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Original Research

Correlations between onsite and global networks of random number generators during group healing meditations

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ABSTRACT

Introduction: The Global Consciousness Project 2.0 (GCP 2.0) is an initiative investigating the relationship between human consciousness and the behavior of the project's random number generators (RNGs). This was explored via a series of meditation workshops led by Dr. Joe Dispenza with between 1000-2200 participants. They are run almost monthly and include meditative practices and 3 separate Coherence Healing meditations, the high points of the events.

Methods: At all of the events in the first half of 2024, a tower of 40 RNGs in GCP 2.0 devices had been placed in the meditation room, constituting a local RNG network. Their data was compared to that of the hundreds of RNGs distributed across the globe, constituting a global network. All outputs were rigorously processed and tested to ensure randomness. In this exploratory study, each of the local and global networks were analyzed for Network Coherence, a measure of coherent activity across RNGs.

Results: During the 15 healing meditations, a significant correlation was observed between the Network Coherence of the global and local networks, with a mean correlation of 0.27 ($p < 0.01$). As this occurred only during healing meditations and not at other times, it suggests the highly focused attention and/or elevated emotional state across humans in the room may have measurable global impact, demonstrating the reach of a small coherent group. Also, combining the local RNG Network Coherence across all the healing meditation periods via a Stouffer's Z score resulted in a distinctive curve when plotted, resembling an evoked response. This suggests a mechanism whereby a coherently focused signal from the people in the room evokes a response from the RNGs similar to those observed in evoked potentials in the brain.

Introduction

The term "consciousness" holds deep meaning, often referring to awareness or sentience in living beings. It includes the capacity to recognize external stimuli, engage in inner reflection, and experience a sense of self.[1] Expanding this concept to include a global consciousness introduces a broader, multi-dimensional perspective of the self—one that embraces a sense of unity with all of humanity.[2]

The notion of a global or extended consciousness is rooted in diverse ancient spiritual and philosophical traditions that have long explored the interconnection of all life and the idea of a universal consciousness. During the latter part of the 20th century, advancements in consciousness research and emerging scientific paradigms began to question strictly reductionist frameworks. For instance, David Bohm proposed the concept of an implicate order[3] and Rupert Sheldrake introduced the idea of morphic resonance.[4]

These historical perspectives motivated the design of experiments that translate questions about consciousness into measurable physical effects, specifically deviations from randomness in electronic noise based on quantum events. Robert Jahn and Brenda Dunne conducted extensive studies investigating the influence of consciousness on physical systems—offering support for the view that consciousness and information can extend beyond individual minds.[5] While working with Jahn and Dunne at the Princeton Engineering Anomalies Research Lab, Roger Nelson carried out numerous experiments to test whether individuals could impact the outputs of random number generators

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(RNGs).[6] These are devices that are engineered to produce completely unpredictable sequences of 0s and 1s (i.e. bits). Their findings led to the creation of the Global Consciousness Project (GCP), the first modern initiative aimed at scientifically investigating interconnection and the emergence of a global human consciousness. The GCP employed a worldwide network of RNGs to examine whether significant global events and collective attention and/or synchronized emotions could affect the correlated behavior of random outputs.[7]

The Global Consciousness Project 2.0 (GCP 2.0) builds upon this foundation as an updated and broader version of the original effort, bringing rigorous scientific exploration to the effects of synchronized human consciousness (attention and emotions) on the coherence across a greatly expanded global network of RNGs. GCP 2.0 is currently being led by the HeartMath Institute. It is part of the Global Coherence Initiative (GCI), launched in 2008, based on the belief that humanity stands at a pivotal point in the evolution of consciousness—with the opportunity to shift toward more cooperative, inclusive, and interconnected social, economic, and cultural systems. GCI is a science-based endeavor which focuses on research into how human consciousness (including physiology, emotion, attention, and group behavior) relates to Earth's energetic systems, such as the geomagnetic field.[8-12]

The new GCP 2.0 network gathers data from a distributed array of RNGs located around the globe. These devices are engineered to produce completely unpredictable sequences of 0s and 1s, yet they show signs of coherence—called Network Coherence—during periods of strong attention and/or emotional synchrony across humanity. Network Coherence is a measure of the emergence of statistically correlated behavior among RNGs, devices that should otherwise produce independent, truly random outputs. This effect was first observed in the original GCP (GCP 1), whose accumulated data over 17 years revealed trillion to one odds against randomness, supporting with high confidence that global events generating collective attention and/or emotional responses could induce coherence among independent RNGs. These devices began to behave in synchrony despite their inherently random nature and physical separation, even across vast distances.

