

VOL. 1 NO. 2 1997

Therapeutic Touch, or TT, is a disturbing phenomenon that has spread rapidly throughout the medical community, specifically among those in the nursing profession.

Bob Glickman is a registered nurse in Philadelphia. He is proud of his honorable profession and dismayed at how many people in the nursing community, including the principal professional associations, have uncritically embraced TT and use it regularly even though there has never been any proven therapeutic value.

Glickman tried for months to coax practitioners of Therapeutic Touch to submit to a simple, inexpensive test of their claims here at the Foundation. His report will give you some idea of just how they wriggle when confronted with a legitimate challenge of their claims.

TT has been used increasingly in hospitals over the past twenty years. It consists of a practitioner running his/her hands over the body of the patient, about six inches away from the person. It is claimed that the practitioner can detect what is called the "human energy field" (HEF) and that it can be felt as distinctly as if it were a layer of sponge rubber. The practitioner can then adjust this field to the advantage of the patient, we're told.

Tests of cures claimed to have been attained through TT would be extraordinarily expensive, subject to many variables, and liable to produce endless discussion and argument. Bob Glickman and I decided it seemed best to test the basic claim: that the HEF could be detected by an experienced practitioner and that it could be detected with an accuracy that would establish its existence.

What follows is an interesting dialogue between Bob and some folks on an Internet e-mail discussion group devoted to Therapeutic Touch.

-James Randi

Touch of Mysticism

by Robert Glickman, R.N.

ne of the many places to look for potential TT practitioners is on the Internet. I submitted a challenge to the Nurse Rogers email service run by devotees of Martha Rogers. Rogers was a famed theorist of nursing based at New York University's School of Nursing and was a major supporter of Therapeutic Touch.

Therapeutic Touch was created in the early 1970s by Dolores Krieger, R.N., Ph.D., and Dora Kunz, a "fifth generation sensitive" and "clairvoyant" since birth, who was the president of the American Theosophical Society at that time. (The Theosophists are followers of Madame Blavatsky, a Russian mystic who taught an Asian-style philosophy she said she learned in Tibet, and asserted that invisible entities known as "Mahatmas"

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SWIFT TAKES

GOOD VIBES AND BAD VIBES FROM ALL OVER

The front page of the Metro Section of The New York Times on Monday, July 21, 1997 featured a lengthy article entitled, "The NYPD's Psychic Friend: When Technology Fails, Detectives Call On a New Jersey Woman's 'Visions,'" featuring self-proclaimed psychic Dorothy Allison helping the men in blue solve murder mysteries. Why they devoted as much ink as they did to this silly woman is the biggest mystery of all. The best part of the story was a quote from Randi, where he recalled what a police chief from the Midwest told him about Allison: "She couldn't find a bowling ball in a bathtub if it were on fire." Skeptic/investigator Joe Nickell was also quoted in the piece.

The folks over at Life may want to rename the magazine Get A Life. The August 1997 cover story, "The Healing Power of Touch," a decidedly credulous look at massage's purported therapeutic benefits, comes on the heels of the July issue's "Why So Many of Us Now Believe the Stars Reflect the Soul: Astrology Rising." The July cover story is bad journalism plain and

simple. Towards the end of his tenpage devout reportage of the pseudoscience's present scene and list of players, author Kenneth Miller recounts his conversation with University of Oregon Professor Ray Hyman, agrees with the fallacy of personal validation phenomenon, and then goes on for two more paragraphs about how angry it makes him that Hyman is right and that all the tests debunking astrology are conclusive. Immediately after this admission, he essentially throws it out the window: "Soon, though, I realized that I had found treasures in astrology that no fallacy could every taint: those flowing metaphors and profound myths; those conversations with strangers, in an arcane language, that had put me in contact with great chunks of my past. And there were things in those transcripts [of my chart readings] that Hyman's theory just couldn't explain." Shame on Life for actually publishing such schlock.

The July/August 1997 issue of Health throws a bone to questionable arthritis treatments in an article concerning the claims of the book The Arthritis Cure, alleging new but as yet unproven treatments for arthritis using the dietary supplements glucosamine and chondroitin. The piece leads off with the tale of a woman who began taking the supplements courtesy of her husband, a veterinarian, who had been using them for some time on dogs suffering from arthritis. Sounds like the remarkable transformation of a wife into a guinea pig.

In a sidebar, a book entitled Alternative Medicine Sourcebook written by a doctor and licensed naturopath is endorsed with the phrase, "for a balanced perspective." And lest any readers miss the bias, this appears under the headline, "Alternatives You Can Trust." Balanced, unbalanced ... there was no notice informing readers that the magazine was now writing its material in Orwellian Newspeak.

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The July/August 1997 issue of Weight Watchers includes an article promoting aromatherapy, under the heading of "Mind: Bath of a Thousand Flowers." Hard to imagine the piece is good for mind or body, but the usual extravagant claims are made, including the advice that one should "consult a qualified aromatherapist," whatever that is. In fact, the article points out that "while national certification isn't available for aromatherapists in the United States, at least nine schools

YOUR OPINIONS ARE IMPORTANT TO US. Please send your comments to Letters to the Editor, Swift, 201 S.E. 12th St. (E. Davie Blvd.), Ft. Lauderdale, FL 33316-1815. Letters can also be e-mailed to randi@randi.org; please put "Letter to the Editor" in the subject line.

We encourage you to submit your ideas, items of note and original articles. Please send them for our consideration to Articles Dept., Swift, at the address or e-mail listed above.

offer correspondence and in-class courses about aromatherapy." Any bets on whether the diplomas are appointed with a pretty floral pattern?

..........

The June 1997 issue of Natural Health poses the headline question, "Spiritual Medicine: Does it Work?" The piece is an excerpt from a new book entitled Coyote Medicine by a practicing medical doctor who also promotes American Indian healing strategies. The doctor reports that he has "seen cancers, neurological disorders, anginas, gland problems, and other diseases cured without (and sometimes in spite of) surgical or pharmaceutical interventions." He does not attribute this observation to the trivial fact that all medical conditions either get better or worse or remain unchanged regardless of whether or how they are treated, but in fact seems to attribute this unremarkable news to the wonders of Amerian Indian mysticism. He also reports on the visions he experiences while using peyote. Perhaps Carlos Castenada should write a medical book.

The same issue includes an article entitled "Strengthening your Life Force," featuring the ever-popular pseudoscience of qi gong, which, we are told, has been around for 2600 years, so it must be good. Either that, or it certainly does take a long time for some suckers to wise up.

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The July 11-13 issue of the syndicated USA Weekend newspaper

supplement asks on its cover, "Can herbs heal you?" The author's answer is yes. The writer has a new book out entitled Miracle Cures, from which the article is excerpted. The hook here is a determined attempt to try to find smidgens of "scientific" evidence to support the endorsed remedies. But we're confused - why can't these alternative therapy people get it straight? Isn't science evil and wrong? Or is science good and accurate, but only when it provides something in support of your particularly favorite pseudoscience?

