

Article

## Alterations of Consciousness at a Self-Development Seminar: A Matrix Energetics Seminar Survey

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### ABSTRACT

Matrix Energetics is a system of self-transformation developed by Richard Bartlett in the context of alternative medicine, which he teaches at training seminars around the world to anyone who wishes to learn it. The authors conducted the present study to determine what happens psychologically at a Matrix Energetics seminar and to see if there could be any long-term health benefits associated with participation at such a seminar. Participants were 97 attendees at a Matrix Energetics seminar held over three days at a hotel in Philadelphia, Pennsylvania. There were 69 women and 26 men ( $N = 95$ ) with a mean age of 51.1 years ( $SD = 13.2$ ; age range: 18–77 years;  $N = 94$ ). Participants were given questionnaires to complete before the beginning of the seminar, at the end of each of the three days, and through a website at a two-month follow-up. The questionnaires included measures of demographic information, personality, psychological well-being, physical and mental health, state of being, and profundity of experiences. In addition, behavioral observations were made and participants were interviewed. During the seminar participants appeared to experience reality as being more plastic than we ordinarily assume it to be while in an attentive, expanded, and emotionally positive state of being. Using the total scale of the 36-Item RAND Health Survey, a paired samples  $t$  test revealed that overall health was better at the follow-up ( $M = 81.33$ ;  $SD = 10.43$ ) than at the time of the initial questionnaires ( $M = 72.77$ ;  $SD = 16.15$ ) with  $t(24) = 3.42$ ,  $p = .002$  (two-tailed), although that result needs to be interpreted with caution. The alterations of consciousness experienced in the context of Matrix Energetics should be further investigated as should the potentially therapeutic benefits of experiencing Matrix Energetics.

**Key Words:** Self-development, alterations of consciousness, meaning, well-being, Matrix Energetics.

Matrix Energetics (ME) is a system of transformation developed by Richard Bartlett, a chiropractor and naturopath, in the context of alternative medicine. Together with Melissa Joy Jonsson, Bartlett has been teaching this system to the public in a series of seminars, each lasting from one to three days, which have been held in hotel conference rooms around the world. The purpose of this study was to investigate what occurs psychologically for people who participate in an ME seminar and to determine whether there could be any long term improvements in physical or psychological health following a seminar.

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The practice of ME consists of applying specific techniques to oneself or to someone or something else. These techniques essentially consist of noting one's own spontaneous thoughts, creating changes in the imagination, and then allowing whatever process appears to be taking place, to take place. In theory, the recipient of ME does not need to be physically present for effects to occur. Whatever is happening is sometimes conceptualized as interacting with a non-physical, intelligent field that has the ability to create changes. Those who have experienced ME have reported noticing somatic sensations, altered emotions, unexpected thoughts, or, in some cases, the spontaneous remission of physical conditions. For instance, sometimes recipients of ME have reported feeling a wave-like sensation in their bodies and ended up lying on the floor (Bartlett, 2007; 2009; Barušs, 2012; 2013; Jonsson, 2013; Marlowe, 2010).

Because of the nature of ME and its possible non-local effects, it is difficult to determine where the boundaries of ME lie, and no effort is made to do so in this study. That would require additional studies that would be difficult to do. Also, for the purposes of this study, no effort is made to distinguish ME from non-specific factors such as social interactions with like-minded individuals, suggestion, listening to a charismatic speaker, and so on. Teasing those out would require separate studies. The situation we faced is not dissimilar to that of the phenomenon of hypnosis. Hypnosis researchers cannot agree on a definition of hypnosis. The closest that they come to agreement is to say that hypnosis is whatever it is that is happening in situations that have been labeled as hypnosis (Barušs, 2003). Similarly, for the purposes of this study, ME is operationalized as whatever it is that is happening at an ME seminar.

We begin our literature review by summarizing two remote influencing experiments using techniques derived from ME and then discuss a study of people who said that they had had transformative experiences in the context of ME. Falling down is a conspicuous behavior at ME seminars, so we say a little bit about that. Then we situate ME in the larger context of self-development and healing. We conclude by laying out the design of our study.

## **Remote Influencing Experiments**

Imants Barušs conducted two experiments using techniques derived from ME to look for any apparent effects of remote influencing. Both experiments were done entirely over the Internet. In Experiment 1, Barušs conducted 34 remote influencing sessions for 15 volunteers asking them to report anything that they thought had occurred during the time of the sessions. On the basis of the responses from participants, Barušs decided to use self-reported energy levels as the main dependent measure in a second experiment.

Experiment 2 consisted of 138 sessions carried out from May 26, 2010 to May 11, 2012 with 22 participants who had provided informed consent and indicated times when they would not be driving or operating machinery. Barušs emailed participants indicating the time that he would begin a session for them, then would flip a coin to determine whether or not it would be a control or experimental session. If the coin landed heads, he did a remote influencing session for them lasting for about 20 minutes. If the coin landed tails, he did nothing further. Participants were asked to respond to three statements on a 6-point Likert scale from "Strongly Disagree" to "Strongly Agree." These were

statements that something unusual had happened, that participants were more fatigued than they expected to have been, and that participants were more energized than they expected to have been. In addition, if he did an experimental session, Barušs took two self-measures immediately after the conclusion of the session, each on a rising scale from 1 to 10, of his degree of psychological absorption in the task and of the depth of his altered state of consciousness.

All of the dependent measures were in the expected direction with the absolute value of the difference between being fatigued and being energized reaching statistical significance. The absolute value of the difference was  $M = 1.56$  ( $SD = 1.59$ ,  $n = 57$ ) for the control group and  $M = 2.08$  ( $SD = 1.58$ ,  $n = 60$ ) for the experimental group with  $z = 1.78$ ,  $p = .04$  (two-tailed). There were no correlations of dependent measures with length of sessions or absorption but there was a correlation of  $r = -.29$  ( $p < .05$ , two-tailed,  $n = 55$ ) of being energized minus being fatigued with depth of altered state of consciousness suggesting that the deeper Barušs' altered state, the more likely participants were to feel fatigued rather than energized. This correlation should be interpreted with caution given that no correction to the level of statistical significance was applied to the consideration of multiple correlations (Barušs, 2013). These results suggest that anomalous remote influencing could take place in the context of ME.

## **Transformative Experiences in an ME Context**

For her doctoral dissertation at the Institute of Transpersonal Psychology, Jos Marlowe sought to understand the nature of transformative experiences that individuals claimed to have had as a result of attending ME seminars. She solicited participants by word of mouth and selected them if they said that they had had “transformative experiences” in the context of ME and had not been engaged in other “transformative spiritual practices at the time” (Marlowe, 2010, p. 28). Of the 15 participants who ended up in her study, 11 completed all aspects of the study.

