

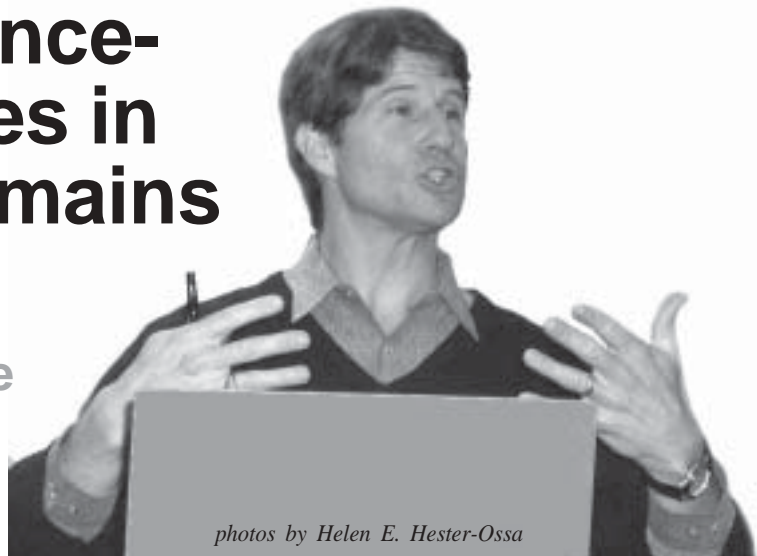


• encourages critical and scientific thinking • serves as an information resource on extraordinary claims • provides extraordinary evidence that skeptics are cool

## Applying Evidence-Based Principles in Implausible Domains

by Helen E. Hester-Ossa

Complementary and alternative medicine make claims that are highly implausible. Most of these claims are not based on scientific evidence and so can largely be dismissed from that perspective. Some, however, appear to have met the criteria for quality research required for acceptance in conventional medicine. How should this evidence be approached?



The people filtered in slowly at first, but then the room filled quickly, until all 78 seats were taken and a few people stood around the edges. It was a Saturday morning in February, and they were at the Silver Spring Library in Maryland at the National Capital Area Skeptics' monthly lecture series to hear Wayne Jonas, M.D., discuss alternative medicine and how to scientifically evaluate it.

Dr. Jonas is Director of the Samueli Institute for Information Biology and Associate Professor in the Department of Family Medicine at the Uniformed Services University of the Health Sciences (USUHS) in Bethesda,

Maryland. He has conducted research in a variety of areas focusing on health promotion and disease prevention, complementary medicine, spirituality research quality, and the biological effects of ultra-low doses. Dr. Jonas was previously the director of the Office of Alternative Medicine at the National Institutes of Health.

"Say a patient with seasonal allergies says that her daughter recommended a homeopathic remedy from a health food store for allergies. Her daughter said it worked great for her and had no side effects. Your patient comes to you [her doctor] and says she wants to stop taking her conventional drugs, which make her sleepy. She wants to know if this is

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# about NCAS

## Bits and Pieces

- The Shadow of a Doubt monthly calendar, can be sent to you via email! Send an email request to [ncas@ncas.org](mailto:ncas@ncas.org) to be added to the eShadow list.
- NCAS has a low-volume electronic mailing list, [ncas-share](mailto:ncas-share), where members can share news items and other things of interest. Send an email request to [ncas@ncas.org](mailto:ncas@ncas.org) to be added to the [ncas-share](mailto:ncas-share) mailing list.
- Visit the NCAS website to find the Condon UFO report online and many other resources at [www.ncas.org](http://www.ncas.org)
- Because NCAS is a 501c(3) nonprofit organization, all donations you make to NCAS are fully tax deductible!



Helen E. Hester-Ossa

NCAS Board of Directors at February 9, 2002, board meeting, from left to right, top row: Chip Denman, Scott Snell, Eugene Ossa, Paul Jaffe, Jonathan Boswell, Marv Zelkowitz, Stephen Goodson. Bottom row, from left to right: Rita Malone, Grace Denman, Jim Giglio.

