Report

ANOMALOUS ORGANIZATION OF RANDOM EVENTS DURING AN INTERNATIONAL QIGONG MEETING: Evidence for Group Consciousness or Accumulated Qi Fields?

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ABSTRACT

Research has documented anomalous organization of random events generated by an electronic random events generator (REG) during various group situations that promote group consciousness experiences. A group situation hypothesized to promote an intense group consciousness experience was an international Qigong conference. Over 2500 invited guests, scientists and practitioners from many countries attended the 1997 International Yan Xin Qigong Practice and Research Conference in New York City on August 30-September 1. Three basic REG predictions were evaluated: (1) the null hypothesis, (2) deviations from randomness would be observed during the days and would disappear during the nights, and (3) deviations from randomness would be observed during the days and continue during the nights (predicted by Chinese scientists YX, ZS, and LS to reflect "accumulating Qi over the entire meeting"). Three days and two nights of FieldREG data were collected prior to, during, and following the conference. During the conference, a total of 234,412 trials of 200 samples per second reflecting I's and O's (100 I's would be expected to occur by chance per second on the average) were collected using a PEAR computerized FieldREG system and stored for later analysis. When the 3 days and 2 nights were analyzed in terms of trials above versus below 100, each of the five segments showed relative increases ($p < .023$). These patterns were not observed during the pre and post conference control days and nights. The data provide tentative support for the hypothesis that an intense group experience that continues over a three day period may create a consciousness or Qi field that can be discerned using the FieldREG paradigm.

KEYWORDS: Consciousness, group meditation, parapsychology, qigong, REG

INTRODUCTION

Research has documented anomalous organization of random events generated by an electronic random events generator (REG) during various group situations that promote group consciousness experiences.[3-5] These experiments propose that discernible "consciousness fields" may be detected in "religious or secular ceremonies and rituals, individual or group therapy sessions, business meetings, sporting events, professional conferences, or any other group convocations that might include periods of unusually cohesive cognitive interaction, creative enthusiasm, or other forms of emotional intensity."[3]

Nelson et al. developed a portable REG system using a notebook computer that makes it possible to collect REG data in field settings.[3] These "FieldREG" systems make it possible to perform "passive monitoring of environmental backgrounds in selected sites and situations where human consciousness might conceivably be altering or organizing a surrounding 'field' of potential information, most broadly construed, without specific intention or direct attention to the experimental device by any of the participants." Measurable deviations purported to reflect field consciousness effects have been reported in various professional meetings (including a humor conference) and religious services, a holotropic breathwork workshop, the 67th Annual Academy Awards, and the 1995 European soccer cup finals.[3-5]

Consciousness fields may be similar to "Qi fields" proposed by scientists in China to explain anomalous variations of certain properties of physical systems influenced by consciousness.[6] Western scientists have hypothesized that "high degrees of attention, intellectual cohesiveness, shared emotion, or other coherent qualities of groups tend to correlate with statistically unusual deviations from theoretical expectations in the FieldREG sequences."[3] These psychological qualities are typically cultivated in various group meditative and Qigong practices. The Yan Xin Nine Step Qigong Method often practiced in a group setting, would be expected to develop a measurable consciousness Qi field.

The purpose of the present experiment was to examine whether a FieldREG system could be used to measure field/Qi consciousness effects during a large conference that would be predicted by both western and eastern scientists to have a significant group consciousness field/Qi effect. Over 2500 invited guests,

scientists and practitioners from many countries attended the 1997 International Yan Xin Qigong Practice and Research Conference in New York City on August 30-September 1. The conference was organized to promote the study of Traditional Chinese Qigong for the benefits of individual and societal health. FieldREG data were collected one week before, during, and one week after the Qigong conference.

Three hypotheses were tested:

1. The null hypothesis: the Qigong conference would not be sufficiently coherent, relative to the "noise" in New York City, to result in a measurable shift in the FieldREG.

2. The local field consciousness hypothesis: FieldREG effects would be observed during the two days of the single track meeting when the FieldREG system was located in the conference hall, and would not be observed during the evenings (when "informal" meetings continued throughout most of the night) and during the one day of the parallel track meeting when the FieldREG system was housed in a hotel room several blocks from the convention center (the western hypothesis offered by GERS and LESR).