Participants were asked to fill out an initial questionnaire, two custom questionnaires with written responses, and two quantitative measures, the Self-Expansiveness Level Form (SELF) and the Hartmann Boundary Questionnaire (HBQ). The first of the written response questionnaires essentially asked participants to tell their stories of what had occurred for them, whereas the second written response questionnaire was used to further query participants using standardized questions about themes that emerged from the first questionnaire. Marlowe used two scales from the SELF to measure “identification with the here and now” and “identification with aspects of reality beyond that which is ordinarily perceived” (Marlowe, 2010, p. 33). The HBQ, measured the degree to which a person has “thin” psychological boundaries in the sense of having ready access to non-conscious psychological material (Marlowe, 2010, p. 35).

Using qualitative analyses, Marlowe found 22 themes, which she called “focus codes” (Marlowe, 2010, p. 56), such as “effortlessness” and “transformation” denoting that participants found the practice of ME to be effortless and transformative, respectively (Marlowe, 2010, p. 124). Six of 88 correlations of focus codes with SELF and HBQ scales were statistically significant. The largest of those correlations was  $r(11) = -.86$  ( $p < .01$ ) of “SELF Personal” with the “Unexplained” focus code, indicating that those who were more grounded in the present were less likely to say that they had

experienced phenomena that they could not explain. The second highest correlation was  $r(11) = .76$  ( $p < .01$ ) between the HBQ “World Total” scale and the “Effortlessness” focus code, suggesting that those who have thinner external boundaries found that ME experiences flowed effortlessly (Marlowe, 2010, p. 47). Marlowe summarized her results by saying that effortless, limitless, transformative changes occurred; that detachment was required to have these experiences; that “What one focuses on expands;” and that “The experience involves shared subconscious processes” (Marlowe, 2010, p. 40).

One of the main problems with Marlowe’s study is the apparent lack of critical reflection by Marlowe. For instance, Marlowe explained the correlation between the HBQ “World Total” scale and the “Effortlessness” focus code by saying: “Effortlessness in this case correlates to the effort that is involved in channeling the energy of the quantum vacuum” (Marlowe, 2010, p. 47). Richard Bartlett has used quantum language to describe his system of self-transformation, Marlowe’s participants used Bartlett’s language to describe their experiences, and Marlowe used Bartlett’s and the participants’ language to explain her results. No evidence has been provided anywhere in Marlowe’s dissertation that anything that she discussed actually has anything at all to do with the quantum vacuum. Another of the problems with Marlowe’s study is that it is frequently not clear whether Marlowe’s participants were reporting events that actually occurred for them or whether they were reporting what they believed should be the interpretation of whatever was happening for them. Without adequate critical reflection, Marlowe’s dissertation could simply be a conduit for Bartlett’s teaching. There are also problems with the small sample size, data analyses, and confusing lines of reasoning.

In spite of its shortcomings, Marlowe’s dissertation gives some insight into the experiences that people can have at an ME seminar. Common themes include the notion that participants’ mental states have been altered, that participants sometimes experience various somatic sensations, including falling down, and that reality has become more plastic so that improbable events are more likely to occur, such as the spontaneous remission of disease. All of these events should be more carefully examined, and we try to make a beginning at doing so in this study. If ME can have gainful effects on people’s health, then research concerning ME could have far-reaching, practical, beneficial consequences for health care.

## **Falling Down**

There are a number of characteristic behaviors associated with experiencing ME, including uncontrollable laughter, spontaneous movement of various sorts, falling down, and, sometimes, jerking around after having fallen to the ground (Bartlett, 2007; Marlowe, 2010). Richard Bartlett has said that falling down is incidental to whatever is happening during the experience of ME, except that physical movement could facilitate productive readjustment that could be taking place in people’s bodies (cf. Bartlett, 2008). Marlowe (2010) has speculated that falling down occurs when the person experiencing ME is exposed to the altered state of the person who is working on her, although she does not explain why such exposure should result in the loss of muscle tone. In general, falling down is not confined to ME. There are two other significant contexts in which similar experiences occur, including the experience of falling down: The phenomenon of being “slain in the

spirit” of Pentecostal-charismatic Christians (Robbins, 2004) and the result of suggestion during hypnosis.

Uncontrollable laughter, spontaneous bodily movements of various sorts, falling down, and jerking around while on the ground are common experiences during charismatic and Pentecostal services and are typically referred to as being “slain in the Spirit” or, more colloquially, as “carpet time” (Singleton, 2014, p. 383). For some individuals, the experience of being slain in the spirit is propelled by deliberately releasing their resistance to it, whereas others just find that their muscles give out so that they can no longer stand. These experiences are described as “bodily manifestations of the Holy Spirit” and are attributed to “God’s power” (Singleton, 2014, p. 384; see also Taves, 1993).

All of these behaviors can also occur in the context of hypnosis for some people who are high in hypnotic susceptibility. It should be noted that hypnosis is not a homogeneous state. Rather, there are three types of highly susceptible people: the positively set, the fantasy prone, and the amnesia prone (Barber, 1999). Several brain imaging studies have shown that hypnosis does have unique brain states associated with it, lending support to the notion that in some cases hypnosis is a special state (Barabasz et al., 1999; Maquet et al. 1999). The person who rationally decides to go along with what is happening could be a positively set person, whereas the one who feels that she has no choice, thereby exemplifying the classic suggestion effect of hypnosis (Barušs, 2003), could be fantasy prone or amnesia prone. Attributing falling down to hypnosis is not an explanation but a re-labeling. In other words, falling down during ME, slain in the spirit, and falling down during hypnosis, are different descriptions of what appear to be similar behaviors that could have similar or different causes for different people in different contexts. The mechanism is not known for any of these. In this study we will try to determine some of the characteristics of falling down in the context of ME.

## **Self-Development and Healing**

Perhaps the most straightforward contexts for ME are those of self-development and healing. There is a notion, particularly in humanistic and transpersonal psychology, that human psychological development does not end with adulthood, but continues toward states of exceptional well-being (Barušs, 2003; 2007; Maslow, 1968; 1971/1976; McDowell, 2010). The activities in which people engage during ME seminars are intended to induce self-transformation. Part of that self-transformation can include healing of physical or psychological ailments. In addition, ME grows out of chiropractic and naturopathic health care so that the activities taking place can be viewed in the context of healing. The notion of “therapeutic transformation” captures the notion of change toward greater well-being without reference to specific religious, therapeutic, or developmental models (Canda, 1988, p. 205) and provides a way of talking about the confluence of self-development and healing. That is the context that we will use for this study.

## **Design**

The purpose of the present study was to see what psychological events occurred for participants at an ME seminar and to see if there were any long-term health benefits. The study was conceptualized as

having three stages. During the *pre* stage participants would fill out a battery of instruments while waiting in their seats for the seminar to begin. During the *post* stage participants would fill out questionnaires at the end of each of the three days of the seminar. In addition, behavioral measures would be taken of participants during demonstrations and practice sessions and those participants would be interviewed immediately afterwards about the experiences that they had had during those events. The *follow-up* stage would consist of having participants log onto a custom website designed for the study in order to fill out another battery of instruments. The *post* measures were to be used to determine what was happening psychologically both by considering the data on those measures alone and by comparing the data from those measures with the *pre* measures. The *follow-up* measures were to be used primarily to see if there were any improvement in health from the time of the *pre* measures.