GCP 2.0 extends this earlier research using a significantly larger network. With over 4,000 RNGs planned, the project represents one of the largest continuous experiments on consciousness-related correlations ever conducted. A larger network is potentially more sensitive, as shown by a scaling analysis of GCP data.[13] It utilizes quantum tunneling technology for the generation of random numbers, and the project enables citizen scientist participation. Its goal is to further explore how shared human emotions and attention in response to global events may directly impact the physical world. By providing a better understanding of our interrelatedness, the project explores how our intentions and emotions may influence our environment. When there is synchronized attention or emotion the RNGs across the network are producing more 1's at the same time or more 0's at the same time than is expected by random chance over long time periods.[6,14]

The GCP 2.0 devices are designed with next-generation quantum tunneling technology and developed by experts in cryptography and computer science. Unlike GCP 1, which required continuous computer access and broadband connections, the GCP 2.0 devices are standalone and more accessible to citizen scientists. Each unit contains four independent RNGs, and the project plans to deploy 1000 of these devices globally. Half will be placed in 25 high-density or significant locations in clusters of 20 devices each, while the remaining 500 will be more widely distributed. All data from the global network are captured continuously into a closed, secure archive. At the time of writing, the size of the network already greatly surpasses that of GCP 1 at its peak. These RNGs, designed to produce unpredictable sequences of bits, show a measurable excess correlation—Network Coherence—during times of global attention and/or emotional synchrony.

A primary research question being explored in GCP 2.0 is the effect of focused, coherent groups on local and global coherence. The hypothesis is that not only large globally encompassing events concur with RNG Network Coherence, but even local events with a high degree of heart rhythm coherence and a shared intention are reflected in their environment, including RNGs near and far.[15-18]

Dr. Joe Dispenza leads meditation workshops that run almost monthly and offer a distinctive context for exploring this hypothesis. These events, which included large-scale meditative practices and Coherence Healing meditations, provided an opportunity to analyze the potential correlations between collective emotion and attention and increased network coherence in RNGs behavior. It has been shown that participants exhibit synchronization among their heart rate variabilities during such healings.[19] They serve as compelling case studies in the broader effort to understand the mechanisms by which consciousness may interact with other humans or objects in the context of healing and physical systems.

This paper presents a detailed exploratory analysis of 15 healing meditations conducted across 5 separate events in 2024. The dataset comprises outputs from an RNG Tower with 40 RNGs located on stage during each event, in conjunction with data from the GCP 2.0's distributed global RNG network including more than 700 RNGs. The central objective is to investigate whether structured collective practices—particularly those centered on healing and meditation—correlate with statistically significant anomalies in RNG data. Of particular interest are comparisons between the local RNG Tower and global RNG network, which would not significantly correlate with each other if they are generating truly random numbers. The study aims to contribute to the growing body of research on nonlocal effects and global coherence.

Methods

Physical setup

RNG data was collected during 5 events in 2024, at each of which there was an RNG Tower with 40 RNGs on stage. The healings occurred during retreats led by Dr. Joe Dispenza in the following North American locations and months: Marco Island, Florida, USA in January, Cancun, Mexico in February, San Diego (SD), California, USA in March, Dallas, Texas, USA in April, and Cancun, Mexico, in June. The format of these retreats follows similar structure and schedule, with some differences. 1000-2200 attendees who already had at least basic familiarity with the material being presented were guided through a series of lectures regarding the mind-body connection. They participated in 20-35 hours of guided meditation varying in intent and posture, including sitting, standing, lying, walking, and healing-focused meditations. Participants were trained in practices designed to cultivate elevated emotional states, focused intention, and a shift in awareness beyond ordinary self-identification.

