The Practical Pitfalls of Research

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Werner Heisenberg, best known as a founder of quantum mechanics, gave us the Uncertainty Principle, which took our comprehension of quantum physics a giant leap forward. We began to understand that we may often get what we're looking for.

If an experiment is designed to measure particle mass and activities, that's what we get; if the experiment is designed to measure wave activity, that's what we get. If one scientist sees evidence that energy is particles, and a second scientist sees evidence that energy is waves, they might argue. Both would be correct, but the argument might continue ad nauseum.

Heisenberg also alluded to the idea that there is no such thing as a purely objective experiment. As soon as you begin to measure something, the energy of the observer may change the results. I'll share with you a few personal experiences that strongly support this concept.

In the late 1970s, I was conducting research at a center for autism in Michigan. At one point, I got the bright idea that autistic children have different energy fields than nonautistic children. I worked with my co-investigator, biophysicist Jon Vredevoogd, to bring in an arbor-type wooden structure in which a child could stand. We mounted 10 receiver electrodes in the arbor to serve as antennae. The signals they received were passed into a sensitive Keithley Electrometer that gave us a digital printout of the child's electrical field at any given moment.

As I suspected, the electrometer consistently measured higher electrical fields in autistic children than nonautistic children. After we had collected what appeared to be groundbreaking data, Jon took our apparatus to his basement laboratory. He wanted to measure the influence of natural versus synthetic fabrics on the electrical fields of those wearing them. His experiment worked according to his expectations: Synthetic clothing produced a higher electrometer reading than natural fabrics.

One night at about 10 p.m. Jon called me at home. He said he had news that invalidated our results. This upset me. I was sure we were on to something important. Jon went on to tell me that he could sit across the room from the electrometer and its electrodes, and change the printout of the electrical fields using only his mental intention. With practice, he was able to get the exact numerical printout he intended.

Skeptical, I immediately went to his house. I was unable to change the electrometer printout with my intention - but Jon could. I didn't want to be able to change the numbers, so I couldn't. I was convinced that autistic children had higher electrical energy fields than nonautistic children, so they did. Jon didn't have as clear a feeling about his fabrics; he got the results he sort of wanted, then was shown the truth. This was an educational experience for both of us.

Another series of lessons came from my experiments using Kirlian photography in the 1970s. At the time, there was an upsurge of interest in this type of photography, which captures energy emissions on a photographic film or plate. Kirlian enthusiasts would use these images to diagnose everything from cancer to schizophrenia. The assumption was that the corona - the energy emission recorded on the photograph - was relatively consistent for any given human subject, and coronal defects or abnormal patterns reflected disease states or conditions.

Skeptic that I am, I began to investigate, first by photographing the coronas of my patients' fingertips on the same film as my own. The process involved creating a time-controlled, electrical-potential field. I took the photos before and after each treatment session, or between each segment, if I used several modalities. The coronas depicted an apparent interchange of energies between myself and the patient. Frequently, on a first visit, the patient's corona was less dense

and expansive than mine; posttreatment, my corona usually diminished, while the patient's corona was enhanced, suggesting some of my energy had transferred to the patient.

As the treatments progressed, the patient's corona sometimes appeared stronger than mine in the pretreatment photographs, while I showed a stronger corona posttreatment. This suggested that the patient energized me. Usually, about the time the treatment series was to be completed and the symptoms were resolved, both of our coronas strengthened. I began to accept these positive changes as indicators that the case was "solved." In this manner, I was using Kirlian photography as an indicator of progress.

I decided to photograph my students' fingertips before and after patient examinations, while I observed and graded the results. I found if I reflected a happy mood, the student's corona was strong. If I warned the student that this would be a tough exam, the corona weakened and reflected flaws similar to those interpreted as diseases by other investigators. If I told the student he or she did well and then re-photographed, the corona was strong again. Some investigators would have used this to indicate a "cure" for a previously diagnosed disease; to me, it suggested that anxiety or fear, no matter how transient, could be misinterpreted as a disease process on a Kirlian photograph.

I went on to test a wide range of variables for their ability to influence a Kirlian photograph. Among our observations: Strenuous exercise caused no significant change in coronas. One person's feelings of happiness toward another caused his or her coronas to blend, while feelings of anger left an empty space between coronas. Temperature differences caused variable corona changes. Acupuncture was used to relieve a toothache in one student, and menstrual cramps in another, and their coronas improved with pain relief. We even studied bloodflow, which caused no change in coronas.

We ended our research after more than a year, and presented our findings at an international Kirlian convention in New York. The results were not warmly received.

In any case, I learned that intention can change the reading on a Keithley Electrometer, while thoughts, moods, anxiety, temperature and pain relief can change a Kirlian photograph. Yes, Mr. Heisenberg, the observer does change the outcome. So, how do you put the observer in the equation, when he or she is an inconsistent factor?

Every session of CranioSacral Therapy, SomatoEmotional Release, Energy Cyst Release, and Therapeutic Imagery and Dialogue requires the therapist to blend with the patient. Moreover, each patient problem and method of treatment is unique. If you follow a standardized protocol, you will not get the same results as if you had blended with the patient and followed the steps provided by the patient's inner wisdom, which is integral to the practice of these therapies. Obviously, you cannot have a double-blind study if no two treatments are alike.

It seems to me that the only studies that can be done to validate the efficacy of such modalities are clinical outcome studies that do not dictate the protocol. The results obtained for given disease diagnoses could then be compared to the thousands of conventionally treated patients with similar diagnoses. To go beyond this in terms of control is to study something that is not CranioSacral Therapy.

I am biased, but I believe I have a right to be. I have worn the moccasins of the rigorous experimentalist. I spent three years as a teaching/research fellow in biochemistry. I spent eight and a half years as a clinician/researcher in biomechanics at Michigan State University. I served for five years on the American Osteopathic Association's Bureau of Research, and two years on the Alternative Medicine Program Advisory Council for the National Institutes of Health.

I have seen both sides, and have come to the conclusion that in health care, it's the outcome that counts, whether you understand the process or not. I have had people tell me I should not use a treatment protocol until I know how it works. My answer to them is to stop using gravity and electricity, until they understand how they work.