Given the previous studies of Matrix Energetics, as well as the informal information available to the researchers, it was expected that participants would experience alterations of consciousness characterized by greater psychological lability during the seminar and that there would be overall improvements in health afterwards. However, given that this was an exploratory study, there were no formal hypotheses.

## Method

### Participants

Participants consisted of 97 attendees at a Matrix Energetics seminar held August 18–20, 2012 in a hotel in Philadelphia, Pennsylvania. There were 69 women and 26 men ( $N = 95$ ) with a mean age of 51.1 years ( $SD = 13.2$ ; age range: 18–77 years;  $N = 94$ ). With regard to education, 23 indicated that they had completed high school, 40 that they were college graduates, and 28 indicated that they had a post-graduate degree. Six did not respond to this item. There was broad representation from a number of occupations including physicians, nurses, those working in various healing and alternative healing modalities, and occupations unrelated to self-development or healing such as college professors, engineers, musicians, artists, office workers, and gas station attendants. The most commonly chosen religious affiliation was “Other” with 32, “Own Beliefs” with 27, “Christian” with 20, “None” with 10, and smaller numbers for other alternatives ( $N = 93$ ). Frequency of religious practice ranged from 1 (Daily) to 5 (Never) and had a mean value of 2.3 ( $SD = 1.6$ ;  $N = 86$ ) where “2” was labelled “Weekly” and “3” was labelled “Monthly.” Only 28 indicated that they had not had any previous training in healing; 50 indicated that they had had previous training in “Alternative Medicine;” 21 in “Other” forms of healing; and 12 in “Traditional Medicine” ( $N = 95$ ). Of the 95 participants who responded to an attendance item, 59 said that this was their first Matrix Energetics seminar; 15 said it was their second, 2 that it was their third, 3 that it was their fourth, and 16 that they had been to at least four previous seminars.

### Materials

**Consent letter.** The consent letter consisted of a description of the study and the steps that

individuals could take should they choose to participate in the study. This letter also outlined the type of data that would be collected and assured individuals that their identities would remain anonymous. Contact information of the lead investigator was included. There was a place for individuals to print their name, sign, and date the document. Individuals were also given a pencil if they needed one.

**Pre-Measures.** The pre-measures package consisted of six pages of paper-and-pencil questionnaires. On the first page participants were asked for their names, email addresses, and written descriptions of their motivation and expectations associated with attending the Matrix Energetics seminar. On the second page, participants were asked for demographic information as well as being given a Personality Inventory. The following pages consisted of the State of Being Questionnaire (Pre), Carol Ryff's Scales of Psychological Well-Being, and the RAND 36-Item Health Survey.

**Behavioral Measures and Post-Experience Interview.** During the course of the seminar, a member of the research team would observe an attendee while she was experiencing ME during a demonstration on stage or during one of many practice sessions. The researcher would fill out the Behavioral Measures form on the basis of her observations. If the attendee who was observed turned out to be a participant in the study, she was asked to complete a Post-Experience Interview with the same member of the research team who had observed her. These interviews were audio recorded and later transcribed. In addition to an open-ended question, the Post-Experience Interview consisted of questions asked by the researcher to which the participant responded by indicating her preference along a Likert scale.

**Post-Measures.** The Post-Measures package consisted of a single sheet of paper on which participants were asked to fill in their name and the day on which the Post-Measures were completed. Participants were asked to describe the most memorable experience that they had had that day. This was followed by the Profundity Scale and the State of Being Questionnaire (Post).

**2-Month Follow-Up.** A questionnaire was set up on our university server which participants were invited to access two months after the seminar. Participants were asked to describe what effects they felt that the Matrix Energetics seminar had had on them. This was followed by the Personality Inventory, Scales of Psychological Well-Being, the RAND 36-Item Health Survey, the State of Being Questionnaire (2-Month Follow-Up), and concluded with a space in which participants were asked to provide any additional comments or reflections.

## Measures

**Demographics.** The demographics section of the *pre* measures package was used to gather basic information about participants: age, gender, occupation, highest level of education, religious affiliation, frequency of religious practice, number of Matrix Energetics seminars previously attended, and previous training in healing, if any.

**Personality Inventory (PI).** Gerard Saucier's Mini-Markers were used as a measure of the big five personality traits. This is a self-report questionnaire consisting of 40 adjectives for each of

which the participant is asked to indicate how well it applies to her on a scale from 1 (“Extremely Inaccurate”) to 9 (“Extremely Accurate”). Eight adjectives per scale are averaged to obtain scores for the big five personality traits of Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Intellect or Openness with alpha coefficients of .83, .81, .83, .78, and .78 ( $N = 320$ ) respectively (Saucier, 1994).

**State of Being Questionnaires (SBQ).** There were *pre*, *post*, and *follow-up* versions of State of Being Questionnaires designed specifically for this study. As much as possible, items were worded in a counterbalanced manner so as not to suggest an implied bias. All items were scored on a seven-point Likert scale from “strongly disagree” to “strongly agree.” Validity consisted of face validity and there were no reliability data until the results were analyzed.

Twenty items, designed to measure the state of consciousness of participants, were common to all three questionnaires. These were chosen on the basis of previous informal experience with people’s reports of their experiences at ME seminars and modelled after Barušs and Moore’s Beliefs About Consciousness and Reality Questionnaire (Barušs, 1990; Barušs & Moore, 1992) and Ronald Pekala’s Phenomenology of Consciousness Inventory (Pekala, 1991). Items included “There is no reality other than the physical universe,” “My energy levels are high,” “I feel present to whatever is happening,” and “The carpet seems to be moving.” The wording for the last of these was changed to “The floor seems to be moving,” for the follow-up questionnaire.

In addition to the 20 core items, we devised a humility scale for the *pre* questionnaire in order to supplement the personality measures and see if humility is relevant to whatever occurs at the seminars. The humility scale consisted of eight items such as “I am aware of my strengths, but also acknowledge my weaknesses,” and “I am comfortable accepting honest criticism.” There were two additional items: “Even though it would be nice if it were so, miracles do not really happen,” and “I think that I am going to learn a great deal at this seminar.” The net result was a *pre* State of Being Questionnaire with 30 items.

The *post* SBQ consisted of the core 20 items plus the following two items: “I feel reborn,” and “I feel that I have developed some good relationships with others at this seminar,” for a total of 22 items.

The *follow-up* SBQ consisted of the core 20 items, the eight humility items from the *pre* questionnaire, the item about miracles from the *pre* questionnaire with the following changed wording, “I do not think that any miracles actually happened at the seminar,” and the item “I feel that I have developed some good relationships with others at the seminar.” An additional 11 evaluation-type items included “I experienced a ‘high’ for a period of time after the seminar was over,” and “I am better able to heal myself as a result of the Philadelphia seminar,” for a total of 42 items.

