

Keynote Address

INTENTIONAL HEALING: *Exploring the Extended Reaches of Consciousness*

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ABSTRACT

The purpose of this paper is to discuss the possible use of intention as a unifying concept in the study of mind/body/spirit healing. Broadly defined, intentional healing involves the projection of awareness, with purpose and efficacy, toward the well-being of another. The concept of intentional healing encompasses a wide spectrum of health-promoting or healing-triggering activities. This paper will review recent basic science and clinical trials in the area of intentional healing—focusing on the complexities of differentiating between psychological, psychosocial, and psychic influences. Discussion includes issues of experimenter effect, patient expectation, the relationship between baseline psychological factors and medical outcomes, as well as experimental design questions such as choice of healers, structure and duration of intervention, and constructing appropriate blinks. This paper is based on Dr. Schlitz Keynote Address made at the Thirteenth Annual ISSSEEM Conference, *Return of the Sacred Science: Celebrating the Mysteries of Healing* (June 19-25, 2003).

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We are alive at an extraordinary time. Never before have people been in contact with so many different worldviews, belief systems and ways of knowing about reality. This is a new phenomenon. At this point in history, we are suddenly forced to deal with many of different definitions of what is possible and of the nature of human experience. On the one hand, there is the extraordinary power of western science. We now have, for example, an orbiting space station, a sheep named Dolly, a cloned cat named Carbon Copy and a computerized chess champion named Deep Blue. We have achieved extraordinary successes in our manipulation and control of the physical aspect of reality. Anybody who begins to lament the progress that society is making is missing the kinds of opportunities that come to us—as you are facing an open-heart transplant, for example, or wanting to rally your immune system using the currently available pharmacopoeia. These things are good, but incomplete.

On the other hand, at this time, we have access to the world's wisdom traditions and spiritual traditions—to ideas and teachings that were once considered to be sacred and esoteric knowledge. A small group of adepts in the mountains of the Himalayas, for example, were the only ones who had access to the texts. Today we can go on the internet and learn much about what was previously considered to be private knowledge. At this interface, we see that there are partial or approximate ways of knowing reality. There are different methodologies and epistemologies that are coming into dialogue. In the past, when people of difference came together it was possible to diverge, to move away from that which was uncomfortable to them. The world was considered vast, almost infinite. If people were with someone whose world view or belief system was fundamentally different, they could simply continue out across the globe.

Today is a time of convergence; it is a time when we have gained a greater recognition of the finite capacities of this precious and delicate planet earth. As the population grows, we have fewer opportunities to get away from that which is different from us. A Muslim, a Hindu, a Buddhist and a Christian can all live in the same neighborhood, shop in the same grocery stores and use the same schools and hospitals. There is a way in which we are forced to engage one another. There are various ways in which this kind of convergence takes form. As we come into contact with differences, we can become intolerant. This leads to conflict. We see this in the global situation today,

particularly earlier on this year. There is a tremendous amount of conflict in the world today, grounded in intolerance of these differences. There are also indicators of cooperation, so when one group with a particular world view comes into contact with another group, there is a way in which either the subordinate group takes on the characteristics of the dominant group or the dominant group imposes their characteristics on the submissive group.

In many indigenous populations, people now want access to western technology. They want things that have never been part of their tradition and which are fundamentally changing the way in which they organize their reality. I work with a group called the Achuar Indians in the Ecuadorian Amazon. A new influence on their culture is a radio show that comes on about four or five o'clock in the morning. This is the time when they have shared their dreams. Now, instead of sharing their dreams amongst each other, they are taking the content of their knowledge from the radio. It is a fundamental shift in the way that they perceive and engage reality.

The third model of this kind of convergence is something quite different. We are at a convergence among different paradigms, different epistemologies and different ontologies—those models of reality that people hold to be true. If one stays open to and respectful of the differences, a creative impulse emerges, and new forms are born. Our work lies here. All of us are giving birth to something new—something that is struggling to be named. Is it subtle energies? Is it an intention? Is it compassionate healing? We do not have the right language yet, but we are beginning to approximate something that tells us there are more possibilities.

