. Cold spots and breezes became common, along with the sense of being touched. In one case, a male participant claimed that an unseen hand grabbed his thigh. Upon hearing this, a female participant admitted that she had felt a firm hand grasp on her shoulder. Table raps became more common as the group began to sing and distanced themselves from the chiding, allegedly from Daniel, that was received through A.F. in Session 5. Daniel would at times answer questions on demand, seeming to confirm his presence, and started providing a wider range of auditory responses, such as tapping, making clocks tick louder, creating electrical buzzing noises, and sudden, loud crashing.

As the group decreased in size and distance from Session 5 grew, the cautious optimism of the group was replaced by confidence and an expectation that Daniel would show up physically. A level of rapport also seemed to grow among the remaining participants. This was demonstrated by participants repeating other participants' requests

of Daniel, cheering when the other participants showed up to the session, and asking Daniel to "c'mon down [the stairs]" to join the group.

Sessions 11-15

During Session 11, the three participants who had previously attempted to assert their way over the group did not show up (L.L., P.L., and A.F.). There were five regular participants who did show up: M.C., V.C., R.H., B.L., and P.S. E.P., also a regular, had notified us ahead of time that she was not available because of ministerial duties.

It was during this session that the macro-PK became the most pronounced of the entire fifteen session series. The group told jokes, and made feeble and awkward attempts at singing songs that Daniel might have known, which further steered the participants into a more hilarious mood as B.L. warbled *The Star Spangled Banner* in falsetto. The table, which at times had previously raised up on one or two legs, now "walked" on two legs into the lap of V.C. The table had backed V.C. into a pole, at which point it stopped walking and the sitters broke into spontaneous applause.

Later, the table "walked" on the cement floor with the legs making a hammering action, striking the floor with force. At times, as it changed direction, the table would occasionally move onto one leg. The anticipation was exhilarating, with the sitter group all shouting "Up! Up! Up!" in unison, wanting the card table to levitate.

During the jokes and singing, V.C. had ceased laughing at the jokes and rocked back and forth. Some members noticed but paid no mind. Suddenly he started laughing, but differently than we had heard him previously. His wife, M.C., exclaimed, "That's not (V.C.)'s laugh!" The experimenter asked, "Daniel, is that you?" V.C. started laughing harder as B.L., M.C., and R.H. continued their mock singing.

V.C. stopped laughing, recovered, and joined the rest of the group. R.H. then stopped singing and closed her eyes. R.H. began laughing and tried to talk, but couldn't stop as she was laughing too hard. It was apparent that the sitters had reached the "correct" Daniel as had been described to them, who was amused at our joking and singing.

The confidence level after Session 11 had reached its zenith of the sessions. M.W. felt certain that Daniel would show up physically, and perhaps even achieve levitations and apports. As a precaution to protect the progress made, the group was closed to anyone else who had not shown up, with the exception of E.P., a regular trusted medium.

Sessions 12–15 were attempts to use Session 11 as a jumping-off point for even more pronounced phenomena. B.L. was asked to repeat a guided visualization that ended up focusing on the middle of the table where Daniel was hoped to appear. While this did not occur, it had the effect of bringing a focused concentration on the Daniel Experiment.

Aside from the table rocking and walking at times, there were some additional previously unheard noises such as footsteps of many people walking on the floor above (the church was locked), chimes (the church does not have a doorbell), and low, tinny voices as if from an old radio. The voices were too quiet to be understood.

Also for Sessions 12–15, there was a heightened expectation that an apparition or a physical presence other than the sensation of being touched would be experienced. Many of the sitters watched the stairs as the sound of many people walking on the floor was heard from above (which was the church sanctuary), with the sitters fully expecting to hear the footsteps start descending the stairs.