**Scales of Psychological Well-Being (SPWB).** Carol Ryff’s Scales of Psychological Well-Being were used as a measure of psychological well-being. This instrument consists of six scales, Autonomy, Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life, and Self-Acceptance. The 3-item scales were used for a total of 18 items with alpha values of .37, .49, .40, .56, .33, and .52 ( $N = 1108$ ) respectively. Although these are small values, the three items in each scale correlate strongly and positively only with their own respective scale and each of

the three items making up a scale had been selected because of its strong correlation with its parent scale in the long version of the questionnaire (Ryff & Keyes, 1995).

**RAND 36-Item Health Survey (RAND).** The RAND 36-Item Health Survey 1.0 is a self-report questionnaire that measures positive and negative physical and mental health states across eight health dimensions: Physical Functioning, Role Limitations due to Physical Health, Role Limitations due to Emotional Problems, Energy/Fatigue, Emotional Well-Being, Social Functioning, Pain, and General Health, with alpha values of .93, .84, .83, .86, .90, .85, .78, and .78 ( $N = 2471$ ) respectively (RAND Health, n.d.). The items range from general to specific with some items asking respondents to rate their health relative to one year previously. For example, respondents are asked to rate the amount of limitation that they experience carrying groceries or climbing a flight of stairs. As another example, respondents are asked how much of the time in the past four weeks they felt “downhearted and blue.” The eight health dimensions can be scored individually, aggregated into physical and mental scales, and scored as a single scale (Hays & Shapiro, 1992; RAND Health, n.d.; Ware, 2000; Ware & Sherbourne, 1992). Longitudinal studies for an instrument derived from the RAND 36-Item Health Survey shows that the normative data are stable or, for some scales in some studies, decline slightly over time periods of up to three years (Hopman et al., 2004).

**Profundity Scale.** The profundity scale was a 21-item scale developed by the researchers in order to gauge the profundity of experiences that participants were having in the course of the seminar. It was administered as part of the *post* measures package. Each item was scored on a seven-point Likert scale from “strongly disagree” to “strongly agree.” After providing a written description of “the most memorable experience” that participants had had that day, the instructions read: “Please respond to the following statements with regard to the experience that you have just described above using the attached scale.” Examples of items include: “I cannot adequately express what just happened,” “What I experienced was not outside the realm of my ordinary everyday experience,” and “I now realize there are aspects of reality of which I was not previously aware.” Validity consisted of face validity and there were no reliability data until the results were analyzed.

**Behavioral Measures.** Behavioral measures were developed for this study to document the observable behavior associated with experiencing ME. There was a 15-item checklist that was used while observing participants either on the stage as part of a demonstration or as a recipient of ME during practice sessions. This was followed, for the same participant, by a 5-item checklist to be used after a participant had been led from the stage or the practice area to a side room in which she was interviewed by one of the researchers. Items were scored “0” if the item did not apply and “1” if the item did apply. Examples of items from the 15-item checklist include: “Participant swayed,” “Participant fell to the ground,” and “Participant appeared to pass out.” Examples of items from the 5-item checklist include: “Participant appeared disoriented,” and “Participant was reluctant to talk.”

**Post-Experience Interview.** The Post-Experience Interview consisted of asking participants “Could you please describe what you just experienced as a recipient of Matrix Energetics?” followed by orally asking participants to respond to the items of the Profundity Scale. All of the interviews were recorded on digital voice recorders and subsequently transcribed.

## Procedure

The main body of data was collected during a Matrix Energetics seminar held in a banquet hall at the Philadelphia Airport Marriott Hotel in Philadelphia, Pennsylvania from Saturday, August 18, 2012 to Monday, August 20, 2012. On the preceding Friday, the researchers met with one of the organizers of the Matrix Energetics seminar in order to finalize the logistics of data gathering. This included making available a room beside the banquet hall in which participants could be interviewed, assigning an assistant at the seminar to help with questionnaire distribution and collection, and determining how participants to be interviewed would be handed off to researchers after on-stage demonstrations. That Friday evening there was a free, two-hour, public demonstration by the organizers of the Matrix Energetics seminar which appeared to be attended by many of the people who would become participants in the study.

Prior to the commencement of the seminar at 9:00 a.m. on Saturday, August 18, 2012, the researchers approached attendees as they came into the seminar room to ask them if they would like to participate in a study and, if they were interested, to give them a copy of the consent letter, which they could read once they were seated. Attendees were instructed to raise their hands once they had read and signed the letter at which time one of the researchers, or the seminar assistant assigned to the research team, put an animal sticker on the back of their name tag, in order to be able to identify them as being in the study, and gave them the *pre* measures package. A pencil was provided for those who needed one. The completed *pre* measures package was collected by the researchers or their assistant, or placed in a drop-box by the entrance to the seminar room by the participants themselves.

During on-stage demonstrations in the course of the seminar, one of the members of the research team would observe the person on whom the demonstration was being performed and fill out the first behavioral measures checklist. As that person left the stage, it was determined whether or not she was a participant in the study. If not, then there was no further observation of that person. If the person was in the study, then the person was led to the side room for the second set of behavioral measures and the Post-Experience Interview. During practice sessions, in which participants practiced ME techniques on each other, a member of the research team would determine if someone on whom ME was being practiced were a participant in the study and, if so, carry out the same process of observation and interviewing as already described.

At the end of the seminar on each of the three days, an announcement was made to ask participants in the study to remain seated in order to fill out the *post* measures package before leaving the room. The completed questionnaires were picked up by the researchers or their assistant, or placed in the drop-box.

Two months after the seminar, on October 18, 2012, participants were sent an e-mail to invite them to log onto a web site in order to fill out the *follow-up* questionnaire package. This message was repeated on January 11, 2013 in order to have as many participants fill out the *follow-up* questionnaires as possible.

## Results

Of the approximately 280 seminar attendees who were approached, 97 signed the consent letter and 95 completed the *pre* measures package. Sixteen Behavioral Measures and Post-Experience Interviews were completed on Saturday, 11 on Sunday, and 15 on Monday. Ninety-one *post* questionnaires were completed on Saturday, 85 on Sunday, and 63 on Monday. And 27 participants accessed the web site to fill out the *follow-up* questionnaires. Isolated missing values on questionnaires were filled in with the median values, but runs of missing values were left as missing. Also, all of the missing values for the RAND 36-Item Health Survey were left as missing to comply with the scoring procedures for the Health Survey.

### Sample Characteristics

The means for this sample of participants were checked against the published norms for three of the instruments (PI, SPWB, and RAND) using individual *z* tests as shown in Table 1. In terms of personality, the participants at the ME seminar were higher on Openness and Emotional Stability and lower on Conscientiousness than the norm. For the Scales of Psychological Well-Being, Environmental Mastery was below the norm and Personal Growth was above the norm. The sample scores for the RAND 36-Item Health Survey were numerically above the norms for all scales with higher scores being indicative of better functioning. The three scales with the largest differences for the RAND are shown in Table 1.