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Helen Hester-Ossa



recycled paper

## Dear *Skeptical Eye* reader,

Feedback we've gotten in the past indicates NCAS members want two things from NCAS:

1. More great programs, lectures, events, workshops, projects, publications, and media appearances
2. Opportunities to participate by becoming volunteers and activists to further causes that promote critical thinking and science understanding and literacy

Often, both can be had at the same time: for instance, the recent project headed by board member **Jim Giglio** to put the 1968 Congressional UFO symposium report on the NCAS web site. The symposium report was added as a companion to the extremely popular Condon report, and NCAS volunteers **Lynn Francis, Mary Pastel, Neil Inglis, Tim Scanlon, Barry Blyveis, and ZoAnn Lapinski** were instrumental in proofreading the results. As with the Condon report, the 1968 Congressional UFO symposium report is an important historical document for those who want to learn for themselves the details and substance of the UFO controversy. By putting it online, NCAS has made this otherwise difficult-to-obtain resource available to an enormous audience.

Last year's "Honest Liar" magic show is another example. Master magician **Jamy Ian Swiss** put on an amazing show to a packed house. **Rita Malone** arranged for the fabulous venue, and **Gary Stone** lead an outstanding publicity blitz. **Chip and Grace Denman** managed reservations and logistics, and even put on a smashing after show party! **Helen and Eugene Ossa** collected money and tickets, and thanks to the efforts of **Marv Zelkowitz, Chip Denman, Randi, and Penn & Teller** we had some fantastic raffle prizes. So many folks helped out with all the details and worked really hard to ensure everything went well. In addition to bringing funds to NCAS, Jamy's show helped increase our visibility and provided a wonderful experience for our members, their guests, and all who were in attendance.

The popular 2001 NCAS workshop, "Understanding Belief—How We Know What Isn't So" is yet another example! **Eugene Ossa** managed the planning and logistics of the hotel and food



(in addition to presenting a workshop session), and board members **Chip Denman, Marv Zelkowitz, Walter Rowe, Stephen Goodson, Jim Giglio, Scott Snell, and Rita Malone** presented and contributed to the engaging workshop sessions. **Grace Denman** handled registrations and made everyone feel welcome. **Gary Stone** and **Helen Hester-Ossa** recorded and documented the event. Be sure not to miss this year's workshop, "Skepticism—Beyond the Basics"!

So, what can **YOU** do? Here are several volunteer opportunities:

- Board member **Walter Rowe** is once again coordinating NCAS' science fair judging program. For a minimal time commitment, you can help prepare students for a brighter future by evaluating science projects!
- Do you own "An Encyclopedia of Claims, Frauds, and Hoaxes of the Occult and Supernatural" by James Randi? If so, you can help proofread the upcoming online version of the encyclopedia! For more information, contact board member **Stephen Goodson**.
- If you see an example in the media of a skeptical voice, or conversely, the foisting of pseudoscience, be sure to let NCAS know! Send us a copy of any letters or other feedback you send to media outlets and advertisers.
- Help out with this year's workshop or suggest speakers or topics for upcoming programs and events!

*continued on page 4*

To volunteer or get more information on any of these opportunities, send email to [ncas@ncas.org](mailto:ncas@ncas.org) or call 301-587-3827

Please make a tax deductible donation in addition to your membership fee or volunteer to help support NCAS. NCAS has no paid staff, and all donations go directly to support NCAS activities and projects. As a 501c(3)

nonprofit organization, all donations to NCAS are fully tax deductible.

If you have any questions, comments, or suggestions, please contact me directly at 703-329-0270 or [pjaffe@yahoo.com](mailto:pjaffe@yahoo.com).

Yours truly,  
Paul Jaffe

President, National Capital Area Skeptics 

# Recommended Reading

by Walter F. Rowe

## Martin Gardner, *Fads and Fallacies*

This is the book that started it all. Gardner surveys pseudoscience from attacks on Einstein and Darwin to Charles Fort and Reichian psychotherapy.

Although this book was written in the 1950s, it retains its timeliness due to the failure of pseudosciences to show significant advances. *American Scientist* placed this book in the top 100 science books of the 20th Century.