3. The non-local Qi field hypothesis: FieldREG effects would be observed during the period of the entire conference (three days and two evenings) because "Qi accumulates over the entire meeting"—since many practitioners report continuing group practice and activities during the night and purport sleeping little or not at all during the period of the meetings (the eastern hypothesis offered by ZSS, LZYXS, and YX).

METHOD

DESIGN

Three days and two nights of FieldREG data were collected during each of three consecutive weekends:

1. Pre-conference baseline data, collected in Tucson, Arizona.

2. Conference data, collected in New York City, New York.

3. Post conference baseline data, collected in Boca Raton, Florida.

The computerized REG data were collected by GERS and LGSR.

During the single track sessions (Day 1 and Day 3), the approximately 2500 participants took part in group Qigong practice, listened to lectures given by various scientists and practitioners (including Dr. Yan Xin) and live music. During the parallel track sessions (Day 2), participants experienced multiple aspects of Qigong theory and applications. Informal activities continued throughout the two evenings between Day 1 and Day 3.

EQUIPMENT

A portable FieldREG was provided by the Princeton Engineering Anomalies Research (PEAR) Laboratory. The data were collected using MSDOS FieldREG software on a Toshiba Satellite 205CDS notebook computer. As described in detail in Nelson et al., the portable REG consists of a printed circuit board and precision components mounted in a 5 x 7 x 2 inch case aluminum box.[3] The random event sequence is based on a low level micro-electronic white noise source which is amplified, limited, and ultimately compared with a precisely adjusted DC reference level. At any instant of time the probability of the analog signal equaling or exceeding the reference threshold is precisely 0.5. The white noise signal is sampled 1000 times per second. The output of the comparator stage is clocked into a digital flip-flop, yielding a stream of binary events (1's or 0's), each with a probability 0.5. This unpredictable, continuous stream of bits is then compared with an alternating template using a logical XOR in hardware, and the matches are counted, thus precluding first-order bias of the mean due to short or long-term drift in any analog component values by inverting every second bit. The resulting sequence is then accumulated as bytes that are transmitted to a serial port of the computer, where they are read and converted to REG data by dedicated software.

The digital and analog circuits are isolated from each other spatially and electrically, and the geometry is fixed by the printed circuitry. To avoid electrical cross-talk, digital transmissions are not performed during the analog sampling. Power to the circuits is supplied by an external DC adapter to minimize effects of associated time-varying magnetic fields. In applications where no line

voltage is available, power is provided by a battery pack (battery power was not necessary in the present research).

According to Nelson et al.[3] "extensive calibrations of a large number of these portable REG devices indicate that all perform as nominal random sources, with distribution parameters that are indistinguishable from theoretical expectations, or from those of the more elaborate benchmark REG."

Computer Software

The FieldREG data acquisition program reads the serial port and assembles 25 consecutive bytes as a 200-sample trial, from which data are recorded as sums of 200 bits, with expectation 100, variance 50. The program generates a data file of consecutive trials, and a corresponding index that contains a new line printed every hour. Interstitial lines record the time, trial number, and other information corresponding to any present or concurrent marks made using defined function keys to indicate events such as the beginning and end of sessions. A custom analysis program allows specification of the beginning and end of the data sequence to be analyzed, and generates a full statistical analysis of its distribution. A corresponding group shows the cumulative deviation of the specified data sequence from expectation, marked with a vertical line at each point where a function key-code was entered (see Figure 1). Each such mark is accompanied by a 5 percent confidence parabola that starts at the current height of the cumulative trace, allowing a visual assessment of trends corresponding to the identified events or time periods.

Results

During the 3 days and 2 nights of the conference, a total of 234,412 trials of 200 samples per second reflecting 1's and 0's (100 1's would be expected to occur by chance per second on the average) were collected. The identical number of trials were selected for data analysis for the pre- and post-conference baseline data.

Figure 1 displays the trial by trial cumulative deviation graphs for the pre- (before) conference baseline data (upper graph), the conference (during) data (middle graph), and the post- (after) conference baseline data (lower graph).