**Table 1.** Comparison of Sample against Norms

	Scale	Sample			Norm			<i>z</i>	<i>p</i>
		<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>n</i>	<i>Mean</i>	<i>SD</i>		
PI	Conscientiousness	90	6.43	1.08	1125	6.74	1.12	-2.61	0.01
	Emotional Stability	90	6.15	1.65	1125	5.79	1.18	2.03	0.04
	Openness	90	7.26	1.34	1125	6.55	1.09	4.90	0.00
SPWB	Personal Growth	94	17.12	1.74	1108	15.7	2.5	7.28	0.00
	Environmental Mastery	93	14.10	2.86	1108	14.9	2.8	-2.61	0.01
RAND	Physical Functioning	95	83.97	20.42	2471	70.61	27.42	6.17	0.00
	Energy/Fatigue	95	63.00	20.53	2471	52.15	22.39	5.04	0.00
	General Health	95	77.22	19.11	2471	56.99	21.11	10.09	0.00

*Note.* Only scales with individually statistically significant differences between means are shown. In the case of the RAND, only the three scales with the largest differences are shown. The sample data are taken from the *pre* measures. PI = Personality Inventory; SPWB = Scales of Psychological Well-Being; RAND = RAND 36-Item Health Survey. All *p* values are two-tailed.

## Long-Term Changes

Of the three published instruments used in this study (PI, SPWB, and RAND) only the RAND is designed to be scored as a single scale. Using that total scale, a paired samples *t* test revealed that overall health was better at the *follow-up* ( $M = 81.33$ ;  $SD = 10.43$ ) than at the time of the *pre* questionnaires ( $M = 72.77$ ;  $SD = 16.15$ ) with  $t(24) = 3.42$ ,  $p = .002$  (two-tailed). Sixteen participants had improved, five had deteriorated, and four stayed the same. This result should be interpreted with caution given the low response rate at the *follow-up*. However, there were no differences on the total health score at the time of the *pre* measures between those who completed the *follow-up* questionnaires and those who did not ( $M = 72.93$ ,  $SD = 15.70$  vs.  $M = 72.35$ ,  $SD = 18.18$ ;  $t(93) = -.15$ ,  $p = .88$ , two-tailed). Multivariate analysis of variance on the nine individual scales of the RAND was not statistically significant (with Roy's Largest Root  $\lambda = .87$ ,  $F(9, 14) = 1.35$ ,  $p = .30$ ). Similarly, neither the changes to SPWB nor PI were statistically significantly different between *pre* and *follow-up* (with Roy's Largest Root  $\lambda = .40$ ,  $F(6, 19) = 1.27$ ,  $p = .32$  and  $\lambda = .33$ ,  $F(5, 17) = 1.12$ ,  $p = .39$ , respectively).

## State of Being

The idea with the *post* measures had been to look at changes from the time that participants arrived at the seminar, at which time the *pre* measures were taken, until they left. However, we realized that not everyone would be staying for the full three days, nor would they necessarily fill out questionnaires just before leaving the seminar, so participants were given *post* questionnaires to fill out on Saturday and Sunday as well. With this in mind, in order to make the *post* data more manageable, only the last *post* data provided by participants were used unless indicated otherwise. This resulted in an amalgamated *post* data file using 85 participants' Monday data, 2 participants' Sunday data, and 7 participants' Saturday data for the State of Being and Profundity measures.

Hierarchical cluster analysis was used with the State of Being *pre* data to organize into scales the 17 State of Being items that were common to the three questionnaires. A solution with four clusters was chosen as being the most meaningful. The psychometric characteristics of these scales, *k1* to *k4*, along with the scale consisting of all 17 items, *k5*, are given in Table 2. The scale *k1* is a measure of positivity and attentiveness with items such as "I feel happy right now," and "I feel present to whatever is happening." The scale *k2* is reflecting transcendence with items such as the reverse scored "There is no reality other than the physical universe," and "I feel connected to everything that exists." The scale *k3* is a measure of the loss of a sense of solidity with items such as the reverse scored "My body feels physical," and "The carpet seems to be moving." The scale *k4* consists of the single item "I feel open-minded." When all 17 items are summed to make up *k5*, the item "My body feels shaky," which appears without modification on *k3*, is reverse scored for *k5*. The scale *k5* can be interpreted as being stable and alert but "high" in the sense of being in a transcendent state of consciousness.

**Table 2. State of Being Scales**

scale	#	meaning	<i>pre</i>				<i>post</i>				<i>follow-up</i>			
			<i>n</i>	$\alpha$	<i>M</i>	<i>SD</i>	<i>n</i>	$\alpha$	<i>M</i>	<i>SD</i>	<i>n</i>	$\alpha$	<i>M</i>	<i>SD</i>
<i>k1</i>	9	attentiveness	94	0.8	51.92	7.43	92	0.7	51.68	7.11	25	0.5	53.28	4.47
<i>k2</i>	3	transcendence	94	0.6	17.45	3.76	92	0.4	18.34	2.74	25	0.4	17.60	3.16
<i>k3</i>	4	lability	94	0.6	13.09	4.80	91	0.6	16.86	5.36	25	0.6	13.76	5.02
<i>k4</i>	1	open-mindedness	95	–	6.57	0.85	93	–	6.42	1.11	25	–	6.08	1.61
<i>k5</i>	17	alert high	94	0.8	91.89	11.66	89	0.7	94.33	10.61	25	0.7	93.20	10.19
<i>ch</i>	2	change	95	0.9	11.51	2.58	93	0.8	12.44	2.24	25	0.9	12.20	2.52

Note. # refers to the number of items in a scale.

A paired samples *t* test for *k5* revealed a statistically significant increase from *pre* to *post* with  $t(86) = 2.74, p = .007$  (two-tailed) and Cohen’s  $d = 0.29$ . Multivariate analysis of variance for the difference variables from *pre* to *post* of *k1* to *k4* was statistically significant with Roy’s Largest Root  $\lambda = .59, F(4, 83) = 12.26, p = .000$  and with both *k2* and *k3* showing statistically significant differences. Paired samples *t* tests for the changes in *k2* and *k3* give  $t(89) = 2.55, p = .012$  (two-tailed), Cohen’s  $d = 0.27$  for *k2* and  $t(88) = 6.86, p = .000$  (two-tailed), Cohen’s  $d = 0.73$  for *k3*. Repeated measures multivariate analysis of variance for *k1* to *k4* at *pre*, *post*, and *follow-up* was not statistically significant with Roy’s Largest Root  $\lambda = 1.35, F(8, 15) = 2.54, p = .057$ .

Two items on the *pre* State of Being Questionnaire were “I expect that something profound will happen to me at this seminar,” and “I expect to feel different as a result of attending this seminar.” On the *post* State of Being Questionnaire these items read “I feel that something profound has happened to me at this seminar,” and “I feel different as a result of attending this seminar.” At the time of the *follow-up* questionnaire these items read “I feel that something profound happened to me at the seminar,” and “I feel different as a result of attending the seminar.” At each iteration, both items together were considered to be a scale, *ch*, with the psychometric properties of that scale given in Table 2. Using a paired-samples *t* test there was a difference from *pre* to *post*, with  $t(90) = 3.16, p = .002$  (two-tailed), Cohen’s  $d = 0.33$ . Repeated measures analysis of variance for all three iterations revealed an inverted quadratic relationship with  $F(1, 23) = 4.35, p = .048, \eta^2 = .16$ .