All retreats shared in common that the last three days included one Coherence Healing meditation each, considered a highlight of the event, totaling 15 healing meditations across all events. Selected individuals with health conditions lie in the center of a group, while surrounding participants enter into emotionally elevated states. The group directs compassionate intention toward the individuals, with the aim of supporting physiological and psychological well-being. The guidance language during these healing meditations focused particularly on social coherence among the participants, and was therefore expected to coincide with Network Coherence among RNGs more than other event activities. This collective process was structured, guided, and repeated multiple times during the workshop, allowing investigators to study potential effects of intentionally generated group states of emotion and attention on measures of health and environment. RNG data was analyzed and data was compared from the tower and global networks. This study was exploratory, as a hypothesis was not formulated before the analysis of early events.

Instrumentation

The devices used for the RNG Tower at the events and the global network were designed by the HeartMath Institute and Ubld.it for the Global Consciousness Project 2.0. Each device contains 4 independent RNGs connected to a power source and the internet via ethernet cable. Data are stored in the cloud via Amazon Web Services (AWS). The global network was distributed across the planet with hosts who passed the application requirements, in most cases having one device in their home. As more hosts joined the global network, it grew during the course of the events, with more than 700 independent RNGs online during the first event and approaching 1000 RNGs during the fifth event. At all events the same RNG Tower was kept on stage throughout the entire event (see Fig. 1), a stack of 10 devices i.e. 40 RNGs.

Each of the 4 RNGs in one GCP 2.0 device generates 10,000 quantum random bits per second, and the first 200 were processed, to minimize correlation across outputs in adjacent seconds.[20] All outputs were rigorously processed and tested to ensure randomness, as detailed in Appendix A.

Analysis

Each RNG produces one number per second, the sum of the first 200 bits. These numbers were analyzed for Network Coherence, a metric named as part of GCP 2.0. We introduce two types of Network Coherence: the Network Coherence (Phase), also known as the Network Variance (NetVar) in GCP 1, and Network Coherence (Amplitude), which is directly related to the average Device Variance in GCP 1.[20] In the present analysis, Network Coherence always refers to the Amplitude version, as it is there that interesting results were found. Network Coherence (Amplitude) is calculated by the following steps: normalize each RNG output to a Z-score, square it to get the variance, subtract 1 to set the average level to 0, sum these across all devices, and finally divide by the square root of the number of devices. The cumulative Network Coherence (Amplitude) over a period of interest (e.g. meditation period) was calculated by accumulating the Network Coherence i.e. summing all of its values from the beginning of the meditation period until the time point of interest. For more calculation details, see Appendix B.

To interpret this metric, a significant upward trend in the cumulative Network Coherence (Amplitude) means that the RNG's across the network are producing a lot more 1 bits than 0 bits or a lot more 0's than 1's i.e. large amplitude. Conversely, a significant downward trend means that there is a fairly even amount of 0 and 1 bits being produced by each RNGs, with unexpectedly low variation i.e. small amplitude. A helpful analogy is to think of the RNGs like ducks on waves, with crests signifying an excess of 1 bits and troughs an excess of 0 bits. Normally, cumulative Network Coherence (Amplitude) is close to 0, signifying expected random behavior, with ducks riding all parts of regular waves. When cumulative Network Coherence (Amplitude) trends downwards, many ducks are coherently experiencing calm, balanced waters. However, when it trends upwards, the ducks are experiencing choppy waters, similarly (coherently) riding the extremes of the waves with some in crests and others in troughs.

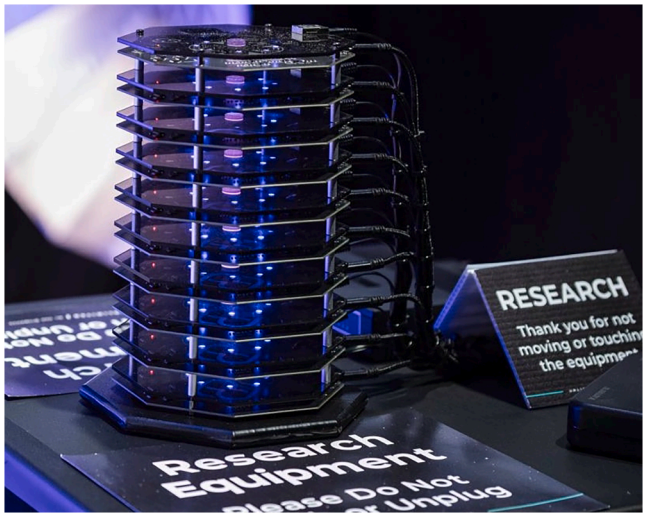

Fig. 1. RNG Tower on stage at a healing retreat.