In honor of the 50th Anniversary of "the Roswell Incident," Time 's June 23, 1997 issue features a cover story, "The Roswell Files" with a tongue-in-cheek account by writer Bruce Handy of the entrepreneurial opportunities that existed in Roswell, New Mexico during the town's planned three-day commemorative weekend in July and little known trivia tidbits, like the fact that actress Demi Moore was born and raised in Roswell. A second article, "Did Aliens Really Land?" is an excellent, rational historical account of the incident by contributor Leon Jaroff.

The April/May 1997 issue of Civilization, the magazine of the Library of Congress, is a breath of fresh air. It contains a wonderfully written, succinct article tracing the history of homeopathy and its present-day popularity entitled "Medicine's New Age," by Robin Marantz Henig, who is also the author of five books and

numerous articles. The magazine's Contributors column states, "Henig sides naturally with the scientists who ask for objective evidence rather than testimonials." Hear, hear. The article also contains a sidebar listing and describing briefly "Other Unconventional Approaches" to healing, including acupuncture, Therapeutic Touch, chiropractic, and biofeedback.

The April 13, 1997 issue of The Boston Globe Magazine Sunday newspaper supplement featured a cover story called "Attack of the Pseudosciences: As aliens and auras take hold of the popular imagination, scientists fight back against the X-Filing of America." This thought-provoking piece by staff writer John Yemma focuses on the layered and complex factors that may have contributed to the prevalent anti-science attitude, scientific illiteracy and the migration of fringe science toward the media mainstream and what some critical and not-so-critical thinkers are doing about it. A parting question sums it up: "But, really, does it hurt to nibble Mysterious Origins mind candy or to secretly thrill at reports of UFOs, Loch Ness monsters, ESP? It doesn't hurt if we keep clear distinctions be-

CORRECTIONS: We reported on April 1, 1997 that one of the recipients of our Pigasus award was Robert Bigelow of the Bigelow Tea Company. We have since learned that Robert Bigelow is not connected with the Bigelow Tea Company. We apologize for any misunderstanding we may have caused.

In "The Kassel Dowsing Test," Vol. 1, No. 1, Amardeo Sarma's name was incorrectly spelled in the byline.

THE KASSEL DOWSING TEST PART II

The premier issue of Swift contained the first part of "The Kassel Dowsing Test," a reprinted article from Skeptiker, about the first original project of the GWUP, the German skeptics' organization.

We left the group of dowsers and GWUP members at the test site in Kassel thoroughly agreed and assured of the protocol, poised to make history. A wide variety of pendulums, forked sticks, and bobbing and twisted springs were in agitated motion as the claimants eagerly awaited their chance at the DM20,000 prize. TV cameras covered every aspect of the proceedings. Claimants told interviewing reporters that they were astonished at the naivety of the GWUP people who were offering them this easy way to win a substantial prize.

I must admit that at such moments, I have a momentary feeling of "But what if....?" Dowsers are almost universally honest folks who really believe they can pass such tests, and their guileless exhilaration is infectious. But as we've shown so many times, these folks are merely subject to the "ideomotor effect," whereby they are innocently unaware of moving the dowsing device, and do so unconsciously. They are often able to succeed in poorly designed and poorly controlled demonstrations, usually depending upon common sense and



ABOVE: A DEMI-DOZEN DOWSERS AT KASSEL, STICKS AND WIRES AT THE READY, PREPARED TO CARRY AWAY THE PRIZE. OPPOSITE PAGE: THE TEN-BOX EXPERIMENT WAS EAGERLY ATTACKED BY A CLAIMANT. THE RESULTS WERE ABOUT 10%.

careful observation, but they always fail in this sort of strict, double-blind, monitored test. Experience has shown me that any number of strong contraindications rarely sway them, and they persist in their convictions that they have supernatural abilities and that they can easily prove them to doubters. There is no joy in having to tell honest-but-deluded claimants that they have not demonstrated their claims to be true. When we demonstrate that dowsing is a delusion, we shoot fish in a barrel.

Lacking huge grants of money and endless maintenance funding, those of us who design and conduct tests of unusual claims often have to satisfy ourselves with going after less important targets, leaving the more damaging and glamorous pseudoscientific claptrap to proliferate. A dowser bobbing a stick in a field is a sad sight, but not a serious threat like homeopathic "medicine" or "recovered memory" witch-hunts. Too bad Congress didn't see fit to hand us the \$30 million that they gave to the promotion of quack-

ery by unqualified "experts" at the National Institutes of Health, where it was promptly squandered.

GWUP deserves high marks for the care they demonstrated at Kassel. I'm happy that I was able to contribute to the design of the protocol, and I feel that the results speak for themselves. Dowsing will continue, of that we're sure. But at least critics of these silly notions will now have a very definitive piece of research to which they can point when confronted with the usual blather on the subject.

Again, we are grateful for the translation skills of Jutta Degener with assistance from Clive Feather and Mark Brader. Ms. Degener also provided us with the official portrait of Pigasus, mascot of the 2000 Club, and designed the popular JREF Web page.

Here is the second and final part of the Skeptiker article.

—J. R.

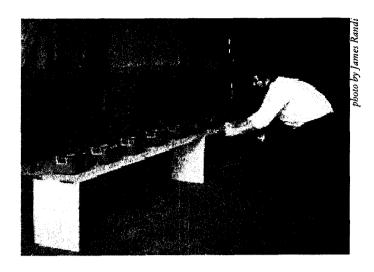
THE DEFINITIVE DOWSING TEST

by Robert König, Jürgen Moll and Amardeo Sarma

THE TEST COMMENCES

Of 21 dowsers who applied in writing, 20 came to Kassel to participate in the tests. Nineteen of them took the test involving water running through pipelines, while the last said the whole area was too "contaminated" for him to do the tests. Fourteen participants took part in the box experiment, but only 13 of them were used in determining the results, because one person broke the previously agreed-upon rules; this was the same person who turned down the water experiment. The results from this person are listed separately; the overall results would not be affected if they had been included.

The 19 participants who took the water test made 30 runs each and scored between 11 and 20 (37% to 67%) — see "Water Test" figure below for a chart of the distribution — with a total score of 298 out of 570 (52.3%).



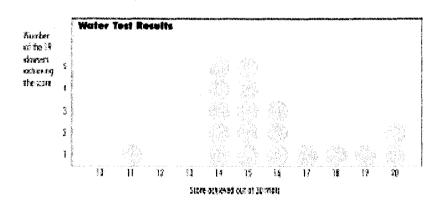
Four errors were made while setting the valves; in each case a valve was turned off when it should have been on. In three cases it was noticed during the trials and corrected immediately, while the fourth case was discovered afterwards and confirmed from the videotapes.

For scoring the results, the actual valve setting was used.

Another incident occurred during a changeover of observers: the new person didn't completely cover the receptacle tank during two runs. That resulted in an increased level of noise from the running water.

One observer thought that a slight difference between the sounds of the two settings could have been noticed. The mistake was discovered during a routine check of the trial conditions. Most dowsers felt the box experiments were more difficult, and so expected not to do as well as they did in the water tests. They scored between 0 and 2 hits each out of 10, 1.08 on average, against an expected value of 1 — see "Box Test" figure below for a chart of the distribution.