Hierarchical cluster analysis of the additional 11 evaluation items on the *follow-up* version of the State of Being Questionnaire yielded two clusters. One of the clusters, called *kfo1*, had five items with  $\alpha = .77$ , and included the item “I am better able to heal myself as a result of the Philadelphia seminar,” and the reverse scored “I feel a let down since the end of the seminar.” The second cluster, called *kfo2*, has six items, was labeled “high,” had a coefficient  $\alpha = .87$  and included the items “I experienced a ‘high’ for a period of time after the seminar was over,” and “I feel as though I have awakened to reality.”

## Behavioral Measures

A total of 42 observational measures was taken during the seminar, 17 of which were made of demonstrations on the stage and 25 of which were made of practice sessions on the floor. A Behavioral Measures Scale, designated as *bm*, was created by adding the scores for the first 18 of the 20 items on the Behavioral Measures checklist. The same strategy as was used for the *post* data was also used for aggregating data from the Behavioral Measures, so that only 36 of a total 42 behavioral observations was used for most data analyses. The mean value for the 36 aggregated observations was 3.94 ( $SD = 3.22$ ). There was no difference between scale scores for participants who experienced ME on the stage ( $M = 4.80, SD = 2.76, n = 15$ ) compared to those who experienced ME during the practice sessions ( $M = 3.33, SD = 3.44, n = 21$ ) with  $t(34) = 1.37, p = .18$  (two-tailed). There were no predictors when *bm* was regressed on *pre* scores and there were no statistically significant correlations of *bm* with any of the *pre* scores.

Examining Item 09 by itself, “Participant fell to the ground,” 22 of the times participants fell to the ground and 20 times they did not. Eleven of those who fell down did so during the stage demonstrations, and 11 fell down while practicing on the floor during practice sessions. There was no difference in frequency between falling down during on-stage demonstrations and falling down during practice sessions on the floor with  $X^2(1) = 1.75$  (not significant). Stepwise logistic regression on *pre* variables using a *p*-to-enter of .05 for score tests and *p*-to-remove of .10 for the likelihood ratio statistic gave a single predictor with a median cut of Purpose in Life ( $B = .33, Wald(1) = 3.92, p = .048$ ; Cox & Snell  $R^2 = .17$ ; Nagelkerke  $R^2 = .23$ ) that can correctly predict falling down 87.5% of the time when participants did fall down and correctly predict the failure to fall down 50% of the time when participants did not fall down.

## Profundity

The Profundity Scale was designed to measure the profundity of specific experiences that occurred for participants at the seminar. When hierarchical cluster analysis was used to organize the 21 items of the *post* Profundity Scale, a single cluster was revealed. Upon interpreting the cluster, it was decided to use the first 7 items as a scale, *p1*, the first 14 items as a scale, *p2*, and all 21 items as a scale, *p3*, with  $\alpha = .87$  ( $n = 92$ ),  $\alpha = .86$  ( $n = 92$ ), and  $\alpha = .83$  ( $n = 91$ ) respectively. The items on scale *p1*, along with corrected item-total correlations, are given in Table 3. The scale *p2* added items such as “I felt a wavelike sensation go through my body,” “My perception of space changed during this experience,” “I now realize there are aspects of reality of which I was not previously aware,” and “I felt a sense of unity with everything that exists.” The scale *p3* added items such as “I cannot adequately express what just happened,” and the reverse scored “What I experienced was not outside the realm of my ordinary everyday experience.” These same scales were also used to interpret the interview data. Because of its clarity of meaning, only the scale *p1* was used for most analyses.

**Table 3. Profundity Scale *p1***

Variable	Item	<i>r</i>
POLA10	This experience was profound.	.69
POLA11	During this experience, I felt that my existence became more meaningful.	.73
POLA13	During this experience, I had a sense of the sacred.	.62
POLA14	During this experience, I was in an altered state of consciousness.	.59
POLA15	What I experienced was spiritual in nature.	.69
POLA16	The word “transcendent” could be used to describe this experience.	.72
POLA19	This experience brought me closer to the truth.	.60

*Note.* *r* is corrected item-total correlation.

Normalized versions of the scale scores *p1*, *p2*, and *p3* were created by dividing through by the number of items for each scale. The resultant mean scores, both for the *post* data and the interview data, were greater than the constant value of 4 (“not sure”). In particular, the normalized *p1* had values of  $M = 5.68$  ( $SD = 1.12$ ,  $t(91) = 14.34$ ,  $p = .000$ , two-tailed) for the *post* data and  $M = 5.42$  ( $SD = 0.96$ ,  $t(35) = 8.88$ ,  $p = .000$ , two-tailed) for the interview data. In fact, for the normalized *p1*, the means in both cases were greater than 5 (“slightly agree”) with  $t(91) = 5.80$ ,  $p = .000$  (two-tailed) and  $t(35) = 2.63$ ,  $p = .013$  (two-tailed) respectively. From these data, it would appear that at least some participants at the seminar are reporting having had somewhat meaningful, profound, spiritual experiences in altered states of consciousness.

In order to understand the profundity scale, it is instructive to look at correlations of some of the other variables with profundity shown in Table 4. For instance, there is a negative correlation of *p1* with Environmental Mastery. One of the three Environmental Mastery items is “In general, I feel that I am in charge of the situation in which I live.” Being in charge is usually antithetical to experiencing profound states of consciousness (Barušs, 2003) so such a negative correlation would be expected for those scoring high on profundity. The correlations with the State of Being Questionnaire are not surprising given that whatever experience participants had had during the day could carry over to the end-of-day query. The correlations with the two follow-up scales suggest that if something profound happened, that that was not transient, but still memorably profound at the time of the follow-up.

Participants appeared to be having more profound experiences during the practice sessions than on stage with  $M = 40.05$  ( $SD = 5.06$ ,  $n = 21$ ) during the practice sessions and  $M = 35.00$  ( $SD = 7.76$ ,  $n = 15$ ) on the stage, with  $t(22.36) = -2.21$ ,  $p = .038$  (two-tailed; unequal variances).

Profundity increased during the course of the seminar with values of *p1* rising from  $M = 36.69$  ( $SD = 8.00$ ,  $n = 90$ ) on Saturday, to  $M = 39.33$  ( $SD = 7.00$ ,  $n = 85$ ) on Sunday, to  $M = 40.46$  ( $SD = 7.49$ ,  $n = 62$ ) on Monday, with repeated measures analysis of variance giving a value of  $\lambda = .38$  for Roy’s Largest Root ( $F(2, 58) = 11.04$ ,  $p = .000$ ) and a statistically significant linear within-subjects contrast with  $F(1, 59) = 22.42$ ,  $p = .000$ .