Separately, to depict general underlying timeseries behavior across multiple healing meditations, the RNG Tower outputs from all healing meditations were combined into one timeseries. The cumulative Network Coherence (Amplitude) at each point in time was converted to a p-value, which in turn was converted to a Z-score. The meditation periods were lined up in time, and their Z-scores were summed at each time point and divided by the square root of the number of periods, known as a Stouffer's Z score.[21] More calculation details can be found in Appendix C.

Results

To explore potential correlations between local and global random number generator (RNG) networks during healing meditations, data collected across multiple events in early 2024 was analyzed. The investigation focused on identifying patterns in Network Coherence (Amplitude)—an index of collective deviation from randomness—during the periods of healing meditations compared to other time intervals. Present here are the results from an individual event, a summary across multiple events, statistical significance testing, and an aggregated analysis of temporal dynamics within the healings.

The first retreat at which the RNG Tower Network was present ran from January 10-13, 2024 (Wed. to Sat.). The Network Coherence was observed during the three healing meditations, the highest emotionally focused points of the event, in both the local RNG Tower and global network. It was found to behave similarly in both networks for all three healings, as shown in Fig. 2. During the first healing, for both networks, the Network Coherence steadily rises and has points of crossing the chi-squared $p = 0.05$ significance threshold. During the second healing, the Network Coherence descends steadily, with points of nearly crossing the significance threshold. During the third healing, the Network Coherence hovers around the 0 line, mostly out of range of the significance thresholds. This is surprising, as the RNGs are rigorously designed to be free of bias and to exhibit only random, uncorrelated behavior. Note that significant deviations were found during healings in either tail, appearing as significant upward or downward trends in the cumulative Network Coherence. Either direction indicates coordinated non-random behavior.

These results suggest a coherence or correlation occurring between the two networks, but when the authors looked across the rest of the event, the Network Coherence patterns did not look the same; the local Network Coherence followed a generally decreasing trend that mostly stayed near or across the significance threshold, but the global Network Coherence steadily increased. Furthermore, other periods during the same event of similar length to the healing meditations were analyzed, and the local and global Network Coherence exhibited different behavior. Only during healing meditations was this behavior observed.

This similarity was reminiscent of behavior that was observed during the sole past event that had a 40-RNG GCP 2.0 Tower, in Orlando, FL, USA in Nov. 2022. There too the Network Coherence was similar across local and global networks. To further test this, the Network Coherence during the next event in Cancun, Mexico in Feb. 2024 was analyzed, and again similarity was observed between the networks during the three healings. At this point, the authors hypothesized there to be a direct Pearson correlation between the cumulative Network Coherence of the two networks during healings and proposed to test this across several events.