## Alan D. Sokal and Jean Bricmont, *Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science*

If you despise French intellectuals (and who doesn't), this is the book for you. It exposes in the most cruel and contemptuous fashion imaginable the ignorance and intellectual dishonesty of a bevy of French "thinkers."

Literally no prominent postmodernist icon is spared—Jacques Lacan, Jean Baudrillard, Gilles Deleuze, Julia Kristeva, Jean-Francois Lyotard and Luce Irigaray—they all get

worked over. The significance of this is that U.S. universities (being years behind the power curve) continue to genuflect before these empty berets. Sokal is, of course, the author of the infamous Social Text sting.

## Bruce Thornton, *Plagues of the Mind: The New Epidemic of False Knowledge*

This book traces the roots of modern irrationalism to the Romantic Movement and its reaction against the Enlightenment. The author also examines in detail three pernicious myths: apocalyptic environmentalism, Native Americans as environmental paragons, and prehistoric matriarchy. I have found this book to offer the greatest insight into the origins of modern irrationalism of any skeptical book I have ever read.

Walter F. Rowe, Professor  
Department of Forensic Sciences  
The George Washington University  
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# Quantum Leaps Offers Too Few New Insights

by Walter F. Rowe

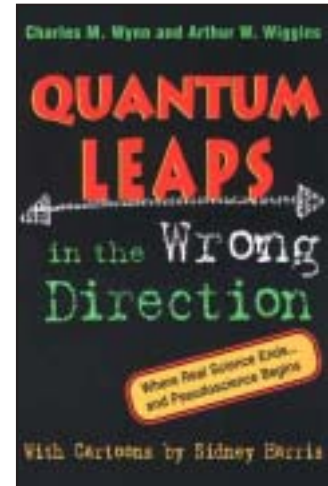
Review of Charles M. Wynn and Arthur W. Wiggins, *Quantum Leaps in the Wrong Direction*, Joseph Henry Press, Washington, DC, 2001.

**Q**uantum Leaps in the Wrong Direction, by Charles M. Wynn and Arthur W. Wiggins, is a new book that critically examines the gamut of contemporary pseudoscience. The authors begin by summarizing the scientific approach to reality and displaying the scientific method in action via a brief history of the development of atomic theory; they then contrast the scientific method of reasoning with the modes of reasoning found in various pseudosciences. The authors move on to short critical examinations of various manifestations of pseudoscience, including UFOs, out-of-body experiences, astrology, creationism, and parapsychology. The book concludes with a 16-page glossary of terms and a short list of suggested readings.

Whenever I read a book on a topic of personal or professional interest, I tend to judge it by the degree to which it gives me new insights into the topic (a positive assessment) and by the degree to which I add marginal notes completing arguments or the presentation of evidence (a negative assessment). *Quantum Leaps* offers a couple of new insights on the Noachian flood. The dimensions of the ark given in Genesis exceed by 150 feet the maximum length of a seaworthy wooden ship. A wooden ship of the length of the ark would “work” so much in heavy seas that she would leak uncontrollably and sink. (I would add to this an observation I made in a letter I wrote several years ago to *Popular Science* in response to a particularly irresponsible article on how science “proves” the *Bible*: Noah and his shipwrights jumped from building vessels on the scales of dinghies and schooners to constructing a wooden ship with dimensions similar to a Nevada-class battleship). All the various symbionts, parasites and pathogens that are found in plants, animals and humans

would also have to be on the ark and in their respective hosts. As the authors put it, “Noah and his family would have had to be infected with the likes of syphilis, smallpox, and leprosy for over a year.”