My work at the Institute of Noetic Sciences is about this period of conjoining and then giving birth to what is emerging out of that conjoining. Noetic is an intangible principal that comes from the Greek word *noos*, meaning mind or direct knowing. But it is really about that aspect of interiority or consciousness that is most real to us. It is what we personalize. It is that thing that we consider to be ourselves. My favorite definition of noetic comes from William James, who describes it as “. . . states of insight into depths of truth, unplumbed by the discursive intellect. They are illuminations, revelations, full of significance and importance, all inarticulate though they remain. And as a rule they carry with them a curious sense of authority.” These are the ineffable

aspects—the intuitive, the unconscious or the interior aspects of who we are. These are the things that science has considered taboo, because they do not fit within that physicalist paradigm. They are suspect, because we do not have a clear frame of reference for understanding them.

The Institute of Noetic Sciences has focused on bridging of the noetic principal with the scientific principal for over thirty years. This began during the Apollo space program. As a collective, we were able to mobilize our intention in such a way that achieved the impossible. We were able to take people to the moon and get them safely back by using technology and western science in such a way that it gave us mastery over the physical aspects of our reality. Edgar Mitchell was one of a dozen people who walked on the moon. Dr. Mitchell was the pilot who manned a little capsule that took the Apollo XIV astronauts from the main Apollo capsule to the moon and back. When he got back in the Apollo capsule to return to earth, he had the opportunity to have the window seat. From this vantage point of deep space, he was able to see the mystery and the wonder that we all live in, and now have become aware of through the mass presentation of these kinds of images. These are common images to us now—at that point this was all new and fresh. Suddenly Mitchell, an MIT trained engineer, was able to see that his model of what was possible, of what was important or true, was not complete. He recognized in a very noetic way that perhaps it is inner space—our world view, our attention and intention, and how we are able to perceive reality—that could shift us in such a way that we might create a more just, compassionate and sustainable world here on planet earth.

Instead of harnessing our resources to master the physical aspects of reality, perhaps we should create an Apollo program to master the inner aspects of experience—an inner space program that attempts to reconcile the interface between our consciousness and the physical world. By bringing the insight coming from the spiritual and wisdom traditions about the nature of consciousness together with the rigor and discernment that comes from western science, we can create something that allows us to further conventional science. This allows us to begin to understand a broader definition of reality that includes rather than marginalizes consciousness, spirit and subtle fields.

At the Institute of Noetic Sciences campus, we have a state of the art psychophysiology laboratory. Our goal is to do rigorous research in the area

of these ineffable qualities. We are interested in mapping consciousness, and in exploring with a variety of subtle energy practitioners, the interface between their practice and manifestation in the physical world.

In this lecture, I am going to focus on one specific area of study, which is directed intention or compassionate intention toward another. This is a way in which we are able to utilize our highest self for the well-being of another, even at a distance. As we begin to look at the world's traditions, we see this idea that somehow our thoughts are potent and that they can engage the physical world in measurable ways. I just had the opportunity to interview a Qigong healer, who was in the lab recently. His model about how healing works, derived from a strong conviction that love is the organizing principal, is a brilliant way in which to begin to ground this kind of research. There are a variety of different names for these phenomena. I am going to refer to what is often called subtle energy or non-local healing, as either distant mental influence or compassionate intention.

This idea of intentionality in healing can occur at a number of levels. For example, we can use our intention to self-regulate in the area of psychoneuroimmunology. Our beliefs or expectations about a particular outcome can have real and measurable changes on our immune system. This is something that has been well documented in a number of labs over many years. There is also the area of relational healing, which explores the importance of the healing contacts or the healing space. These are very important issues as we consider the significance of our intentions for the well-being of others. For example, the placebo effect is seen as though it is something that needs to get discarded or set aside. Yet it reveals much about the power of intention, both as it is self-directed as well as it is other-directed. As we bring our intention and our expectations towards other people, how much does that influence their ability to heal?

I am going to move fairly quickly through some of this early research so that we can come up to date with what is happening today. In thinking about how one begins to combine the noetic principal with a rigorous scientific perspective, there are a number of factors that we have had to take into consideration. We have had to rule out all conventional sensory explanations. If we are trying to establish some kind of efficacy to distant healing or distant

intentionality, it is important that we can rule out suggestion, placebo, wishful thinking and the other kinds of conventional explanations. We wanted some way of measuring a physical outcome, so we selected an objective indicator. We randomly organized our trial periods such that we can know that we are not just engaging in some kind of wishful thinking, that we have used the best kind of scientific methodologies available.