One candidate was omitted from the results of the box experiments, as mentioned already. This was be-





Single

THE STORY THAT NEVER WAS. The Hessische Rundfunk TV network, who paid for the expenses of setting up the dowsing tests, had covered the proceedings assiduously. Their crews were unobtrusively everywhere, taping every aspect of the tests. Such involvement of personnel and equipment, aside from the outlay of expenses for the basic water delivery system and security procedures, is quite expensive. They had planned to prepare a TV special, and GWUP had granted them this right in return for their participation. Crews and executives from the network were as eager as all of us to see the final results, but as it became evident that the dowsers had failed spectacularly, interest faded quickly. Crews packed away their equipment, scheduled post-results interviews were canceled, and the TV special never took place. It was a case of a "non-story" to Hessische Rundfunk, though if the dowsers had been successful, we expect it would have been a celebration of rare dimensions. —J.R.

cause the realization diverged from the protocol in two respects: first, this person's runs were done outside, possibly compromising the double-blind setup; and second, they made 20 tests rather than the pre-agreed 10. Even so, the contestant failed to make a single hit. Altogether the 13 participants scored 11% (14 hits out of 130); if the omitted results are included, this shrinks to 9% (14 out of 150).

Apart from the actual results, we also gained other interesting insights during the experiments. The dowsers indicated "interfering anomalies" prior to the start of the water test (see diagram below). Not

only did the "anomalies" diverge considerably from each other, but the dowsers also traced the disturbances to widely different causes. These ranged from water veins via buried metals to "global lattice networks."

THE RESULTS

The overall result of the water trials (52.3%) is very close to the expected rate of 50%. The distribution of rates is within the range that would be expected under the chance hypothesis, which is therefore confirmed. Now, considering the best results from the water trials, we see that two participants achieved 20 hits

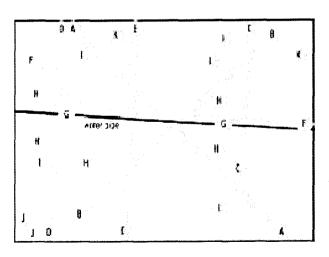
SCHEMATIC OF
CRISS-CROSSING
AND
INCONSISTENT
"INTERFERING
ANOMALIES"
INDICATED BY
THE DOWSERS.
NO TWO
DOWSERS
DETECTED THE
SAME
ANOMALIES.

and a third person scored 19. Taken alone, this might seem remarkable. But in fact, the chance of two or more people scoring 20 is about 24%, while the chance of three or more scoring 19 is 30%, both higher than one might have expected. One should remember that such outlying results are of limited value, even if they look unusual, because a large number of such patterns can be "discovered" in any random sequence, depending on a human observer's sensitivity.

Apart from this, we also compared the hit rates with random YES/NO settings. These random drawings scored between 11 and 21, thus managing to generate a better score than even the best dowsers. Singularities in random results are quite likely and don't signify a deeper meaning. Even a single result of 23 or 24 wouldn't be proof for "earth rays" or other "locational influences."

The results from the box experiments are equally clear. 95% of all trials of this type should be expected to score between 5% and 15%. In this case, the actual result (10.8%) is very close to the expected value. The distribution of the results (0 to 2 hits out of 10) also provides no hint of a hidden effect.

The overall results fail to verify the claimed abilities of dowsers. Of course, this is not the same as proving that such abilities don't exist, because it is practically impossible to prove such a thing to the satisfaction of believers in dowsing. Someone can always claim that we tested the wrong dowsers, used the wrong hypotheses, or expected too strong an



effect. Take, for example, that last objection. If we wanted to test an effect at the 54% level, we would have to make more than the scheduled 570 experiments for the water trials. Testing a hit rate of 53% would require at least 1000 separate runs. Under these circumstances, who could deny a dowser the claim that they were fatigued?

An even more important point is that, though people occasionally talk about a weak, only statistically significant effect, there is no clear definition of this effect. But such a definition is needed before designing a test for it. Once defined, even a small effect could be tested for in principle. The belated discovery of significant results for not previously defined hypotheses cannot be used as proof. If you look hard enough, something significant can almost always be found. Such results are at most a starting point for new hypotheses and new tests.

Conclusions and outlook

The trials do not confirm the pre-defined hypothesis. The tested dowsers could not achieve their claims in either of two situations; to the contrary, and as predicted by the GWUP, the results were exactly what would have been expected by chance. A closer examination of the results does not hint at any "small effect" either, but it should be admitted that the experiments weren't designed to detect such a thing (even supposing that such an effect had been well-defined before the experiments were made).

There have been a few suggestions for improving future trials. To begin with, more people should be involved with controlling the test conditions in order to be able to react immediately to protocol errors. Such errors are a greater danger than accidental, statistical deviations. For the same reason, this test's requirement for the repetition of a result should definitely be retained. Second, deviations from protocol, as in the case of the test person who was disqualified for the box experiment, should be excluded as a matter of principle. Third, it was pointed out that the shack with the valves wasn't completely isolated from the outside world; an accomplice could have gained information from the reactions of the people in the shack and passed it on in some way. Even though this is considered a very minor risk, it should be excluded in the future.

These three examples show how difficult it is to conduct the perfect experiment. Nevertheless, it must be said that no other German trials for the dowsing/earth ray problem have come close to the high standards to which this one aspired. Given the right conditions, the GWUP will continue to hold experiments on claims of dowsing and of other paranormal or extraordinary claims. However, a strict precondition will be that the hypotheses are precisely defined before the tests, that the tests are strictly controlled, and that they can be conducted as doubleblind tests. The more extraordinary the claim is, the stronger the security controls must be.



ONE OF THE CLAIMANTS USING A CUSTOMIZED PENDULUM TO DETERMINE SOMETHING ABOUT A BOOK. THE PENDULUM TECHNIQUE WAS AS DEPENDABLE AS THE FORKED STICK METHOD.

ACKNOWLEDGEMENTS

At this time, we'd like to thank the people and institutions involved with the preparation and realization of the dowsing test, without whose help such activities would have been impossible. We are grateful to the Hessische Rundfunk for their generosity. We should also mention that the Kassel Fire Department School provided invaluable assistance both in technical matters and with personnel. Finally, our special thanks to James Randi, who not only significantly influenced the design of the dowsing test, but also helped make it a worthwhile and very pleasant experience for all of us.

SWEE

More on Dowsing

The most strident objections offered by "experts" to counter the failure of the dowsing tests at Kassel were put forth by two German physicists, Drs. H. L. König and H.-D. Betz, authors of Der Wünschelrute, a book about their government-funded dowsing investigation. (The German word for "dowsing stick" is Wünschelrute, which literally translates as "wishing stick," an appropriately accurate designation.)

König and Betz had employed the usual questionable reinterpretation to all their data, such as assigning significance to a "mirroring" effect in dowsing, which claims that if a dowser guesses that the target is number two in a row of ten targets, yet the target is actually number nine, since the target and the guess are each one-removed from the ends of the row, a "reflection" effect has taken place.

These two celebrated dowsing experts have had an incredible influence on belief in dowsing worldwide, and when they were asked by GWUP and myself to become involved in the Kassel tests, they quickly declined to do so. They stated that their own tests had sufficiently established the phenomenon, and that further replication would not be necessary. Naturally, when the Kassel tests proved so negative, they rushed to defend their claims.