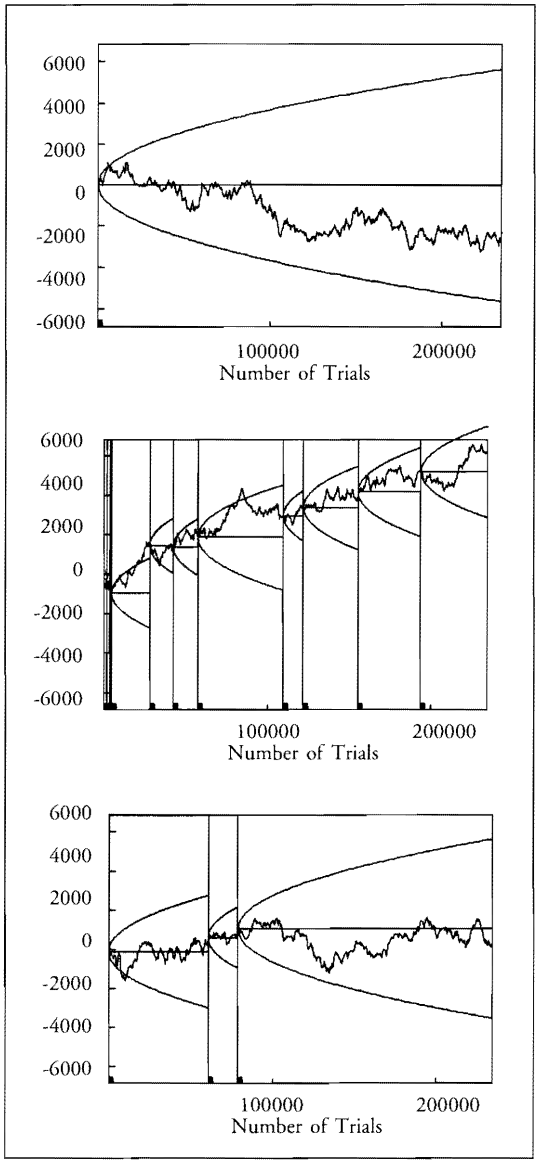

Figure 1. *Figure 1 displays the cumulative deviation graphs for the pre- (before) conference baseline data (upper graph), the conference (during) data (middle graph), and the post- (after) conference baseline data (lower graph). Data from offset 0 to 284,412.*

It is immediately apparent that whereas the pre and post baseline data fell well within values expected by chance over the course of three days and two nights, the conference data (middle graph) revealed a generally increasing cumulative record that persisted over the course of three days and two nights. Figure 1 indicates that no marks were entered during the pre- data, various marks were entered during the conference data (e.g., when the equipment was stopped and moved for periods of time such as lunch breaks and when the equipment was moved from the conference center to the hotel), and a few marks were entered during the post data.

Figure 2 displays the grand averaged number of 1's per second for the pre- baseline, conference, and post-baseline data. It can be seen that there was a small increase in the number of 1's per second over the course of the three days and two nights of the conference compared to the pre and post baseline data.

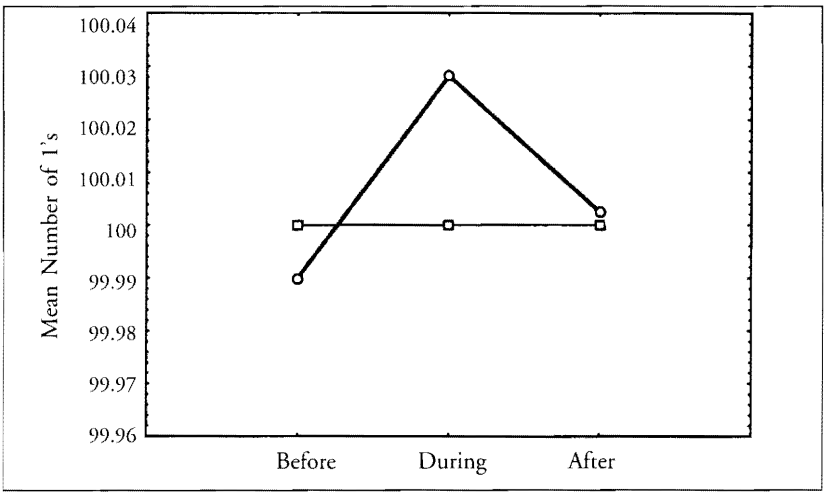

Figure 2. *Figure 2 displays the mean number of 1's per second averaged over three days and two nights for the pre baseline, conference, and post baseline data (observed versus expected by chance). Open circles are observed values, open squares are chance values.*

Figure 3 displays the mean number of 1's per second separately for the three days and two nights of the conference (times defines by the formal printed program—actual times varied slightly, the pattern of findings were identical). Table I displays the times used.