Ultimately because the language of science comes in statistics, we wanted to be able to apply a statistic to this. Dan Benor has done some reviews of this literature, as has Jerry Solvvin. There have been about a hundred and seventy studies published and approximately half of them are finding some evidence for a non-local exchange of information. We designed these first experiments to test the healers' claims that they can influence somebody's physiology at a distance. I like to think about these initial studies as proof of principal. We work with healthy volunteers who are willing to come into our lab. We monitor their autonomic nervous system activity. Meanwhile another person, a healer, would be in a separate room intending to calm or to activate the physiology of the distant person. The experimenter is there to assure that there is no conventional sensory exchange between the two people. The healer in the other room will either see or not see the image of the person on this remote circuit television.

We measure different parameters of the autonomic nervous system. We can measure electrodermal activity, which is our primary outcome, and heart rate. Most recently we started looking at gut reactions (the enteric nervous system). Overall the results are statistically significant. We are finding clear and replicable evidence that there is some kind of non-local exchange of information that has physically measurable qualities.

Stefan Schmidt is a physiological psychologist from Freiburg, Germany who did his Ph.D. dissertation (2003) on distant mental interactions on living systems or DMILS. Schmidt did a critical review of the literature and came up with all kinds of ways in which we can improve our design. Rather than being threatened by that, we invited him to our lab. He spent a month with us as we were setting up the facility so that we could make sure that the kind of critique he offered could be embedded in the design as we were moving forward. This engagement between skeptics and proponents is another area in

which this convergence can happen in a fruitful and positive way. If we can open ourselves to the idea that we do not know everything and that, in fact, even our most ardent critic can be our greatest ally, then we may begin to see new and more sophisticated designs coming out.

The question then is, what role does the experimenter play? If our intentions are potent, and in fact there is a non-local exchange of information, who is the biggest advocate for an outcome in these experiments? It is the person who is there doing the research, day in day out. We started doing a series of experiments again, bringing together skeptics and proponents. I have a colleague named Richard Wiseman, who is a card-carrying member of the skeptic community. He is also a Ph.D. psychologist and a professor at the University of Hertfordshire. Richard had been doing some experiments to replicate some of the original work that I had done with William Braud at the Mind-Science Foundation. At the Cognitive Sciences Lab at Science Applications International Corporation, we were able to do a set of what we called remote staring experiments. This is basically a test to look at whether people can detect somebody staring at them from a distance. If you look at the survey data, the vast majority of people have had the experience of sitting in a park or driving in their car and having this feeling that somebody is looking at them. They may feel a tingle up the back of the neck. When they look over, they see someone is indeed staring at them. This is an example of an autonomic response. We did two formal experiments while I was at Stanford. In both of those formal experiments we used a randomized, double blind protocol. A person would come in and would stare at the image of a distant person when the television monitor lit up, but not when the monitor was blank.

Our findings confirmed our predictions that there were statistically significant differences in the average amount of autonomic nervous system activity when the person was being stared at as compared to the control conditions. This provided a nice objective way of looking at this X factor in the staring phenomenon. One explanation for the staring is that perhaps we just have heightened peripheral vision, that people just are not aware at the conscious level that their peripheral vision is perceiving motion change in a person's head. That is a very parsimonious explanation for what happens. We try to eliminate that as a confounding factor and really look at

whether there is something like a subtle energy exchange occurring between the two people. In both cases, we found statistically significant evidence for this.

Richard, in his lab in England, found quite the opposite. He found no significant differences. Being an open-minded skeptic, he invited me to come to his lab. First we did a demonstration experiment, which a television crew filmed. At the end of this two trial mini experiment, Richard saw the strongest evidence for psi that he had ever seen in his laboratory. He was quite taken by this. It was all in my data and it was not in his. So this led us to think, maybe we should do a formal collaboration. We set up a formal study where everything was identical—the same equipment, same randomization, same lab, and same subject population. Everything was identical, except that he worked with half the people and I worked with half the people.