Dr. Jim Enright, professor of behavioral physiology at Scripps Institution of Oceanography at the University of California at San Diego in La Jolla, California, offers the following comments on the objections made by König and Betz to the Kassel tests and on their own results.

—J. R.

he 1989 Kassel dowsing study reported in Swift [Vol. 1, No. 1, 1997] is the most carefully planned and executed experiment ever undertaken to determine whether dowsers can perform as claimed.

In 1986, the German government provided some \$250,000 (DM400,000) as a grant to a group that included two university physicists from Munich, Drs. König and Betz, for their proposed experimental study of dowsing. That research was not as carefully planned and controlled as the Kassel study, but it was a project of much greater scope, with

some 500 dowser candidates and nearly 10,000 individual tests.

Those researchers concluded in 1988 that their data unequivocally demonstrated the existence of a real dowsing phenomenon, implicating some unknown stimuli unfamiliar to present-day science. The Kassel experiments were originally proposed as an attempt to replicate that study by the Munich physicists, using fewer subjects but clearly a significantly controlled experimental design. The negative outcome of the Kassel project supports the doubts that skeptics have long had about dowsing, but enthusiasts might dismiss that outcome as only an unsuccessful attempt at replication: a failure to replicate cannot be regarded as compelling proof that the originally reported results were simply wrong.

Equally relevant to the original objective of the Kassel study is a reexamination of the data from the Munich study, which was recently published in Naturwissenschaften, the German journal of the Max Planck Gesellschaft (Enright, 1995, 1996). That reanalysis led to the interpretation that if a real dowsing ability exists, it was decidedly not reproducibly demonstrated. Most dowsers consistently did very badly; even in the best cases, intra-dowser reproducibility was also very poor. When, as occasionally happened, a particular dowser achieved unusually good agreement, in a set of 5 to 10 tests, between chosen location and the concealed water pipe, that same dowser failed to achieve similarly good results in other replicate sets of tests. When a phenomenon is as unreproducible as water dowsing proved to be in the Munich study, the most sensible interpretation is to attribute the occasional successes to chance alone.

Those who are interested in more information about dowsing should consult what in my estimation is the best Web page out there on the topic. Go to http://www.voicenet.com/~eric/dowsing.htm.

REFERENCE

Enright, J. T. "Water dowsing: the Scheunen experiments," Naturwissenschaften 82, 360-369, 1995; and "Dowsers lost in a October 31 - November 2 1997

SOLVED MYSTERIES

SCIENCE ON THE EDGE

On a nationally-televised program, with clenched fists and a forceful expression, a "psychic" appears to make a pencil spin with just his mind. Children seem to be able to see pictures, text and even symbols with only their fingers. In hospitals throughout the U.S., nurses claim to be able to manipulate powerful "human energy fields" with their hands.

Are we entering a whole new paradigm where the laws of nature are subject to wishful thinking? Or is there something else at work here?

The James Randi Educational Foundation (JREF) presents an interactive workshop that will not only show how to detect the underlying principles behind these and other claims, but how to test for them and reasonably eliminate the potential for human error.

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- "See demonstrations of deception up-close

Participants are encouraged to bring video cameras, still cameras, and/or audio recorders. Informal dress is recommended and should be suitable for somewhat cool evenings.

ACTIVITIES Friday, Oct 31

7 pm - 9 pm Saturday, Nov 1

8 am - 9 am 9 am - 12 pm

12 - 1:30 pm 1:30 - 5 pm 8 pm

Sunday, Nov 2

8 am - 9 am 9 am - 12 pm

WORKSHOP REGISTRATION

HOTEL RESERVATIONS Reception with James Randi

Breakfast

Examining the Evidence:

Calculating the Odds with Dr. Suzanne Hadley Catching the Deception with James Randi

Lunch

Designing Protocols: Controlling Against Trickery

Dinner

Critical Thinking: State of the Art An evening with James Randi

Breakfast

Summary and Observations A discussion with James Randi

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Swift



X-RAY VISION

by Massimo Polidoro

n Italy, CICAP is well-known to the public due to the many TV appearances of its members. Because of our visibility, we are frequently approached by people who claim to possess psychic powers and want us to test them.

The psychics who visit us at the University of Pavia are very rarely deliberate frauds. More often, they are sincere people who really think they possess paranormal powers just because they have never properly tested their claims; this has been the case, for example, of the lady who "impressed images on film," of the man who "changed the taste of wine," of the one who "moved the clouds" or of the other who "was immune to acids." In all of these cases, after submitting the claims to scrutiny, we were able to find normal explanations for the phenomena.

THE WOMAN AND THE BOXES

Some time ago, we received a letter from a woman — we'll call her R.G. — who said she could see inside a sealed box and could describe what objects were inside it; she wanted CICAP to test and verify her powers.

We accepted her proposal and invited R.G. to the University of Pavia to test her with the help of Dr. Luigi Garlaschelli and Professor Adalerto Piazzoli.

In the letters and phone calls that followed, she assured us we could use any kind of box and any object we liked; she claimed a 60% to 70% rate of success.

Once in Pavia, she agreed that the situation was ideal, the conditions were met, the people there were not hostile, and that she was confident she would succeed. We read her the protocol we had prepared for the test, to which she also agreed.

THE TEST

We had previously selected 12 random objects, each one different from the others in shape, color and material; these objects were taken into a different room from the one where the test was going to take place and randomly numbered from 1 to 12. During the test, an experimenter would choose a random number, then take the corresponding object, wrap it up in paper to avoid any clue by noise (the psychic said beforehand that paper didn't block her visions), put it in a wooden box kept closed by two rubber bands, and then bring it in view of her. This would happen for each object, and each object could be chosen only once.

At this point, when she saw the box for the first time, R.G. asked us to take off the rubber bands, because she claimed they could confuse her images. We accepted on condition that nobody could get close to the box after the experimenter had entered the room.

We then gave her a list of the 12 objects to help her remember what

Massimo Polidoro is the European representative for the JREF; he is also researcher for CICAP (the Italian Committee for the Investigation of Claims of the Paranormal), an expert in the techniques and psychology of deception, the author of various books dealing with the critical examination of paranormal claims.

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CICAP's Web page can be reached at: http://www.valnet.it/cicap

to look for. We explained to her that she had to concentrate on the box and then indicate on the list the object that best matched her visions. If she wished, she could change her mind and switch one guess for another before the end of the test. The correct answer for every guess would be given only at the end of the session.

Obviously, the person who did place the objects in the box was kept away from R.G. so as to avoid any non-verbal communication.

We videotaped the whole test.

"I SEE SOMETHING SQUARED..."

R.G., sitting six feet away from the box, with her husband beside her, would concentrate for a few seconds and then give her perceptions:

"I see something squared ... a bit thick ... something dark ... straight ..."

She pointed to the rubber stamp on the list. The test went on until the last object was reached:

"It's something rigid," said R. G., "straight ... not a cube ... it has only one color ... looks like a pen, a tube ... could be the key."

At the end of the test, we took the list with the order in which the objects were presented to her and proceeded to compare it with her guesses. Out of 12 objects, she got one. Exactly what one would expect by chance.¹

R.G. tried to justify her unsuccessful performance by saying that the conditions (to which she had agreed before the start of the test) were not her usual and then tried to accommodate her descriptions to the objects actually presented. For example, the object she had indicated to be the "key" turned out to be a "mirror."