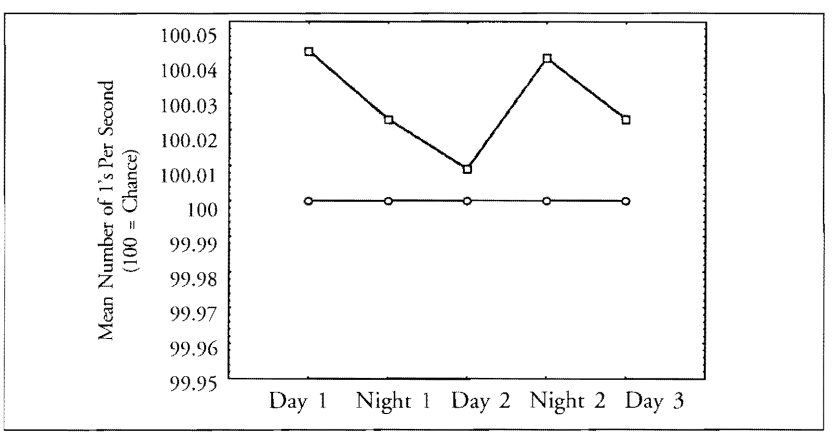

Figure 3. *Figure 3 displays the mean number of 1's per second separately for the three days and two nights of the conference (observed versus expected by chance). Open squares are observed values open circles are chance values.*

Table I
Times Used for Analyses

Segment	Times (EST)	Trials
Day 1	8:25 a.m. - 9:00 p.m.	0 to 50,981
Night 1	9:00 p.m. - 8:00 a.m.	50,981 to 95,509
Day 2	8:00 a.m. - 10:00 p.m.	95,509 to 153,923
Night 2	10:00 p.m. - 8:00 a.m.	153,923 to 193,582
Day 3	8:00 a.m. - 5:30 p.m.	193,582 to 234,412

It can be seen that each of the time periods showed a mean increase in number 1's per second, consistent with the non-local hypothesis (t = 2.82, df = 4, p < .048, two-tailed).

Figure 4 displays the mean number of trials above chance for the pre- baseline, conference, and post- baseline data. It can be seen that there was a small increase averaged over the three days and two nights of the conference compared to the pre- and post- baseline data.

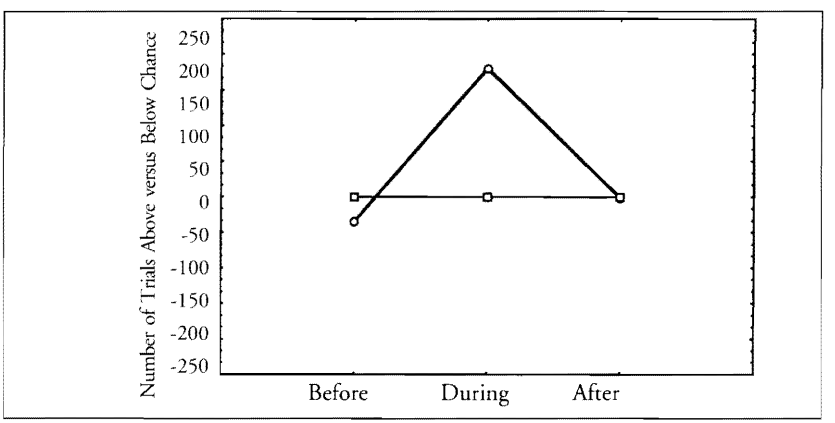

Figure 4. *Number of trials above versus below chance averaged over three days and two nights before, during, and after the conference (observed versus expected by chance). Open circles are observed values, open squares are chance values.*