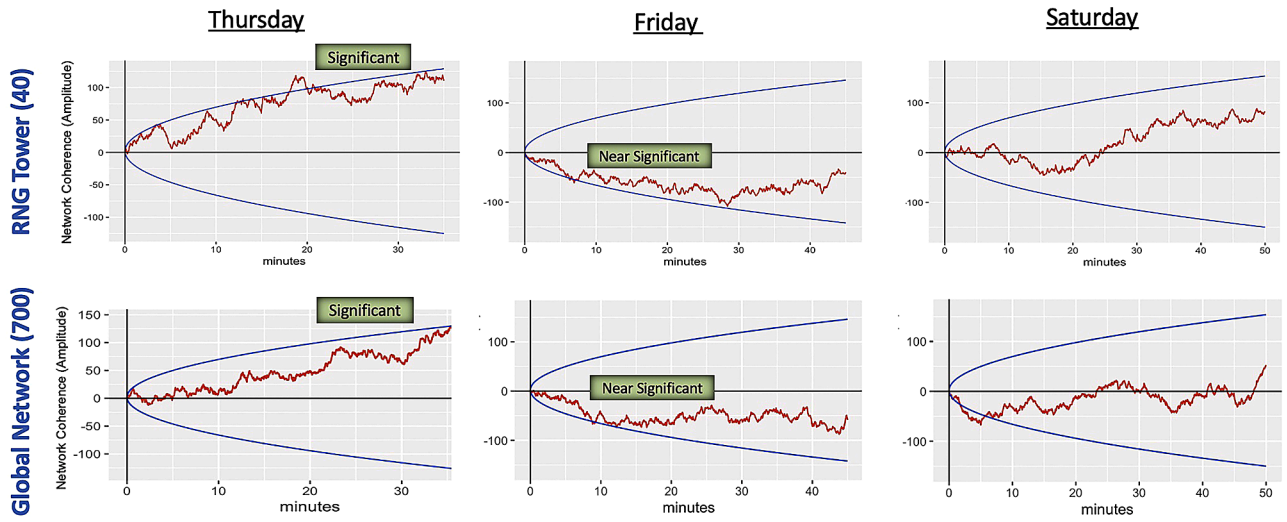

Fig. 2. Cumulative network coherence (Amplitude) across the local and global network during the three healing meditations at the event in Marco Island, FL, U.S.A. in January 2024. Each column corresponds to one healing. The top row depicts results from the local RNG Tower (40 RNGs) while the bottom row depicts results from the global network (700+ RNGs). The red curve is the Network Coherence while the blue curve is the significance envelope ($p = 0.05$), the threshold across which network behavior is considered significant. The trends in the Network Coherence in the top and bottom row appear similar.

The recurring correlations between the two networks appears evident across many of the 15 healing meditations, shown in Fig. 3. Given that healing meditations always lasted at least 30 minutes but sometimes extended to 50 minutes, the first 30 minutes are shown for all healings to maintain consistency. Global and local Network Coherence are visibly similar for many meditations, in some cases tracking a fairly monotonic upward or downward trend while in others even following more complex trends. The Pearson correlation between the local and global cumulative Network Coherence was positive during 10 out of 15 healings, with an average correlation of 0.27. Apparently, there is a correlation between local and global networks of RNGs that one would have expected to be random and unconnected.

To test for significance, control RNG data was independently generated in fifteen pairs of 30-minute segments. The same process was applied as for the observed data: cumulative Network Coherence was calculated for each segment, and a mean correlation was taken across them. Repeating this process 1,000 times produced a distribution of expected mean correlations, shown in Fig. 4. The distribution appears symmetric as expected and given its width, the observed correlation of 0.27 lies well into the positive tail, with a one-sided $p < 0.01$. There is a significant correlation between the local and global RNG networks.

Another interesting finding arose in the analysis of the local RNG network. To depict general underlying timeseries behavior across all healing meditations, the RNG Tower outputs from all healing meditations were combined into one timeseries In Fig. 5, the Combined (Stouffer's) Z-score of the cumulative Network Coherence accumulated across all healing meditations is shown, for the first 33 minutes of the healings since they all lasted at least that long. This provides an averaged view of the network behavior during the course of a healing. The Z-score has a distinctive shape, although it does not reach significant