On the whole, my negative marginalia outweigh the positive ones. At various points I felt that the authors had not done an adequate job of researching the topics. For example, in discussing Van Daniken’s ancient astronaut theories, the authors fail to cite Ronald Story’s excellent *The Space Gods Revealed*. In their discussion of the Nasca lines, the authors attribute the lines to religious processions. However, it has been well established for many years that the lines form patterns matching Nasca constellations (I suppose asterisms is the technically correct term). At several points in the book I noted in the margins that the authors needed to give a fuller discussion of cold reading. The entry for cold reading in the glossary simply doesn’t do justice to this important phenomenon. Similarly, the important ideomotor effect (significant in explaining dowsing and the Ouiji board) is given very cursory treatment. I was left completely in the dark as to how a Tarot card reading works. Near the end of the book the authors discuss spontaneous human combustion without citing Joe Nickel’s exhaustive research of reported cases of spontaneous



**Quantum Leaps is disfigured by a hostility to and misrepresentation of religion. The most egregious example is found in the chapter on creationism.**

continued on page 6

human combustion that showed, in case after case, that ignition sources such as candles or smoldering cigarettes were found at the scene. Nickel also found that evidence of the victim’s consumption of alcohol and/or drugs was also frequently present. The authors also neglect to mention a feature of these deaths that is supposedly inexplicable: the almost complete consumption of the victim’s body. Arson investigator John DeHaan has demonstrated that a human body can be almost completely consumed in a slow fire fueled by the fat rendered from it. At other points, I was baffled by what the author’s chose to discuss. I am still puzzled about how precisely aviation physiology relates to UFO reports.

*Quantum Leaps* is disfigured by a hostility to and misrepresentation of religion. The most egregious example is found in the chapter on creationism. This chapter ends with this inflammatory—in my view, totally unwarranted—statement:

“Lysenkoism may be dead, but its spirit lives on among the creationists, who advocate government-imposed equal time for creationism and evolution in biology curricula.”

Lysenkoism is named for Trofim Lysenko, the head of Soviet agricultural research under Stalin. Lysenko was an advocate of Lamarckian evolution (i.e., the transmission of acquired characteristics to offspring); he denounced genetics as bourgeois idealism contradicted by Marxist-Leninism. Throughout the 1930s and 1940s Lysenko and his sycophants ruined Soviet agriculture and biology. They closed down institutes of genetics and destroyed irreplaceable collections of plant seeds. Many of their opponents (e.g., the great plant geneticist Vavilov) were sent to forced labor camps, where they died. Wynn and Wiggins actually manage to make the Lysenko affair seem less terrible than was actually the case. The equating of Lysenko and his band of totalitarian

thugs with American creationists has no factual basis and is simply hyperbolic nonsense. Indeed, the contrasts between Lysenkoism and creationism could scarcely be more stark: Lysenko

was a materialist who believed in evolution and did not believe in genes, while creationists are theists who do not believe in evolution and who seem to have no major quarrel with genetics. The sole similarity between Lysenko and the creationists is the desire of both to make scientific reality subservient to a pre-existing ideology.

The authors also vigorously flog some strawmen. At the beginning of Chapter 3, they make the comment that “[T]he public is bombarded by pseudoscience in the form of TV dramas such as *The X-Files* and movies featuring gigantic alien insect invaders.” Readers of *Skeptical Inquirer* will recognize the Mrs. Grundyesque tsk-tsking tone. Neither the authors of *Quantum Leaps* nor the editors of *Skeptical Inquirer* seem to be able to make the simple and obvious distinction between the dramatic arts and science. The *X-Files* cannot be pseudoscience because it does not hold itself out to be science in the first place.

Whether this attitude reflects only an inadequate education or an unconscious desire for the power to control the thoughts of their fellow citizens is a question beyond the scope of this review. When you are addressing the unconverted, such remarks make you sound like an arrogant intellectual bully. Wynn and Wiggins don’t even get their facts right here. The insect invader movie cycle died out in the late 1950s. I was left wondering when was the last time the authors had been in a movie theater. Current science fiction movies such as the *Alien* series or *Star Ship Troopers* feature insect-like aliens whose physiologies are clearly distinguished from terrestrial insects (e.g., acid blood). Wynn and Wiggins (and the editors of *Skeptical Inquirer*) might ponder George Orwell’s remark in *The Road to Wigan Pier*:

“The ordinary man might not flinch from a dictatorship of the proletariat, if you offer it tactfully; offer him a dictatorship of the pigs, and he gets ready to fight.”