At the end of the month that we worked together, we had both replicated our original findings. This suggested to us that there was something about the intention or the expectation of the experimenter that may influence the outcome of these studies. This is a very challenging kind of finding because one of the cornerstones of western science is objectivity. We assume there is an objective world out there that we can somehow manipulate. If the experimenter's intention or consciousness begins to play a role in the outcome of these studies, it muddles all of these assumptions. We decided to replicate this. Richard came to my lab and we set up an identical experiment. We increased our sample size. Again at the end of the month, we had both replicated our original findings. I am batting four for naught, he is batting four for naught, but in opposite directions.

We now have gotten a research grant through the Samueli Institute for Information Biology, located in Irvine, California, to do a conceptual replication of this work. In this case, we are looking at the possibility that there are a variety of different questions you can ask as to why this kind of a difference would occur. One hypothesis is that it has to do with sociability—in my case, granting people permission to be open to this kind of effect. Because Richard does not believe in this possibility, at a meta-linguistics level, he is communicating to other people that, in fact, this is not possible. In order to test this

hypothesis, we are engaging people in a cross over design. I interact with half the people and he interacts with the other half. Then when we do the experiment, he works with half of my people, I work with half of his people. The goal is to see if the people that I have interacted with, but he studies, have the effect, or whether, in fact, there is an additive effect with my subjects with whom I also interact. We are now about halfway through the data collection. We are wanting to see if there are differences in physiological activity during the influence or intentionality period versus the control period.

If you consistently get these kinds of differences in physiological activity, then you have a highly statically significant difference. You can apply a statistic to this and come up with some way of evaluating how likely your results were to have occurred on the basis of chance alone. Reports from a variety of laboratories support this, starting at The Mind Science Foundation with William Braud, the University of Edinburgh, the University of Nevada in Las Vegas, Science International Corporation, the University of Hertfordshire, the University of Freiburg and the Institute of Noetic Sciences. If you do a metaanalysis of the studies, most of the results are in the predicted direction. Instead of having trials in an experiment, you treat each experiment as a trial, and you can concatenate across the database. We have about a 33 percent success rate in our lab, comparable to other data that is coming out. We are finding a highly statistically significant difference across these various labs and various experimenters.

Why is this important? Why should we as clinicians or people who are interested in healing care about this? This is a very important question. A number of people now have begun to ask this question, again under very well controlled circumstances. Randolph Byrd used a randomized double blind protocol to measure outcomes for cardiology patients in hospitals. Half the patients came were randomized to standard care alone and half were randomized to the intercessory prayer condition. Byrd found statistically significant differences between these two groups in a variety of different parameters—the length of hospital stay, number of medical complications and secondary illnesses.

Another study was done by Zvi Bentwich, a very prominent immunologist in the area of AIDS research, in Israel. He was clearly interested in trying to

apply these kinds of insights to his own clinical work. He had a three-arm study in which he looked at distant healing, self-regulation (what he called relaxation) and a control group. Again, he found that those people who were treated by the distant healer, showed significantly more satisfaction with care—a generally greater sense of physical well-being, improved wound healing, fewer fevers, and better satisfaction with life than either the suggestion group or the control group. This suggests that the distant healing arm of the study was more potent than the self-regulation condition alone.

I am going to go into most detail about a study conducted by psychiatrist Dr. Elisabeth Targ at California Pacific Medical Center. Regrettably she died in July 2002. Elisabeth was a pioneer in trying to harness these subtle fields within the rigors of western science. She wanted to tackle the hardest and most complex questions. She looked at areas within the conventional medical model where the illness seemed resistant to allopathic intervention. At the times when these studies started, AIDS was not easily treated. She, Fred Sicher and a group of people were able to work together to create a protocol in which subjects were evaluated and stratified, based on their age and weight and a variety of AIDS complicating factors. Then they were randomized into two groups. They either received distant healing or standard care alone. Their definition of distant healing is “a conscious and a compassionate act of meditation intended to impact the physical and or emotional well-being of another person at a distance.” Healers, who had at least five years of experience, had experience working with at least ten patients and had previously worked with AIDS patients, were recruited across the country. They were not given complicated instructions about what to do. They were encouraged to use whatever methodology was convenient and familiar to them, and to simply hold an intention for the health and well-being of the patient.