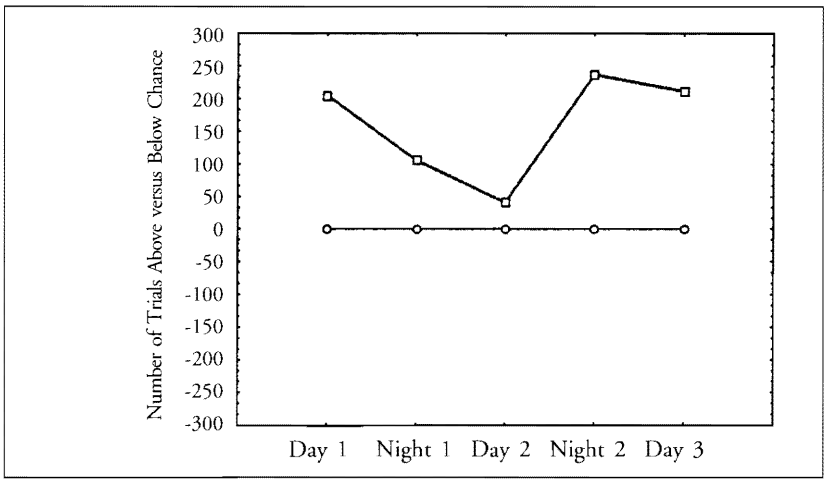

Figure 5. *Number of trials above versus below chance during the days and nights observed versus expected by chance. Open squares are observed values, open circles are chance values.*

Figure 5 displays the mean number of trials above chance for the three days and two nights of the conference. It can be seen that each of the time periods showed a mean increase in the number of trials above chance, consistent with the non-local hypothesis (t = 3.56, df = 4. p < .023, two-tailed). The pattern is clearly similar to, but not identical to, the average number of 1's displayed in Figure 3.

DISCUSSION

These findings replicate and extend reports of anomalous organization of random REG events in a field setting hypothesized to promote increases in group consciousness.[3-5] Moreover, the data are consistent with the long standing claims of practitioners of Qigong and the eastern researchers in the present research who predicted that "Qi would accumulate over the entire meeting." Theoretically, a shift in the ordering of the REG from randomness could have resulted in increased 1's or increased 0's; the finding of increased 1's in the present study is interesting in light of the eastern prediction.

Clearly, the present field/Qi findings need to be replicated before firm conclusions can be drawn. For example, it is not possible to determine from the

present findings if other "field" consciousness events (local or global) that occurred in parallel with the Qigong meetings could have contributed to the observed effects.

Field consciousness research is especially difficult because many potentially important factors can not be controlled experimentally. In the present study, it would have been desirable to:

1. Collect the pre- and post- conference baseline REG data in the same city and in the same buildings,

2. Collect pre-, during, and post- conference REG data simultaneously in other cities (to determine how "non-local" the effects were),

3. Have experimenters blind to the hypotheses collect the REG data (e.g. though the western scientists—GESR and LGSR—who collected the data did not anticipate that the eastern scientist's Qi hypothesis would be supported, we were not blind to three hypotheses, and we were obviously familiar with the published findings suggesting that group consciousness effects could be measured using FieldREGs), and

4. Have an identical number of equipment stoppings and movements in time and space. The conference data collection clearly had more stoppings and movements (e.g., each morning and evening plus some lunch hours, between the hotel, the conference center, and various restaurants) than the pre- and post - baselines. However, stoppings and movements per se did not seem to produce consistent initial increases in 1's (as shown within the conference as well as post- baseline, post- markings cumulative curves within the parabolas).

The purpose in publishing fieldREG findings such as the data reported here is to provide incremental justification and encouragement for scientists to seek funding to support the kinds of research that are necessary to provide more definitive conclusions.

As Bierman notes, "it is unclear if the driving factor behind these apparent anomalous correlations is a shared emotion, a shared attention or a specific state of consciousness that may transcend ordinary time and space constraints."[5] In complex field situations, these and other factors may all be involved. As research in Qigong suggests (for example, experiments involving Dr. Yan Xin

who purportedly influenced with his Qi the half life of radioactive isotope Am-241 and the orientation of the polarized plane of a laser beam—reported in Lin et al.), the concept of Qi (an eastern concept similar to the western concept of a field) challenges science to consider non-local influences of shared conscious experience that may transcend ordinary time and space constraints.[6,7]

FieldREG theory and research may provide a powerful bridge that connects eastern and western science and philosophy. Moreover, as Radin[7] puts it, FieldREG research on the phenomenon of field consciousness may bring us closer to apprehending the fundamental nature of the "conscious universe," the inherent interconnectedness of everything.

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