**Table 4.** *Correlations of the Profundity Scale p1 with Various Variables*

Time	Variable	<i>n</i>	<i>r</i>	<i>p</i>
<i>pre</i>	age	89	-0.27	0.012
	number of ME seminars attended	90	0.26	0.013
	SPWB: environmental mastery	89	-0.21	0.050
	<i>ch</i> : expected change	90	0.25	0.018
	SBPR28: “. . . miracles do not really happen.”	90	-0.23	0.032
<i>post</i>	<i>k2</i> : transcendence	91	0.29	0.005
	<i>k3</i> : lability	90	0.39	0.000
	<i>k4</i> : open-mindedness	92	0.22	0.036
	<i>k5</i> : alert high	89	0.31	0.003
	increase in <i>k3</i> , lability, <i>pre</i> to <i>post</i>	88	0.24	0.023
	increase in <i>k5</i> , alert high, <i>pre</i> to <i>post</i>	87	0.23	0.036
<i>follow-up</i>	<i>ch</i> : experienced change	24	0.65	0.001
	<i>kfo2</i> : high	24	0.54	0.007

*Note.* The full text for Item SBPR28 is “Even though it would be nice if it were so, miracles do not really happen.”

The question arises whether profundity is correlated with changes to any of the long-term measures, such as changes in physical well-being. The answer is almost no. Change in the personality measure of Openness has a correlation of  $r = .45$  ( $p = .043$ , two-tailed,  $n = 21$ ) with *p1* although Openness does not increase from *pre* to *follow-up* with  $M = 7.26$  ( $SD = 1.34$ ,  $n = 90$ ) at *pre* and  $M = 7.42$  ( $SD = 0.83$ ,  $n = 24$ ) at *follow-up*, and paired samples *t* test giving  $t(21) = 1.81$ ,  $p = .084$  (two-tailed). This correlation was not mirrored in the *k4* scale consisting of the single item “I feel open-minded” which had a correlation of  $r = -.28$  ( $p = .19$ ,  $n = 24$ ) with *p1*. Hence this finding should be interpreted with caution.

Using stepwise multiple linear regression to predict *p1* from the *pre* measures gave a solution with  $R^2 = .14$ ,  $F(2, 65) = 5.27$ ,  $p = .008$  for two predictors:  $b_1^* = -.31$  for age and  $b_1^* = -.24$  for SBPR28. In other words, those having more profound experiences are younger and believe that miracles can happen. However, this only accounted for 14% of the variance in the profundity measure.

There were no significant changes to humility nor was humility a significant predictor for any of the other measures.

### Interview Data

There was a total of 42 interviews in which participants described what had just occurred to them as a result of being recipients of ME. The interviews were transcribed verbatim from the original audio

files without editing. There was no effort to formally analyze any of the transcribed texts nor any of the written comments. For both the interview data and the written comments, selections are given here to present the variety of what participants said about their experience and not the frequency of what was said. In only two cases, participants reported dysphoric experiences, one in an interview, and one in a written comment. Both of those are included below.

Participant 05: “I experienced a wave while my partner was working on me. My body just spontaneously swaying and then I would, what I call, lose my body and I would just go . . . into my head it felt like. It is very, very, very peaceful and I see a celestial light like its glowing from the inside with occasionally threads of gold. It is just very peaceful and a lovely, lovely spot.” Female, 45, registered nurse, *bm* = 2, *p1* = 45.

Participant 11: “. . . it almost felt like really gentle rain sort of coming down into my body and gravity. . . . My body just released and I went to the floor. Somebody helped me on the floor. I felt . . . , and still feel, . . . my heart beat actually increase and I . . . feel more heat in my face. I felt my blood moving. I feel tingly in my arms and my fingers and I feel more like I am the space and less that I end at the edge of my body . . . and very peaceful and I’m really aware of just being in a sea of sounds. I’m just floating. It’s really nice.” Female, 57, acupuncturist, *bm* = 4, *p1* = 44.

Participant 19: Interviewer: “Now, what happened when Richard played the guitar?”

Participant: “Oh, I had been wanting to learn how to play the ukulele for a long, long time and I just resonated with, for some reason, that chord that he played. He knew to play that chord and then I could just feel it all up my spine. When I was leaned over towards the floor — in what did he call it? The elephant something stance — I could feel the energy coming up my spine and especially stretching out on the right side for some reason. There was a major shift in the way my physical body felt on the right side. And when she pointed to my mouth that was a little bit too close since I had had a root canal yesterday. It feels much better now.”

Interviewer: “Oh, really? It does? And before that you were in pain?”

Participant: “I was fantasizing about an Advil, but not anymore!” Female, 57, potter, *bm* = 3, *p1* = 40.

Participant 21: “As soon as I got up, I felt like I had a headache. . . . So I don’t have a headache right now. I feel very relaxed. I felt relaxed before, but it’s a different state, if that makes any sense.” Female, 24, clinician, *bm* = 8, *p1* = 39.

Participant 33: “Letting go in a way that I don’t usually do. . . . It was just very quick and like an unraveling. It was very quick, I don’t even know what she did. . . . It’s involuntary. . . . It just happens and you just go with it. You have a choice but also you don’t have a choice.” Female, 45, Office Worker, *bm* = 6, *p1* = 43.

Participant 51: “. . . In my brain as I was coming up to the stage and while I was there I was thinking I’m not going to lie down or anything like that. Then . . . it’s difficult to describe . . . it got all wonky. . . . It was kind of funny observing . . . what was happening to me. . . . In a way it was like stepping out of one reality and coming into another one . . . . Then I kind of went down onto the ground. . . . It became very funny at that point . . . . Have you ever seen . . . any drawings by M.C. Escher? . . . So

there is one drawing that he did that . . . what's the ground depending on where he is in that drawing is, it can be at right angle, it can be kind of at a different angle, and where all these different angles are ground, like where people are standing or sitting. . . . And so then I've got my back on the floor and the people on the stage are they're like at right angles, like gravity is at a 90 degree pitch from where I am, and then they're looking down at the people that are out in the audience. . . . For me it was like a complete shift in . . . my perspective. I looked at something from a completely different angle." Male, 56, project manager, *bm* = 5, *p1* = 27.

Participant 54: "[Falling over] is like a letting go. You get soft and so that yields, it's like a yielding feeling. And then, as I was even lying down I felt like patterns unraveling. . . . I felt like I've been constructing in a way . . . I feel like it's unraveling, like a deconstruction in a way. . . . I was very conscious and present to what was going on." Female, 51, unknown occupation, *bm* = 4, *p1* = 30.

## Written Comments

There was a total of 457 written comments. These are presented as written, with editorial changes in square brackets.

### Most memorable experience.

Participant 03: "When [another participant] did ME on me during practice session, I did not specify a malady. However, when she touched my right knee started to pop like popcorn – went on for quite a while. I have had arthritis in my right knee for a while. I feel taller now."

Participant 12: "Also earlier today I was in a small group and started to feel like the whole room was spinning. It was not pleasant."

Participant 17: "My daughter was called up on stage. She was a true sceptic. They Time traveled her back to before birth. I was in a very Bad car accident in my 7th month with her. It amazed me they knew!! (she may have been hurt then)."

Participant 66: "Back pain completely gone had to take pain pills every 4 hrs."