A variety of different techniques were employed—visualization, prayer, chakra balancing. Energy manipulation or energy balancing was the largest representation in this sample. This word energy is very complicated. The concept of a non-local, distant healing exchange does not fit within a conventional model. It does not appear to be falling off at the square of the distance. It does not appear to be behaving in ways that we understand energy to work. Energy becomes a metaphor for something that we need to hold on to because these metaphors are very important for the types of the questions that we ask. There

are a variety of different techniques. Targ and Sicher found significant differences in a variety of outcome measures, including the number of doctor visits, the number of days in hospital, and the AIDS severity score. The only area that did not show any significant difference was the immune measures that were looked at. It did not appear that the immune system was changed as a result of the distant healing, but the external manifestations of the person's condition and well-being were different.

Another study done in the area of cardiology is the Harris study involving a randomized control trial on the effects of remote intercessory prayer on the outcomes of patient admitted to a coronary care unit. This study, published in the Archives of Internal Medicine, found that heart patients who had someone praying over them without their knowledge had ten percent fewer complications. A ten percent difference is enormous for the kind of cost savings that are available to the medical model, not to mention the kind of opportunity that this provides for an expanded model for health and healing.

We were able to support the work of Duke University cardiologist Mitch Krucoff through The Institute of Noetic Sciences. The interesting thing about Dr. Krucoff's pilot study is that the group that stood out in terms of outcomes was the distant healing group, not the guided imagery group and not the Therapeutic Touch group. He found though, that what he calls noetic interventions, all provided better outcomes for the patients—better than standard care alone. This is now being replicated. It is now a multi-site study, which will carry weight in a conventional scientific model.

The study that I am most involved in right now is the wound healing expectancy study funded by the NIH. This study will look at wound healing in patients who are undergoing breast reconstructive surgery. We are working with three plastic surgeons, who work with these women. They are doing the recruiting of the subjects. We have affiliation with the wound-healing center of the University of California at San Francisco. We have an objective measure of wound healing reflected in the rate of collagen deposition using a small polyurethane patch that is implanted in the women's belly. It is a three-arm study, two blinded, one unblinded arm. In the two-blinded arms, the subjects know they are in a distant healing study, but do not know whether they are

randomized to a distant healing or to a control group. The third group is unblinded. They are in the distant healing condition and are told they are in the distant healing condition. In fact, they are called every day during the treatment period to tell them that the healers are working for them. The idea is to see if we can find some kind of linear relationship.

We also received a grant from an anonymous foundation in Silicon Valley to investigate and create an educational program around distant healing. We are working with digital media and creating an educational program that will go out to medical schools, nursing schools, and other health care and spiritual training programs. We are interviewing healers from a variety of different traditions. We just completed and published a Definitions and Standards report, which came out in the May/June 2003 supplemental report of *Alternative Therapies in Health and Medicine*. This is an excellent resource for developing protocols around these topics. There are two essays on distant healing, one for lab based studies, one for clinical studies. There are two essays on bio-fields or subtle energies, one lab based, one clinical based. And there are one or two essays on relationship-centered care, one from the nursing perspective, and one from the physician perspective. The issue is Medline abstracted.

One of the reasons that we built our lab is that we were keenly interested in looking at bio-field, in the context of a different variety of practitioners systems. We completed a study looking at neural-energy transfers. This was a collaboration with the Chopra Center and Leanna Standish, N.D., Ph.D., a scientist at Bastyr University. The idea was to look at psychophysiology. We measured EEGs to see if, when a person in one room is stimulated by a light, a checker-board kind of effect, a person in another room has a similar kind of physiological response. Is there a non-local exchange of information at the cortical level? In fact, this study produced significant results and has been submitted for publication.

This is an exciting time and a challenging time for us. How do we do this research with confidence? How do we recognize the limitations of what the western medical model offers? How do we recognize the limitations of the scientific methods that we are looking at? How do we also embrace all the complexities of what is happening in terms of subtle energies and this conver-

gence that I mentioned at the beginning? I just spent some time with Ken Wilber before I came here. Ken has a paper out on an integral theory of subtle energies. If you are interested in that, it is on his website. It is a very good comprehensive attempt to merge the wisdom traditions with what we understand from science to begin to develop a sort of theoretical model based on the first, second, and third person perspectives. R. D. Laing wrote that the universe was a vast machine yesterday, it is a hologram today, who knows what intellectual rattle we will be shaking tomorrow. The point is to stay open, to stay rigorous, to stay skeptical, and to stay open-minded fashion.