Overall, I would recommend *Quantum Leaps* as a useful book to introduce a high school or lower-level college undergraduate to the critical analysis of pseudoscience. However, in that role it will be less effective than it might have been due to its overall tone. ☹

Walter F. Rowe, Ph.D., has been a Professor of Forensic Sciences at the George Washington University since 1990. He is a frequent contributor to and speaker at scientific and skeptical conferences.



### **“Intelligent Design” Not!**

by Fred J. Kourmadas

*This letter refers to an article published in one of the chiropractic “trade papers” (i.e., not a refereed journal, but representative of the thinking in much of the chiropractic profession). I thought it might be of interest, since creationism and “Intelligent Design” are common discussion topics on this list. Below is the letter to the editor I sent, which will never be published. I did, however, post it to a couple of chiropractic lists, and generated a lot of interest and discussion.*

From: Fred J Kourmadas  
To: comments@worldchiropracticalliance.org  
Date: Wed, 17 Oct 2001 16:28:24 -0400  
Subject: “Intelligent Design” by Christopher Kent

Every month, my postman dutifully brings me *The Chiropractic Journal*, which I immediately place into the trash, unread. Every now and again, however, I read one, just to remind myself of how bad it truly is. The September, 2001 issue, and especially Christopher Kent’s article on “Intelligent Design,” did not disappoint.

Though Kent is billed as “researcher of the year” for two national chiropractic organizations, he reveals such a profound naivety of basic science, research methodology, critical thinking and probability, and the true status of scientific thought, as to call into question his ability to evaluate any data and to draw logical inferences. This is all the more troubling because Kent is not any ordinary chiropractor, but a two-time “researcher of the year.”

Kent starts out by asserting that the “Intelligent Design” movement is “revolutionizing science and challenging the philosophy of mechanism.”

Intelligent Design is merely the latest iteration of the creationist argument, and is in no way, shape, or form, “revolutionizing science” or invalidating mechanism. It isn’t even a blip on the radar of mainstream biologists. The only place that Intelligent Design is making inroads is in nontechnical books written for the popular audience, like the books that apparently constitute the bulk of Kent’s “research.”

The fallacious argument of Intelligent Design is that “complexity” of design implies that an object or organism was designed by an intelligence. Kent’s analogy of finding a watch in the woods is classic misdirection. “Complexity” means that a system is not fully describable in terms smaller than the actual thing itself. In other words, it doesn’t break down into a pattern, function, formula, or algorithm. A good example would be a series of 1,000 tosses of a fair coin. The chances are, no “pattern” of heads and tails would emerge that would allow the series to be fully described in less than a series of 1,000 heads and tails.

Thus, “complexity” is fundamentally indistinguishable from “randomness,” and randomness, in my humble opinion, is not a good argument for “Intelligent Design.” Dr. Kent’s watch, on the other hand, is not an example of “complexity” in the scientific sense.

Kent goes on to say that:

“... there is evidence that DNA is not the master controller of development in living systems. Wells, [4] a molecular biologist, notes that despite how he might manipulate an embryo experimentally, the basic endpoint never changes: ‘Frog eggs always become frogs, and mouse eggs always become mice.’”

Wells also explains that when an egg’s genes are removed and replaced with genes from another type of animal, development follows the pattern of the original egg until the embryo dies because necessary proteins are lacking.

If this quote is accurate, I must assume that the intellectual dishonesty lies with Wells, the author, and that Kent is merely a scientifically naive dupe, all too willing to accept any tripe that might be useful in his pro-Innate Intelligence stance. The statement is a partial truth—eggs will, in fact, begin to develop according to the species of the egg donor, regardless of what DNA is implanted or even when the nucleus is completely removed. This is because the early embryonic development is

*In the spirit of encouraging skeptical activism, from time to time we will use this column to acknowledge NCAS members who have let us know about skeptical correspondence they have sent (letters to newspaper editors, television producers, etc.) or other actions they have taken proactively or in response to various articles, programs, events, etc. of concern to skeptics.*

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intelligent design continued from page 7

**What is most troubling to me is this “researcher’s” obvious inability to critically evaluate claims and data, which, after all, is what “researchers” are supposed to do, and his willingness to base a health-care practice on a frankly religious foundation, rather than a scientific one.**

regulated using maternal RNA present in the ovum, before the embryo even begins transcribing RNA from the newly fertilized nucleus. Thus it would be completely expected for the fertilized egg to develop according to the body plan of the egg donor species, and then die once the cell began to try to code proteins from an incompatible nucleus.