Well, I was right after all," she said. "It was something straight, not a cube, and it only had one color."

R.G. seemed to have forgotten that she also said that the object looked like a pen and a tube.

AN INFORMAL TRIAL

We had designed our protocol on the basis of what was necessary for a well-designed trial, but we also accommodated her needs within those standards. Despite that, she insisted that this was not the procedure she was used to at home. Usually, she said, she needed two series of objects: one for the test and the other to be kept in front of her so that she could compare her visions with a replica of the actual object and not with a word on a piece of paper.

Even though we considered the test over, we agreed to perform an informal trial after we found 12 double objects in the laboratory. We proceeded then as before and, as before, the result was clear: 1 hit on 12 trials.

R.G. was still not convinced, and repeated that at home she would usually get 6 or 7 objects out of 10 and indicated two more differences with our test: at home, her husband could use the same object more than once, and this gave her more freedom of choice; furthermore, she needed some encouragement, so she needed to know if she was right or wrong immediately after her guess.

Some of us were against performing a new test and changing the protocol yet again; however, after clearly stating that the test was not to be considered a scientific test and that it was only done as another informal trial in view of future tests, we decided to try again.

Since this demonstration proved to be very quick to prepare, we did 28 trials with a choice of the same 7 objects for each trial; R.G. was right in 6 cases. Even this demonstration was not considered to be significant.²

At the end of our meeting, we suggested R.G. try to repeat at home the test as we had performed it that day; in this way, maybe she would realize that the results can only be random (unless she really possessed real psychic powers, that is). We invited R.G. to come back if, following this procedure, she could still obtain a 60% to 70% rate of success. A few years have now passed, but we haven't heard from her yet.

NOTES

- 1 This procedure corresponds to the one used by Susan Blackmore for a test on an English psychic (Journal of the Society for Psychical Research, 60, n. 840, July 1995).
- 2 Using a standard binominal statistical test where chance predicts
 1 hit out of 7, six hits out of 28 trials is well within the expected non-significant range. In such a test, at least 8 hits would be required to achieve even minimal standards of significance.

One of the basic tenets of the James Randi Educational Foundation is to promote and support critical thinking among young people. The following paper was written by Alex Shangraw for a "Science and Pseudoscience" course taught by Chip Denman for the University Honors Program at the University of Maryland in College Park. JREF congratulates Mr. Shangraw on a fine example of scholarship.

We hope to publish other student pieces in the future. We encourage students and their instructors to submit promising work for consideration in Swift.

—J. R.

THE EVOLUTION OF THE LITTLE GREEN MAN

by K. Alexander Shangraw

e are not alone. There is a race of otherworldly beings who co-inhabit our reality. Some are tall and beautiful, many are short and misshapen, and some defy description. They have taken an almost frightening interest in the human race, and there have been strange tales of ordinary people taken from this world by them. Many of these abductees thought that they were called for a higher purpose. The beings have

taken a special interest in children and pregnant young mothers. There have been rumors of sinister crossbreeding programs instigated by these beings. They have been implicated as the cause of bizarre lights, periods of "lost time," and feelings of dread in the deep of night.

If you were to describe this race of beings to anybody in America or the industrialized world today, there is an excellent chance that they would say you were describing aliens from UFOs, the "Grays," that are supposedly visiting our world for unknown purposes. However, you would most likely have gotten a much different response two hundred years ago. People then also had a name to fit this description: fairies.

Indeed, the similarities between the "little people," as the whole menagerie of fairies, elves, dwarves, brownies, goblins and pixies are called, and the modern gray, rubbery, almond-eyed alien visitors are surprising. The similarities are so numerous, allowing for the distorting effect of time on legends and different social climes, that one cannot help but realize that the two must be manifestations of the same phenomenon. In response to this, UFOlogist Dr. Thomas Bullard has said, "The similarities (between fairies and aliens) ... are made only by extracting elements that are similar from only parts of the stories." It is true that fairy legends and modern UFO accounts differ in some details. However, one must keep three points in mind. First, fairy legends have been altered by time; details are lost or added to make them more interesting and they change from telling to telling. They may originally have exhibited even more similarities than today's fairy tales. Second, the similarities are in fact much greater than Dr. Bullard seems aware. The similarities do not end with abductions and strange lights, but include the mental state of the experiencers, the fact that both vary regionally, the focus on sex and cross-bred children, and even more. And third, if the fairy/UFO phenomenon is largely produced in the mind, experiences would, as they have in the past, differ based on the society in which they occurred, especially in one which has seen as much change as our own so recently has.

THE SIMILARITIES

One similarity between the little people and extraterrestrials is their appearance. For example, in about 7% of UFO cases, the aliens are described as resembling (and in many cases, behaving like) goblins or trolls of ancient legend, with greenish skin, big ears, grotesque features, and poor manners.2 In another 5% or so of cases, the aliens are described as resembling dwarves or brownies: short, uncommunicative, and hairy.3 And, from another angle, a few fairy legends seem to describe little folk who physically resemble modern aliens. For example, in one tale, a man reported seeing fairies who were short and grey, with a mushroomlike quality to their bodies4 much like today's gray alien.

However, even more striking than the apparent physical similarities and more important in proving that this phenomenon is mental in

origin is the fact that, just like the exact physical form of the little people varied from region to region in medieval times - every hamlet described its resident brownie or imp differently from the next hamlet5 there is regional variation in the way extraterrestrials are reported today. For example, in France, many aliens are described as wearing silver suits. This is a characteristic rarely reported in the U.S. or Great Britain.6 Further, there is a proportional difference in the variety of aliens reported from area to area. For instance, in the U.S., three-quarters of the aliens were described as Grays, compared to about one-half in mainland Western Europe and one-eighth in Great Britain.7 There is even regional variation in the type of smell associated with the aliens - cinnamon in Great Britain, ammonia and sulfur in America.8 Tellingly, as interest in UFOs has gained popularity and press, the proportional types of aliens sighted in a given region has tended to shift towards the figures exhibited by the U.S.9, the media capital of the world. A similar effect can be seen with the worldwide tendency to view fairies as insectwinged flower sprites, an image popularized in Victorian England and dispersed throughout the civilized world. And likewise, despite the claims of UFOlogists, there is enormous variation in individual accounts of extraterrestrials, just as there is with fairies. Some reports include orange men, spiky balls, phantasms, gray men in space suits, gray men in stetson hats (absolutely true!), gray men in nothing at all, lizard men, shape-shifters, robots, and more.

Accounts of individual spaceships vary, too. Common descriptions include egg- shaped, ball-shaped, football-shaped, and saucer-shaped (with or without a cupola on top), with colors ranging across the whole spectrum.