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QUESTION AND ANSWERS

Attendee 1: Hi Marilyn. My name is Karin Cremasco, from Ontario Canada. I just graduated in energy medicine with my doctorate through Greenwich university. I am currently enrolled in Holos university for my doctoral dissertation for Th.D. I did a research project, which had 86 participants. The topic was energy balancing as directed by the body using muscle testing, and its effect on anxiety and depression. The study consisted of a one-hour energy balancing session, or an education session as the quasi-control. The quasi control and the intervention group both worked with me and were in session with me for one hour. Both groups set a baseline of talking about what their symptoms were like. Both groups set a goal of intention. At that point they pulled a number out of a hat to determine whether they got an odd number, which would determine an education session. Or an even number in which case they received a balance.

What was interesting (in that you were talking about intentionality), is that all the people that came in weeping received an energy balance, and all of the people who came in very clear were just fine. What that meant to my research, was that the two groups were too different, as far as the statistics went. What we looked for was the difference between people coming and spending an hour in a healing environment in a conditioned space working with me. Half the group received the energy balance and the other group received talk about the energy balance. It was a detailed discussion. I gave them overheads, I really did a song and dance, so they received lots of information. What we found was the state of anxiety improved in all the test points of those

who had balances. The trait anxiety improved in all test points but one, and that was at one weak test point. We did test points the evening before the session, the evening after the session, and then one week later. In the zoom scale, the depression improved in all test points for the intervention group. In the control group, we found that trait anxiety improved one week later only. But everything else in the zoom and the state and the trait was the same. I'm now doing a cross over study so that those people who didn't get an energy balance are coming back to get the balance. The ones who got the intervention last time will come back and get an education session. We want to see what happened to people when informed they will have an energy balance.

Marilyn: *What is really important is if you have a ceiling affect, how are you going to see a difference if they are already in optimal health? I think it is good to work in that kind of model, to have some stress. When you are working with some deficiency, such that you can restore them to balance, I think you are more likely to see a difference.*

Karen: I believe you are right. I think that's what happened, we still saw a difference in the number. The level of significance for many of the test points was $p < .0001$. Even with that, the intervention group (who was more depressed or had more anxiety) came up beyond the level of the control group in terms of test scores. You asked for us to report our research. Where and how do we do that?

Marilyn: *Well there are a number of journals, for example ISSSEEM's journal, **Subtle Energies and Energy Medicine**. Publish, publish, publish. Get it out there. You know, peer reviewed journals are really great. **Alternative Therapies, Complementary and Alternative Medicine**. I think that it is really important to get the studies out. It may not be that it's in appropriate form right now that it could get through the peer review. You could publish it as an abstract. That is still very, very important for contributing to the literature that is out there. Getting it into the literature is the thing to do.*

Attendee 2: David Grace. 99 percent retired psychologist. Maybe soon to be 90 percent. Do you know if anyone has used the silent unity prayer data? It is a rich resource, I would think. Silent Unity Prayer is a service the Unity Church, at least in Missouri, provides. You call or write. They pray for you for thirty days, and then they usually send you a letter, confirming that they have done it. Again, I think it would be a rich resource.

Marilyn: *That's terrific. My email is schlitz@noetic.org and I would appreciate the contact information for that. We get requests all the time for this type of healing work. My way of dealing with it is to refer people to these kinds of circles. There are a number of prayer circles, all over the country, all over the world. If they actually have a program where they are giving people feedback, I think that's a great service and would be very appreciated.*

Attendee: Sandra Paulson. Psychologist and private practice in Sacramento. I am wondering if you have any comments about the potential confounding influence of prayers that are not part of your study. Other spurious intentions, including those of skeptics, etc, that you are controlling.