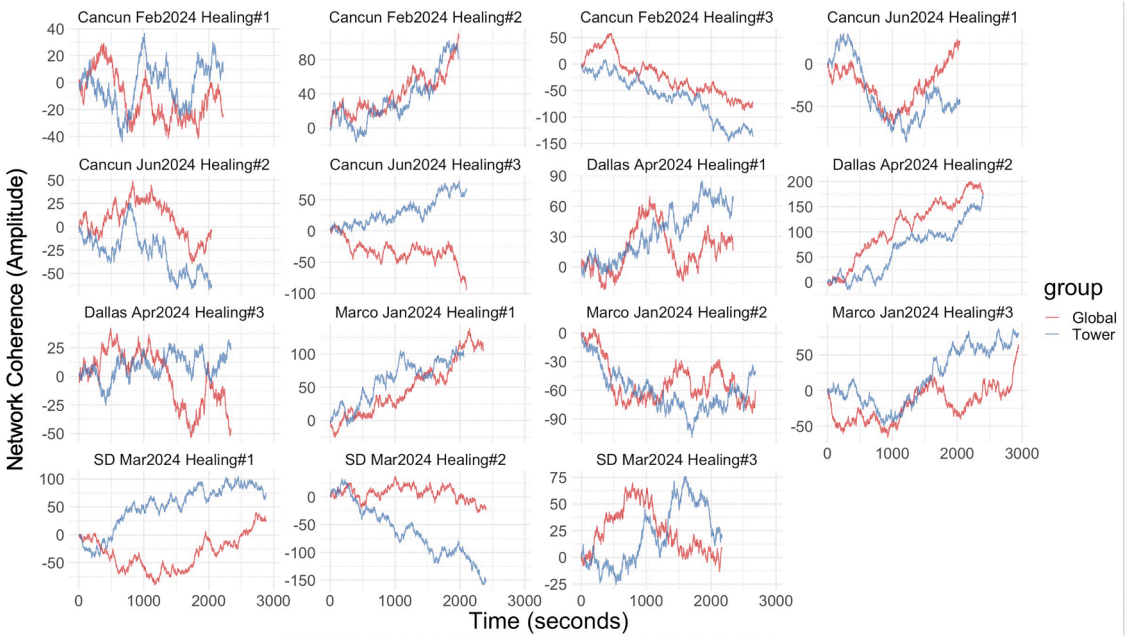

Fig. 3. Cumulative network coherence (Amplitude) across the local (blue) and global (red) network overlaid for all 15 healing meditations during the first half of 2024. Many of the local and global trends in the Network Coherence appear similar to each other.

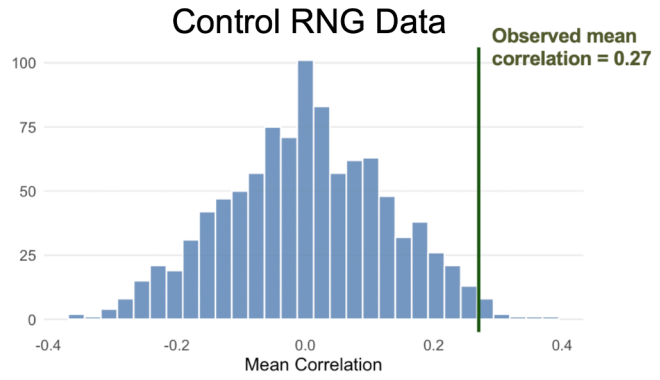

Fig. 4. Distribution of mean correlations between the cumulative Network Coherence of matched control RNG data. This is compared to the observed mean correlation of 0.27 across all actual meditations, demonstrating statistical significance ($p < 0.01$).

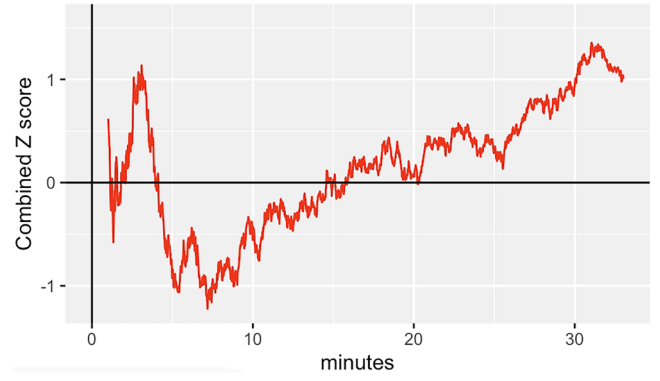

Fig. 5. Stouffer's Z score in the local RNG tower, representing the cumulative network coherence combined across all 15 meditations. The trend resembles an impulse followed by a response.

values, with a sharp increase during the first few minutes, followed by a sharp drop, and then a slower increase for the remainder of the healing. It resembles an evoked potential response which has also been observed in GCP 1 data in smoothed network variances. [2] This is in contrast to a typical random output from the RNGs, observed as a lack of Network Coherence at other times during or outside this workshop, which has been observed as noisy and meaningless. The RNG Tower results provide a possible window into the mechanism of interaction between the participants and the devices.