One of the most chilling events associated with both the little people and UFOs is the abduction. In fairy legends, this most often happens along stretches of lonely roads or byways. Likewise, many UFO abductions are purported to happen on lonely roads. In fact, UFOlogist Jenny Randles has stated, perhaps tongue in cheek, that "one of the most dangerous places to be if you fear possible alien contact is in a car on a lonely road at night."10 There are also many instances in both UFO and fairy lore in which victims felt as if they were taken directly from their bedrooms and flown through the air, an event to which is also ascribed religious meanings.11 The age demographics for abductees are similar for both as well. In fairy legends, children and young women or men were preferred.12 In modern UFO experiences, demographics have shown that there are "peak" numbers of abductees in these age groups.13

The purposes of the abductions seem, on the surface, to be rather different. This is one of the UFOlogists most beloved retorts to the suggestion that the two phenomena might be one. On the surface, their arguments seem to have merit. Extraterrestrials appear to abduct for the purpose of bizarre quasi-medical experiments, while fairies are generally interested in obtaining a human midwife for a fairy birth or oth-

erwise recruiting the human for their fun and games, or possibly in just causing trouble. However, below the surface, there are many telling similarities. In both the midwife cases and alien abductions there is often a feeling of being "called upon;" that is, to go along for some important purpose.14 Abductees often see people they knew or know - a parent, a friend, a lover, etc. There is the slight difference that, in fairy legends, the familiar person is often dead or has been missing for some time15, and in UFO reports the person is generally living.16 Abductees also often report seeing alien/human or fairy/human cross-breed children, although in UFO encounters alien/ human fetuses have also been seen.17 This is, in fact, another theme in both abductions: the abductee frequently insists that they had sex with/were sexually aroused by their captors. Breeding and the acquisition of children seems to be of paramount importance to both the fairies and the extraterrestrials — practically every modern abduction story mentions it, as do many fairy myths, in one form or another. Further, the captives in both cases almost always describe being taken to an enclosed area lit by bright lights, but not the sun,18 a fact that is rather more noteworthy in the fairy legends, since constantly-burning, indoor lights were by no means common before the end of the nineteenth century. Some people supposedly abducted by UFOs even claim to have been taken underground or underwater,19 the traditional realms of the fairies and, indeed, where most fairy abductees claim to have been taken. However, one of the strangest similarities involves "fairy ointment." So-called fairy midwives were often called upon to cover newborn fairy babies with an odd green-brown ointment.²⁰ In at least one case, a modern abductee reported seeing an alien baby slathered with a similarly colored ointment.²¹ And finally, just as in the Middle Ages abductees would experience some new revelation, uncanny knowledge or a new skill, modern abductees often report returning with psychic powers or messages of impending ecological or nuclear disasters.²²

There are several other similarities between UFOs and the little people as well. Both are associated with odd lights, indicative of a flying saucer or fairy mound. Both are associated with time distortion, including the fabled "lost time" phenomenon. There is a slight difference here: aliens are most often implicated in "lost time,"23 while fairies are generally associated with "time stretching," similar to that in the tale Rip van Winkle,24 but both groups of beings have been cited as causing both types of distortion. Both are blamed with causing disease and deformity. In ancient times, any Down's syndrome baby or unexplained disease was certain to be blamed upon the wee folk.25 In fact, there even existed "proof" of these diseases' supernatural origins in the form of mysterious stone arrowheads with no shaft, which naturally required some unworldly force to propel.26 Today, we know that they are merely relics of our Stone Age ancestors. Likewise, unexplained nosebleeds, scars, and splotches on X-rays and CAT scans are blamed on this century's supernatural beings, although now we say that they are the result of implanted alien probes. And in both eras, odd wasting diseases are said to follow encounters with the supernatural.

THE EVOLUTION

It is apparent that the similarities between the wee folk and aliens are far too numerous to merely brush off by insisting "What we are dealing with here [UFOs] has no connection with folklore!", as infamous UFOlogist John Mack has.27 Skeptics have made excellent progress in identifying many of the physical phenomena misinterpreted by the UFO movement: weather balloons and natural celestial bodies as alien ships, sleep paralysis causing quasi-mystical experiences, alien encounters screening past abuse, and on and on. But the question remains: "Why has the UFO phenomenon manifested itself as it has in this era?"

Fairy lore has shown remarkable resiliency in being passed from one generation to the next, often barely intact, and often seeming to be utterly fresh to the younger generation.²⁸

However, the twentieth century has been one of the most tumultuous in history: wars and intense diplomatic maneuvering on a scale never seen before, economic strife, changes in the basic family structure, population migrations on a truly global scale, the development of totally new entertainment media, and massive civil unrest. In the midst of such turmoil and abandonment of so many old traditions and modes of thought, would it be surprising that old ex-

planations for scientifically unexplainable phenomena would be discarded or be passed down in only the barest of fragments? Absolutely not. However, mankind does not seem to have lost its inherent need to explain the unknown, nor has it lost its egocentric leanings that seem to dictate that everything must be the work of human-obsessed agents.²⁹

Thus, it is hardly surprising that human-like entities rushed in to fill the void. Further, it is logical that the modern UFO movement has coalesced around many of twentieth century society's concerns and fears: science and technology (an extremely wide field which can more or less fit both categories), distrust of authority, and interest in outer space, along with the age old cast of sex, fear, brutalization, and fear of the unknown. This has been the case in the evolution of the UFO/little people phenomenon prior to this age of turmoil. According to fairy lore expert Katherine Briggs, the "little people" originated as lesser pagan gods of field, forest, stream, and hearth.30

As Europe became Christianized (Europe is used as a model here, but similar patterns are evinced worldwide), these lesser spirits persisted and were given a religious explanation: angels who fell from heaven with Lucifer but were not wicked enough to reach hell, or else souls of the dead who could not enter either heaven or hell for one reason or another.³¹ Later, during the religious upheavals following the reformation, fairies became firmly fixed as servants of witches and the devil;³² reasonable enough, given the reli-

gious concerns in that time. Then, in Victorian England, that bastion of middle class morals, fairies were made much more presentable and sociable as flower sprites with pretty translucent wings. And now we have found a new manifestation for this age-old phenomenon: inhuman intruders in the darkness, wielding technology instead of magic, giving shape to our fears.

CONCLUSION

Fairies and extraterrestrials represent some of our deepest nightmares (in fact, the word "nightmare" is derived from fairy lore³³): exploitation, helplessness, brutalizations, and the unknown. Whether due to the sweeping changes of the last century or some other agent, we have chosen to manifest our fears in a totally new manner. Instead of fairies from beneath the earth, we have intruders from beyond the skies. Perhaps it is healthy, even vitally necessary, that we put a face that we can identify with to our fears. Identifying our fears is often the first step towards dealing with them, even if that face is a false one. Or perhaps we simply cannot accept our own ignorance and frailties, and we invent humanoid forms for them to displace the blame onto. One thing is clear: In whatever form they take, the little green men show no signs of going away.

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TOUCH CONTINUED FROM PAGE 1

brought hidden wisdom to her by means of messages written on scraps of paper that drifted down from her ceiling.)

Krieger's initial forays into research focused on the "laying on of hands" to elevate hemoglobin levels in afflicted individuals (Krieger 1972). Soon after, Krieger revealed that "prana," Hinduism's "vital force," was the source of the healing in TT. After receiving much condemnation and criticism from her third hemoglobin study, Krieger dropped the prana explanation and embraced the human energy field (HEF) concept then being developed by Rogers (Rosa 1994).