Marilyn: *Well the idea is that it gets randomly distributed across your groups. You cannot control for all the external things. You cannot ever ask a family not to pray for their at risk person. The goal is to see if you have a large enough sample size that those potential compounds will get randomized across the study design.*

Sandra: I would think skeptics intentions would not be predicted to be randomly distributed.

Marilyn: *Well one would hope that there is a uniform sort of balance of those things across the database. I cannot imagine for somebody intending for the harm of other people. They may be intending to dismiss a positive outcome. I can certainly see that as a possibility, but I don't know of anybody who would be intending harm for another. Even skeptics are loving, wonderful people. I consider myself a skeptic. I consider myself an open-minded skeptic. And I think that it's really in these studies, trying to create a large enough sample size, such that you can rule out those kind of confounds.*

Attendee 4: Maureen Gamble, interested bystander. I have a question and a request. The question is, on the group that you are now studying with the evocative images, are you as a part of that also replicating Dean Radin's testing?

Marilyn: *Dean and I are doing the study together and in fact he was looking at the data, and he is finding right now, that heart rate seems to be most influenced by this transmission. He is seeing an effect right before the target is actually shown to the sender. What she is talking about on some studies that were done, looking at, in the psychophysiology literature, how a stimulus will effect a physiological reaction. What Dick Buereman and Dean Radin and Daryl Bem now at Cornell are finding, is that if you begin to look at the physiological reaction prior to the stimulus, you know seconds prior to the stimulus that people are anticipating at an unconsciousness level an evocative target. They are not showing a profound reaction to the non-evocative target. It suggests that there is some time displacement. We had a meeting in Fryburg with a group of mainstream psychophysicologists and showed them the data. One of them looked at their own data set and found it there, too. There really is something interesting happening and we are looking at it, wherever possible.*

Maureen: Since you have responses across a time span on your remote staring experiments, has Dean looked at that to see if there may be some response happening with

the people who respond to the remote staring? In other words, before the actual opening of the video link, is there some initial rise, because that would be interesting too, that they know that they are going to be stared at?

Marilyn: We have not looked at that. In the gut reaction study, one of the things we saw is that some people as senders are not reacting to the targets. If you look at how strong the sender reacts, it correlates with how strong the receiver reacts. So it does appear, as kind of a telepathy model. That might be some of our best indicators that were actually getting some kind of mind-to-mind communication.

Attendee 5: Chris Mason. I am a psychologist. I work at a residential center for at risk youth in Estes Park, Colorado. I am hoping to start a mind-body practice with other professionals, in the Boulder/Longmont area. I have talked with several area hospitals. They like the idea, but they are not really incorporating that paradigm. I was told, "We are still using the western medical model." I want to thank you for the work that you are doing. I just want to say, research is important for all of us to be doing in some way or another because the more research there is, the more likely we are to have an effect on how medical care and healing is delivered and also on insurance companies. Do you know of any studies or any efforts to link all the spiritual healing prayer traditions into praying for healing the world, praying for healing differences between ethnic groups, praying for healing the conflicts we are involved in now. I am truly wondering if all of us joined together in that prayer effort, or that intention effort, if we can actually make a difference in the world's political and economic situation.

Marilyn: There are a number of practices that are engaging in this. Some studies have been done looking at group cohesiveness and the impact it had on crime rates on inner cities. There is actually quite a lot of data that supports the idea that holding that kind of positive intention as a group, multiple intentions coming together, can have a positive outcome. There have been a number of sort of prayer vigils. I know people like James Redfield and Marianne Williamson actually have on their website where they post times when those things are happening. I am sure there are other people here, who have initiated these kinds of practices. The problem is how to evaluate an outcome in those situations. When you have too many variables, it is impossible to bring science in. I know a lot of people who were praying around the Iraqi situation, and maybe it ended earlier because of that. Who knows? That is just speculation. Science has its limits, and we need to confine ourselves to places where we can understand where there is a cause and effect relationship. Science is not everything, and so, it really is important to hold the positive intent for the well being of our planet. I think holding the goal of a just, compassionate, sustainable world is the best thing.

Attendee 6: Hi, my name is Silvia. I am a junior high Math teacher. It struck me earlier when the lady was talking about the randomized study where one was going to get healed and one was not. It wasn't really random, because the ones who were in the biggest trouble were the ones who got the healing number. How can you hold onto the concept of randomized? Maybe there is no such thing as random. How do you deal with that in your research?