Discussion

The present study revealed a striking and unexpected pattern: during healing meditations, the behavior of the local RNG Tower Network and the Global RNG Network showed consistent correlations across 15 separate healing meditations. While these two independent systems are designed to behave randomly and independently, their coherence trends frequently mirrored one another during healing periods. This anomalous alignment was not observed during control periods of similar length. Statistical testing confirmed that the observed average correlation of 0.27 between local and global Network Coherence during healings lies beyond chance expectation ($p < 0.01$). This implies that something occurring during the healing is influencing both networks.

This supports the hypothesis that the actions of a small, focused and coherent group are connected and impact the coherence of the planetary consciousness. The focused efforts of the meditation groups at these events creating a coherent environment may impact global coherence in a measurable and quantifiable way. This could be directly causal or perhaps a third entity such as global consciousness is affecting the local and global environment.[6] A counter-proposal would be that global events – among humans or other physical objects – are influencing RNGs globally and in the room. This does not explain why this behavior only shows up during healing meditations and not other parts of the event. Rather, it appears the healing meditations evoke a coherence that expands nonlocally to the planet and is measurable in RNG network coherence.

Another possibility follows a goal-oriented approach, that the designers and analysts of the experiment rather than the participants exert intentional influence on the results based on their expectations.[23] However, these healing meditations were chosen based on being the high points of the event during which many participants report coherence, and the replication was comprehensive in choosing all 15 consecutive healing meditations across the events during the time period of analysis. It seems unlikely that this one choice of 15 periods happened to coincide with such consistent correlated behavior. Furthermore, a goal-oriented approach does not well explain findings of long-term correlations between global network coherence and markers of collective sentiment such as Google Trends search data[24] and the stock market.[25] It was found, independent of any choice of event to analyze, that GCP data over several years correlates to these metrics that can be considered proxies of public attention and emotion. It seems more likely that collective attention and emotion is a main contributor to RNG Network Coherence.

The hypothesis that a coherently focused group of people in a room are measurably impacting the planetary consciousness field is supported by this exploratory study but requires further investigation. It is plausible that, by averaging across many healing meditations, the signal of the effect of this group is being extracted from the noise. A confirmatory study with a preregistered hypothesis is warranted. One could also investigate whether correlations are stronger in the local vicinity of the event, or display some other spatial profile centered on the event,[26] suggesting that the event provides the source of the global effects. Some preliminary evidence for this has been observed in this dataset by comparing the local RNG Tower to the networks across the USA and Mexico. It also raises interesting research questions about the parameters that affect a group's ability to measurably impact coherence locally and globally. These parameters may include the size of the group, the degree of meditation focus on group or planetary coherence vs. other meditation modalities, and the number of RNGs in the detection network. To study this, further experiments are being planned and conducted, measuring RNGs in the vicinity of meditation.

Another area of investigation is the mechanism that connects human and RNG coherence. From the standpoint of established physics, electromagnetism and/or quantum mechanics seem to be leading contenders.[27, 28] For example, the people in the room may influence RNGs via electromagnetic signals and vice versa, similar to the action of cell phones. These signals may be generated by the heart, which is known as the strongest generator of electromagnetism in the body.[29] The heart's rhythms have been shown to synchronize with those of other hearts[11, 30, 31] and may also form a basis of connection with objects like RNGs. Another possibility is quantum entanglement between humans and RNGs and amongst each other. Questions of causality also arise here, as we know that the coherence is concurrent for the humans and RNGs, but it is less straightforward to disentangle if one is influencing the other or perhaps they are truly connected and concurrent in an acausal fashion.

In the local RNG Network Coherence, the combined Stouffer's Z score across all the healing meditation periods also exhibited a distinctive curve, resembling an evoked potential response. This suggests a mechanism whereby a coherence "pulse" from the people in the room evokes a response from the RNGs, which evolves over the course of the healing similar to an electroencephalography evoked potential in the brain. Similar parallels were drawn in RNG data in GCP 1, with multiple examples of averaging smoothed Network Coherence (Phase) across repeated similar events that resulted in patterns resembling evoked

potentials.[22] This would be a worthy area for further study. Investigation into the raw electronic voltages that give rise to the random numbers may clarify the mechanism, and these RNGs are storing such data for future analysis.