### Two-month follow-up effects.

Participant 30: "Following the seminar I felt clearer and more 'connected.' This feeling remained stable for a couple of weeks before dying off somewhat. However there were some shifts that seemed to be permanent - a greater awareness of the metaphysical aspects of reality and more solidity/strength within my body."

Participant 54: "Although I was up on stage and was just freshly operated on for carpal tunnel, I don't feel it had particular benefits or effects on that as I am still getting physio for it."

Participant 76: "I was absolutely transformed by the Philadelphia Matrix Energetics seminar. I read a

lot of books about consciousness and the nature of reality but to actually experience Richard's seminar first hand and observe the effects that were taking place was an amazing experience. I was actually called up to the stage and felt the wave of 'energy' through my body and noticed positive improvements in my health afterwards. It was very rewarding." *Change in total RAND: 13.33.*

## Discussion

Something was happening to people at the ME seminar. And whatever it was that was happening, appears to have been beneficial. The average total health score improved from *pre* to *follow-up*, when such health scores are known to be stable or to decline with time.

However, this finding should be interpreted with caution given the small number of participants who responded at the time of the follow-up, thereby introducing a sampling problem. In other words, those whose health declined may have chosen not to respond or been unable to respond due to poor health. Also, it is not clear that the seminar was the cause of the increase in well-being, given that people who were trying to be healthier could have gone to the seminar as one of a number of strategies that they were using for trying to improve their health. It is unlikely that participants were inflating values to make ME look good, given that they were unlikely to remember their initial responses and given that there were no correlations of the changes to total health scores with any of the personality and psychological well-being scales. For instance, those who were less conscientious or were less autonomous did not have greater changes in their total health scores than those who were more conscientious or more autonomous.

There were only two reports of dysphoric experiences during the seminar, both of which have been included above. It is possible that participants were reluctant to report negative experiences so that they are under-represented in this study. In some cases, there appears to have been no change in a person's physical condition during the seminar. But there were also many cases of reported physical or psychological improvement, in some cases, dramatically so. Overall, it would appear that the seminar had beneficial effects on attendees.

## Alteration of Consciousness

It is interesting that participants changed more at *post* than they thought that they would change when asked at *pre*, as measured by *ch*, although being changed more than they thought that they would did not statistically carry over to the *follow-up*. The *pre* to *post* change suggests that something unexpected happened during the seminar to some of the participants. What was that? The state of being scale *k5*, alert high, increased from *pre* to *post*. In particular the *pre* to *post* changes in *k2*, transcendence, and *k3*, lability, indicate that participants tended to lose their sense of the solidity of reality and their physical isolation, and tended to gain a sense of metaphysical plasticity and an immaterial connection to everything that exists.

Scores on the profundity scales provide some characterization of the kinds of experiences that participants were having at the seminar. The scale *p1* is a scale that measures self-perceived depth of

profundity, spirituality, transcendence, meaning, knowledge, and alteration of consciousness. Increase in meaning is a core existential value and appears to have occurred for some of the participants at the seminar. There has been a tendency in contemporary scientific research to demote numinous experiences such as these to the incidental sporadic firing of some neural circuitry. That is neither logically justified nor helpful. The numinous remains the numinous, whatever its neural correlates, providing the person exposed to it with meaning that was perhaps previously missing (Barušs, 1996; 2014; Pearson, 2014; see also Auld & Bailey, 2014).

The correlations given in Table 4 help to provide concurrent validity for the profundity scales. In particular, *k2*, *k3*, *k4*, and *k5* are all positively correlated with profundity, indicating that those having more profound experiences were also those who experienced feelings of transcendence and lability, and perceived themselves to be open-minded. In spite of the drop in *ch* from *post* to *follow-up*, those with more profound experiences during the seminar were more likely to report having experienced change and to still be positively affected by the seminar for some time after its termination. There seems to be a practice effect present so that experience with ME is associated with more profound experiences as seen from the increase in profundity scores during the seminar and from the correlation with the number of seminars previously attended. Being younger, having less sense of control over one's environment, expecting change to occur, and believing that miracles can occur, were all correlated with more profound experiences, although being younger and believing that miracles can occur by themselves take up the variance in profundity attributed to those variables.

## Somatic Sensations

Reading the interview transcripts and comments, as well as examining the behavioral measures, reveals the extent to which participants experienced somatic sensations during the seminar. There was such a range of different sensations that it is difficult to summarize them. Some of the experiences that participants had were clearly out of the ordinary. Frequently they were identified as being synchronous, such as the significance for Participant 19 of a chord played on a guitar by Richard Bartlett or the termination of the time travel technique to a time before birth when the woman's mother, Participant 17, had been in an automobile accident. It is not clear whether any anomalous phenomena occurred; the study was not designed to make those determinations.

About half of the time that behavioral measures were taken for participants as they experienced ME, they fell to the ground. It is not clear why. The comment by Participant 11, "My body just released and I went to the floor," does not answer the question. Why was the "release" so profound that the person could not stay on her feet? Or Participant 51: "it got all wonky . . . it was like stepping out of one reality and coming into another one." The world as we know it just seems to give way and we find ourselves in a reality in which we fall down. The somatic sensations, falling down, and synchronous events, all need further research.

There was no difference in the number of people falling down during stage demonstrations or during practice sessions on the floor, nor was there a difference in the behavioral measures scores between the stage and the floor. Somewhat counterintuitively perhaps, profundity scores were higher for participants experiencing ME during the practice sessions than participants experiencing ME during

demonstrations on stage. It is possible that the researchers selected participants in a biased manner, although it is not clear how they would have recognized greater profundity at the outset when the selections were made. It is also possible that participants felt more at ease in the practice sessions which could have contributed to higher profundity scores. Also, participants having more profound experiences during the seminar might have been more willing to talk to researchers when they were approached on the floor, thereby skewing the results.

There were no predictors for who would experience somatic sensations as measured by the total score on the Behavioral Measures. Purpose in Life was the single, statistically significant predictor of falling down, although not a particularly good one. What is interesting is that none of the State of Being Scales predicted falling down. In other words, the people who fell down were not more likely to be those who were more attentive, or more labile, or more open. The falling down was independent of such obvious potential predictors and suggests that whatever was happening was more nuanced than it might at first appear to be. In particular, there is no evidence from our data that falling down is just the result of compliance or hypnosis and thus it certainly deserves more study.

## Conclusion

Participants at the ME seminar at which these data were gathered were sometimes experiencing alterations of consciousness. It is not clear whether that is due to the ME techniques or to non-specific factors associated with attending the seminar or a combination of both. However, these alterations are associated with meaningfulness, an increased sense of transcendence, and increased psychological lability, but, overall, no lack of attentiveness to whatever is happening in the moment, as suggested by the State of Being scale “alert high.” Participants appear to be experiencing reality as being more plastic than we ordinarily assume it to be while in an attentive, expanded, and emotionally positive state of being. These alterations of consciousness should be further investigated as should the potential therapeutic benefits of experiencing ME.

Note:

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