***Marilyn:** I think that there is randomness. To throw the baby out with the bathwater is probably too extreme. There are limits to randomness and if you look at any of the random event generator work, for example, the Princeton lab has for at least twenty years been collecting data that shows that there are ways in which consciousness can perturb random numbers and create a greater coherence within these random systems. Ed May, who is a good friend and colleague of mine, works at the cognitive science laboratories, and he has a theoretical model called the decision augmentation theory. It is based on the idea that perhaps in that example of people parsing out, perhaps there is a way again in which experimenter's intentions play a role in how people put themselves into various groups. Another example of that came in Elizabeth's and Fred's first AIDS study, where if you looked at the database, after the study was done, more people in the control group died, than in the treatment group, in the first study. There were two studies done, and so that is pretty striking. We went back and looked in detail at the sort of profiles of the two populations and in fact there were more older people with more severity spores in the initial group, in the treated group, as compared to the control group. Was it just by chance that this happened? Ed would say that the experimenter is somehow picking the opportune time to create the random decision, such that you create the opportunity for the outcome you're looking for. That was the reason we used the stratification procedure for the second experiment, so that we counter balanced age in both sets of groups. This is part of the learning. I would not give up on randomization, I would acknowledge the limitations.*

Attendee 7: Jerry Wesch. Psychologist and seeker of truth here. You were talking about the influence on research by skeptics. In the Spindrift series (one of the largest sets of healing research done by a pair of Christian Science folks over a twenty-year time period) at one time the central church of Christian Science was prosecuting and persecuting them as heretics for doing this research. There were large numbers of people in the church hierarchy praying that their research would fail. During that time in fact, their studies came out null. I think that is another variable you might include. Indeed, it is documented in a new book, by Bill Sweet, just now coming to publication.

***Marilyn:** It was a father and son team, and they both committed suicide. It is a very sad story. I was not aware that there was actually prayer going to inhibit the results of*

the study. I am quite close with Virginia Harris, who is the head of the Christian Science Church and I can tell you that she is extremely supportive. And, there are limitations. They have participated in the mantra study for example. I would say that whatever the circumstances, there is a profound shift that has happened within the church. I would say that Virginia's leadership is warmly welcome.

Attendee 8: Hello, my name is Ben Perry, I am a film and television technician. I also volunteer at the Rhine Research Center. My question is about the ethics in a lot of this research. Pardon me if I'm not too familiar with these studies. My impression that in Bird's original cardio study, patients did not know they were being prayed for and I wonder how that might have gotten past the IRB? And if there was one. And more importantly, in the study in '99, it sounded like the 10 percent of patients did not realize they were being studied, and I just wonder if you could just talk about the ethics of that in a research design.

Marilyn: *The whole IRB issue has gone through profound transformation in the last six months. Anything involving human subjects, human volunteers (forgive me for the word subjects, but that is the language that is used) requires an IRB, it requires informed consent. We don't do anything without informed consent. It is a little tricky when you are trying to have somebody in a control group, but the way we have handled it, is to try and have a big enough sample, and to make sure everybody is informed that some time they will get it. I like the idea of sort of the cross over at the end, such that all people get the treatment. Sort of a weightless control is what that is called. I think that that is a good idea. It helps to compensate for what the intervention is. The field is maturing, we are growing up. That is part of our recognizing, that this is not just a garage activity anymore. We are now at the National Institute of Health level. They require a level of scrutiny that is really helpful to us, as we go through the study. In my wound healing study, I go through the IRB at three separate institutions. I have had to go through at least four rounds at Healthway Pacific Medical Center to make sure that they are happy. Primarily it is the wording of the consent form. Now there is this whole issue that has come out in the last couple of months, making sure that biological materials are safeguarded. This is new. We now have to assure that all genetic material is thrown away, and that there is no tracking or association between that material and the name, the identity of the person. It is a complicated different game we are playing. The limitations are that it adds challenge, it makes it a much more professional activity than it was before. I think that it is a good thing. I think that ultimately, for the ethical issues that you are raising, it is extremely important that we be responsible.*

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