Conveniently, as Krieger was looking for a more scientific rationale for TT, Rogers was introducing her Science of Unitary Human Beings (SUHB). "From the SUHB, Rogers has derived the theory of paranormal phenomena. This theory posits that in a pandimensional, unitary world there is no linear time and no separation of human and environmental fields. This theory provides an explanation for phenomena such as clairvoyance and telepathy and for the process and outcomes of interventions which need not involve physical contact, such as Therapeutic Touch. According to this theory, action-at-a-distance phenomena are normal rather than paranormal." (Meehan 1993)

Rogers's notion of SUHB gave Krieger a theoretical background for TT, and TT gave Rogers an alleged physical manifestation for her "science." Later, a flawed study by another nursing theorist, Janet Quinn, proved to believers that TT was effective and that actual touch was no longer necessary (Quinn 1982). Around this time, TT began to become more accepted in the nursing hierarchy.

The Rogers e-mail discussion group focuses on various aspects of nursing from a Rogerian perspective. In one of my initial posts, I proposed a test to be conducted at the James Randi Educational Foundation (IREF) in Ft. Lauderdale, Florida in June 1997. The producer of PBS's Scientific American Frontiers TV program had agreed to officiate. The test would use a fiberglass construct with two sleeves to allow for the insertion of a subject's arms. The TT practitioner (TTP) would assess the energy emanating from the construct to determine whether the right or left sleeve was occupied as determined by a randomizing coin flip. Following some preliminary trials, a score of 15 or greater out of 20 would be considered a positive result and would allow that practitioner to advance to the final test. This final test would be done the following day and a score of 20 out of 20 would win the \$1,100,000 award. For the most part, the invitation wasn't well received.

Francis C. Biley, R.N., Ph.D., of the University of Wales College of Medicine is a contributing author of The Theory and Practice of Therapeutic Touch (Churchill Livingstone 1995) and coordinator of the International Region of the Society of Rogerian Scholars. She is also the listowner of the Nurse Rogers e-mail discussion group. "After spending some time on formulating a critique of the methodology for the following quasi-experiment, I have decided that it really isn't worth doing," said Biley. "Although I applaud Glickman and his associates for spending time on the subject, it is quite obvious that they need to expand their methodological understanding beyond 'if you can't measure it, it doesn't exist."

Ana Cris da Sal is an R.N. and a nursing researcher in Brazil. "I am getting skeptic [sic] by the skeptic methods," said Cris da Sal. "They seem to be so... hmmm....antique?! A researcher, a real one, before accepting or not the phenomenon, should study it (by modern methods, of course). TT, for instance, should be tested beside quantum physics and physiology. I'll be pleased to win the prize proving — or not, as a real researcher must think — the existence of the human energetic field."

Joanne Griffin is a TT researcher at New York University. "I almost treat messages like the one from Mr. Glickman like the jokes which I usually enjoy enormously and often forward to my friends," said Griffin. "It seems obvious to me that he does not understand the basic definition of energy field as Rogers used the term, and it isn't worth the time to respond."

I responded to these rather negative outlooks. "I thought this was an open [Internet] board with people open to new ideas," I replied. "I thought TT proponents would appreciate the chance to prove to the waiting world that TT's HEF exists."

One of the main problems with Rogerian Science is the duality and elusiveness of simple meanings. All too often, much discussion on these postings was devoted to the defining of concepts. The term "human energy field" sometimes referred to the TT HEF in a Rogerian context and sometimes it didn't. However, most of the writers in this service seemed to accept the notion of the TT concept and its HEF.

The "not worth doing" argument didn't make sense to me. The test doesn't need extremely large sample groups, complicated procedures, extreme methodological strategies and statistics, or even quantum mechanics. It's not an "if you can't measure it, it doesn't exist" notion. TT practitioners have made the claim that they feel energy fields. We simply designed a test to see if they can.

"I feel that this is important research in spite of the fact that it may seem too simplistic to some," I explained, in the course of my ongoing online dialogue. "Had research such as this been done in the infancy of TT and Rogerian Science, maybe this challenge wouldn't be necessary now."

Biley, at this point, encouraged me to keep on posting. She also agreed about the duality and elusiveness of simple meanings, and the fact that Rogerians spend a lot of time defining concepts. "I sometimes wish that they could just get on with it," she said, "but then I think it's the beginning of an evolving science and there is much we don't yet understand."

At this point, I thought I had my foot in the door. "I am glad you see

"TT practitioners have made the claim that they feel energy fields. We simply designed a test to see if they can."

my point about the elusiveness of definitive meanings for terms in Rogerian Science and that there is much that is not yet understood," I wrote. "This is why I'm sure that you know that it is important to follow the scientific method. In an evolving science, the scientific method is even more important. It prevents confusion and the contradiction of terms."

"Let me state for the record that I am not a Therapeutic Touch practitioner," wrote Martha H. Bramlett, R.N., Ph.D. "While I've taken classes and have used it on occasion (and my recipients have reported positive results), I certainly do not place myself in the class with some of the experts that have participated in this discussion.

"The crux of this issue seems to be one in which sciences are clashing," she continued. "Mr. Glickman is making a sincere effort to try to understand a purported phenomenon. Yet when presented to the Rogerian Science nursing community, the effort has met with great consternation. Several things contribute to this. First, the term Therapeutic Touch is somewhat imprecise since Rogerian Therapeutic Touch as pioneered by Dr. Krieger has a very different theoretical base than that presented by many of those who report themselves to be Therapeutic

Touch practitioners. Thus, when Mr. Glickman says Therapeutic Touch, we don't even know if we're talking about the same thing, and in fact, from the discourse, I feel sure we're probably not.

"Many have tried to explain this difference; however, if each of us remember [sic] back to when we first started working with Rogerian Science, we will probably all remember the struggle we endured to hone the conceptual picture involved. Our conceptual perspective dictates what we see, and sometimes limits our abilities to see through another perspective. Science is replete with examples of this. Einstein altered his formulas because his belief in a static universe was so compelling, he couldn't believe his own calculations, and he later admitted this.

"The question arises as to what constitutes scientific investigation. I think many of the Therapeutic Touch practitioners and Rogerian scientists have tried to explain to Mr. Glickman that his tests are inappropriate for the phenomenon to be tested. The energy field he is trying to measure is not the one we're saying we feel. Perhaps at some point such a measure will exist, but not right now. I would ask Mr. Glickman to be patient with our science and our methodologies. I do not ask him to accept what we say, only to allow

for the possibility that it may exist, and at some point of evolution our methods may provide him with the proof he so desires."

I responded that we weren't interested in investigating a purported phenomenon. "We are not sure there is one," I wrote. "What we are trying to investigate is a legitimate claim. That claim is that TTPs are able to feel HEFs. The water is definitely muddied as to how to define these fields. That is not my fault. I am more or less stumbling into a work in progress and am trying to sort things out. You say that you had taken TT classes and used the technique. Did you feel an HEF? Were the TT courses Rogerian-based or the other type? These aren't my terms. I am willing to test any TTP who states they can feel an energy field, be they Rogerian or not. I see nothing in the test we have devised that could be considered inappropriate. TTPs of all stripes claim to feel HEFs. What is so complicated about that? Why wouldn't anyone want this to be tested?"