Although I certainly don’t expect the average chiropractor to know embryological facts like this off the cuff, I certainly expect a “researcher of the year” to check his facts, especially before publishing them in an article

*Fred J. Kourmadas is a chiropractor with an MS in exercise, fitness, and health promotion. “When I embarked on my chiropractic career, I thought I was entering a profession that was scientifically based, and would soon be getting the kind of acceptance from the scientific community that it was due. Twenty years later, the ‘leadership’ (if you want to call it that) of the profession seems to have lost interest in science, now that all forms of pseudo-science quackery are in vogue.”*

*Chiropractors possess a unique set of psychomotor skills for the analysis and treatment of musculo-ligamentous afflictions. The pseudo-scientific element in the profession holds that we are not “back doctors,” but rather are a comprehensive system of health care that can treat a broad range of organic and even infectious disorders, all by adjusting the spine. This faction will not ‘go away’ until the public becomes more savvy and seeks out practitioners who practice on firm scientific foundations.”*

*Fred plans to write about what chiropractors can and can’t do, and how to avoid practitioners who will lead you down a primrose path of pseudo-scientific dogma.*

designed to support a particular philosophical view.

Finally, Kent further reinforces his misunderstanding of the nature of probability by quoting another author’s speculation about the “improbability of hemoglobin as a chance event.” This is exactly the same fallacious “complexity” argument as before, and Kent seems blissfully unaware that it is absolutely meaningless to speculate about the probability of things that have already occurred. The hemoglobin argument is basically that there are 20 amino acids, so the “probability” of any particular amino acid being the first in the chain, for example, is 1 in 20, or  $2 \times 10^1$ .

A protein might be, for example, 250 amino acids in length, so the “probability” of a particular protein =  $(2 \times 10^1)^{250}$ . The fallacy is that ANY combination of 250 amino acids has that same “probability,” but if you are making a 250-amino acid protein, the chances of coming up with SOME 250 AA combination is 100%. “Probability” only is relevant BEFORE something has happened, as in:

“I’m pulling 250 amino acids at random out of a hat. What is the chance I’ll get the formula for hemoglobin?”

Going back to the example of the series of 1,000 coin tosses, the probability of any particular series, predicted in advance, is one in  $2^{1,000}$ . But after the fact, a series of 1,000 random Hs and Ts is quite ordinary.

What is most troubling to me is this “researcher’s” obvious inability to critically evaluate claims and data, which, after all, is what “researchers” are supposed to do, and his willingness to base a health-care practice on a frankly religious foundation, rather than a scientific one. This, unfortunately, gives credence to the accusations of our harshest critics, that at its core, “chiropractic” is an “unscientific cult.”

Fred Kourmadas, DC, MS 



**Washington State Board of Education  
Accredits College of Astrology**

by Tim Scanlon

On November 17, 2001, Tim Scanlon wrote  
NCAS president Paul Jaffe:

Well, here they are: what I'd written to the Washington State Government, and their response to my letter.

Note that the response includes some strange bedfellows, notably "critical analysis and thinking ... ability to understand self," etc., along with liberal arts-based astrology program that includes the historical, sociological, political, and psychological facets of astrology."

Then there's "The value of a degree from Kepler College ultimately will be determined in the marketplace..." Is "the market" what determines a program's creditability?

Is this a strange case of relativism? Or is it merely that we Sagittarians tend to skepticism—or something?

Enjoy. And if there is a Washington State Skeptics Society, perhaps we should be in touch to influence what the last paragraph of their response states.

\* \* \* \* \*

Washington Higher Education Coordinating Board  
917 Lakeridge Way  
Olympia, WA 98504-0001  
October 23, 2001

To Whom It May Concern:

Not long ago, my wife and I were in the State of Washington on vacation. We were there to see both Mount Rainier and the Seattle Opera's production of Wagner's *Ring*. We both fantasized living in a state of such beauty.