Conclusion

Across 15 healing meditations at five events, a consistent pattern of correlation was observed between the local RNG Tower Network and the Global RNG Network—two systems expected to produce uncorrelated random output. This correlation emerged specifically during the healing periods and was absent during control runs, exhibiting a time-locked, non-random connection between the two networks. Statistical analysis confirmed the significance of this effect ($p < 0.01$), and the consistent evoked potential -response shape observed in the local RNG network points toward a repeatable, possibly structured influence. These findings provide evidence that collective human consciousness, particularly during coherent, emotionally charged group experiences, may interact with physical systems in unexpected ways. Even a relatively small, coherently focused group may impact the larger global field. Future research is needed to confirm these exploratory findings, explore the underlying mechanisms of this interaction, and to determine whether similar effects can be observed across other group practices or intentional settings.

Data availability statement

All datasets analyzed in the current study are available from the corresponding author on reasonable request.

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CRediT authorship contribution statement

Nachum Plonka: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Scott Davies:** Investigation, Formal analysis, Conceptualization. **Mike Atkinson:** Methodology, Data curation. **Kevin Crowe:** Visualization, Data curation. **Joe Dispenza:** Visualization, Data curation. **Rollin McCraty:** Writing – review & editing, Project administration, Methodology.

Declaration of competing interest

The authors declare no conflict of interest.

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Appendix A. RNG Output Processing and Testing

Each of the 4 RNGs in one device generates 10,000 quantum random bits per second. All outputs are rigorously processed and tested to ensure randomness. Each RNG consists of a pair of Zener diodes that undergo reverse biasing, and the resulting quantum tunneling generates a random analog time-varying voltage. This undergoes the following stages of whitening to ensure randomness and remove any conventional biases such as temperature that cause thermal fluctuations in the electronics. This whitening scheme was used in most of the RNGs in GCP 1, branded ORION RNGs.[20] The diode outputs are run through a series of electronic circuit elements, starting with a D flip-flop, a logic circuit that converts the signal to either "high" or "low." Then, an XOR gate is applied to the two signals from the pair, outputting a high signal if one signal is high and the other low but outputting low if the input signals are the same. Next, the XOR output is sampled every 0.1 ms, digitizing it into 10,000 bits per second, where high signals convert to 1 and low signals to 0. Then, a further XOR is applied to this stream against an alternating sequence of bits (101010…). Finally, the first 200 bits of each second are summed, discarding the remaining bits to minimize correlation across outputs in adjacent seconds.[20] This produces a number from a binomial distribution - also a normal distribution for such a large sample size - with expected mean of 100 and standard deviation of sqrt(50). Every device received 24 hours of testing before being included in a network as well as periodic checks, running through a suite of statistical tests including Z tests of the mean and standard deviation, Wald-Wolfowitz runs tests, and Jarque Bera and Shapiro tests for normality.

Appendix B. Calculation Details for Network Coherence (Amplitude)

During the time periods of interest, cumulative Network Coherence (Amplitude) was calculated (also known as Device Variance in [20]) for each second as

$$C(t) = \frac{1}{\sqrt{R(t)}} \sum_{r,t} \left(Z_{r,t}^2 - 1 \right) \tag{B.1}$$

where Z is the Z-score derived from the number output by the RNG r at time t in seconds and there are a total of R independent RNGs online at time t. The Z-score is calculated using the previous day's mean and standard deviation over 24 hours, a close approximation to the expected mean and standard deviation for a binomial distribution. Since Z is expected and typically observed to follow a normal distribution, C(t) is expected to follow a chi-squared distribution with t degrees of freedom, and two-tailed p-values can be derived for a given value of Network Coherence.

Appendix C. Calculation Details for Combining Timeseries from Multiple Meditation Periods

To depict general underlying timeseries behavior across H healing meditations, the RNG Tower outputs from all healing meditations were combined into one timeseries. For the duration of each healing h, the cumulative Network Coherence at each second t was converted to a p-value and then a corresponding Z-score $z(h,t)$. Then, the Stouffer's Z-score[21] was taken across all healings to generate one timeseries:

$$Z(t) = \frac{1}{\sqrt{H}} \sum_{h} z(h,t) \quad \text{(C.1)}$$

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