They really lost me with the statement that "the energy field he is trying to measure is not the one we're saying we feel." The energy field I was trying to measure was exactly the one the Rogerians were saying they felt!

"I think a Rogerian would say that they 'perceive' a field manifestation, rather than feel a field, i.e. we chose to call what ever [sic] is going on a perception of an energy field rather than say that it is an energy field or is energy," Biley wrote.

The debate continued. "Last time the test was offered, I said all that I had to say about the matter," said Richard Cowling, R.N., referring to several e-mail exchanges he and I had prior to a November 1996 TT test in Philadelphia, in which one rather maverick TTP came from Los Angeles and tried the test. She scored chance results. "I think that the dialogue spawned by this test has done a great deal of good by allowing people to openly describe various vantage points. I do not share Mr. Glickman's philosophy of science, but respect his right, as I hope he does mine, to advocate for a specific world view."

I had been writing all along in the simplest and clearest terms possible to avoid any misunderstanding. I had also studied the evidence for TT. From Krieger's initial hemoglobin study to the present, supporting evidence is virtually nonexistent. TT studies have suffered from poor design, poor methodology, poor controls, improper or absent double-blinding measures and improper statistics.

Therese Meehan, R.N., Ph.D., a Rogerian TT researcher concurred. "What current research tells us, according to Popper's principles of refutation and verification, is that there is no convincing evidence that TT promotes relaxation and decreases anxiety beyond a placebo response, that the effects of TT on pain are unclear and replication studies are needed before any conclusions can be drawn. Other claims about outcomes are, in fact, speculation." (Meehan 1995)

The healing effects noted by many TT practitioners can too easily be attributed to the placebo effect. This is the prime source of static and false positives in healing studies. To make any definitive statement about any healing modality, it must be effectively ruled out in any study.

The TT scientific research was groundless. In Rogerian Science, speculation is mounted on more speculation, creating newer and grander ideas, but no actual specific testing is done. If anything, many of these ideas are beyond testing. Without this vital testing, upon which factual and useful data can be built, statements like "I believe that [an] energy field is not emanating and physically palpable, but rather manifest as pattern" are virtually devoid of meaning.

Richard Cowling wrote to me, encouraging my attendance at a conference in Los Angeles sponsored by the University of Southern California, University of California at Los Angeles, and University of California at Irvine called "Reclaiming Voice: Ethnographic Inquiry and Qualitative Research in a Post-Modern Age." He quoted the introductory description, which began: "At a time when the pressure for change in the academy is increasingly linked to the resurgence of conservative and

neo-liberal discourses and practices, researchers need to be more direct in countering the attacks in the public space against alternative methodologies. While the need for research to be theoretically rigorous and ethically accountable is vital, we must be clear that rigor and accountability are not the sole provinces of conservative and neo-liberal educational discourses and practices."

This became the last bit of actual dialogue that I was going to receive from the Rogerians. So I ended with this parting shot: "Richard, my words here are meant to be a constructive criticism and not an attack or a lack of respect for you and your efforts and the efforts of others. As a nurse, I am interested in what effects Rogerian Science and TT will have on my profession. I have examined the TT research thoroughly. I have only begun looking into Rogerian Science, but the combined TT/Rogerian research I have reviewed is poor.

"Wishful thinking is the engine that drives science, but it can't be the science by itself. There are all kinds of 'sciences' out there that are actually pseudosciences. Many have the rubber stamp of approval of apparent scientific boards and Universities. TT is also considered by many to be 'scientific' and this has been expressed in volumes of literature and support. It is also featured and promoted by many universities and nursing organizations such as the ANA and NLN. This support still doesn't make TT scientific. With TT, the science has been totally ignored. The scientific literature on TT is baseless. Although accepted by too many in nursing, no one has yet been able to prove the most basic tenet of TT: Can anyone actually feel a field?"

There are several gurus today who have attracted a large following by mixing mainstream medicine with a multitude of fantasy ideas. Not knowing the difference between fantasy and reality is dangerous. People who don't know the difference but should and have a "scientific" background are perhaps among the most dangerous of all.

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JREF ceramic cof mug with spi inscription. For indoor outdoor use. Reusab washable. Subscription to Sa NAME ADDRESS	ffy any lang or maroon co ble, homeopa standard wift only. No men	guage olor, to thic go refills. mbers	rimmed in Randi. Available in four old. Takes sizes:
PHONE		_	
E-MAIL			
*SCHOOL ATTENDIN	IG	BAY	MENT AMOUNT
		FAI	MENT AMOUNT
All payments to be ma For credit card paymen PRINT CARDHOLDER	it, please provide i	by che nform	ck, money order, Visa or MasterCard. ation below:
ACCOUNT #			Exp. date
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The JREF is a 501(c)3	not-for-profit corp	oratio	n. All memberships are tax-deductible in the U.S.



JAMES RANDI EDUCATIONAL FOUNDATION

EDUCATION

The James Randi Educational Foundation (JREF) feels that young people must be exposed to the elements of critical thinking, as well as to reliable information about paranormal claims. It offers scholarships to students who investigate such claims in a careful, scientific manner. Adults as well as young people can attend JREF educational classes and seminars. Its library of books, videos, news clippings, and other materials is open to the media, students, researchers, and the general public.

RESEARCH

The JREF is committed to providing reliable information about paranormal claims, and it both supports and conducts original research into such claims. It publishes the research results in *Swift*, the official newsletter of the Foundation.

THE PRIZE

Years ago, outspoken entertainer James Randi "put his money where his mouth is" and offered a \$10,000 prize of his own money to anyone who would demonstrate a paranormal feat under controlled observing conditions. Thanks to a number of pledgers, collectively known as the 2000 Club, the amount is now over \$1,000,000. The prize continues to grow almost daily.

Purpose

The James Randi Educational Foundation (JREF) is a not-for-profit organization based on the ongoing work of its founder and leader, the world-renowned conjurer and investigator James Randi. Its primary goals are to:

CREATE A NEW GENERATION OF CRITICAL THINKERS.

INSTRUCT IN THE CONSEQUENCES OF UNCRITICALLY ACCEPTING PARANORMAL, PSEUDOSCIENTIFIC AND SUPERNATURAL CLAIMS.

SUPPORT AND CONDUCT RESEARCH INTO SUCH CLAIMS.

PROVIDE RELIABLE INFORMATION ON SUCH CLAIMS.

ASSIST THOSE WHO ARE BEING ATTACKED DUE TO THEIR INVESTIGATIONS AND CRITICISMS OF SUCH CLAIMS.

FOR FURTHER INFORMATION

Please visit our Web page at http://www.randi.org

An Invitation

WE INVITE YOU TO SUPPORT THESE ACTIVITIES BY BECOMING A MEMBER OF JREF.

SEE PAGE 19 FOR MEMBERSHIP INFORMATION.



Swift is published by the James Randi Educational Foundation, 201 S.E. 12th Street (E. Davie Blvd.), Fort Lauderdale, Florida 33316-1815, +1-954-467-1112, fax +1-954-467-1660, randi@randi.org. POSTMASTER: Send change of address forms to JREF, 201 S.E. 12th Street (E. Davie Blvd.), Fort Lauderdale, FL 33316-1815. Contents copyright © 1997 James Randi Educational Foundation, all rights reserved.

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