More recently, I caught wind of your having accredited the Kepler College of Astrological Arts and Sciences. All I can say is: so much for my fantasies.

What was it? Politics? A payoff? After all these years—even after "What is your sign?"

**the write  
stuff**



skeptical correspondence

has become no more than silly nostalgia—I'm ashamed to see that in the United States such an institution was accredited. If there is any way to reconsider, I hope you do so, lest our whole country be remembered as one that accredited a practice developed millennia ago by people who didn't have the sense—and especially the scientific knowledge—we have now. You accredited a silly superstition. You should be ashamed.

Sincerely,  
Timothy P. Scanlon

\* \* \* \* \*

State of Washington  
Higher Education Coordinating Board  
Degree Authorization Agency  
PO Box 43430  
Olympia, WA 98504-3430  
October 30, 2001

Dear Mr. Scanlon:

Your comments regarding Kepler College of Astrological Arts and Sciences have been forwarded to me.

Chapter 28B.85 RCW prohibits a degree-granting institution from operating in Washington State unless the institution meets authorization or exemption requirements as found in the RCW (law) and the WAC (rules). WAC 250-61 provides the minimum standards required for degree-granting institutions to be authorized. At the time of application, Kepler College of Astrological Arts and Sciences met minimum standards as defined in the RCW and the WAC.

Information submitted by the school indicated that Kepler College's program is not a vocational program designed to train people to become astrologers. Its stated purpose is to educate individuals in a liberal arts-based astrology program that includes the historical,

**Note that the response includes some strange bedfellows, notably "critical analysis and thinking ... ability to understand self," etc., along with liberal arts-based astrology program . . ."**

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letter to Washington state continued from page 9

sociological, political, and psychological facets of astrology. Students' expected competencies would be in critical analysis and thinking, oral and written communication, ability to understand self, and ability to understand what occurs when theory moves into practice.

The decision to authorize an institution or deny an institution for authorization must be based solely on whether the RCW and WAC requirements have been met by an institution. Authorization by the Higher Education Coordinating Board means that a degree-granting institution can operate within the state. Authorization is not an endorsement by the Higher Education Coordinating Board of an institution, a program offered by the institution, or the contents of a program.

Washington provides its citizens a diverse array of educational opportunities. Students are free to choose the area of study they

want. It is not the responsibility, nor should it be, of government to dictate what citizens should study or think. The value of a degree from Kepler College ultimately will be determined in the marketplace by students who choose to invest their tuition dollars in that institution.

Current authorization for Kepler College of Astrological Arts and Sciences to operate as a degree-granting institution in Washington State expires March 9, 2002. A review for renewal of authorization will be completed prior to that date to ensure that compliance with RCW and WAC requirements is being maintained.

Sincerely,  
Karen Oelschlager  
Administrative Assistant

---

### Null & Void

by Jim Giglio

*On Tue, 26 Feb 2002, Garold Stone wrote [to NCAS-share]: "Gary Null is airing spots promoting his special 'Seven Steps to Perfect Health' on WETA (Channel 26)."*

*I found the "Contact Us" link on the WETA page, and delivered this bit of feedback:*

It is beyond belief that you have Gary Null back on your schedule. The man is a dangerous pitchman for medical quackery. Look at his web site. In 2 minutes



*NCAS board member Jim Giglio headed the recent project to put the 1968 Congressional UFO symposium report on the NCAS web site. The symposium report was added as a companion to the extremely popular Condon report.*

you'll discover that he rejects the HIV/AIDS connection and adheres to the highly questionable notion that the MMR vaccine causes autism.

At a fundamental level, he rejects the germ theory of disease; he would carry us back to the days when the typical family could expect to lose half its children to infectious disease.

The DC area is filled with world-class medical treatment and research institutions, among them the NIH, which is a 30-minute cab ride from your offices. You should start tapping this resource for the health education material you broadcast, not some road-show huckster who is barely distinguishable from the snake-oil salesmen of a previous century.

James C. Giglio



## Alternative Treatments to Fight Anthrax

by Paul Jaffe

Stephen E. Straus, M.D.  
NCCAM Director  
Democracy 2 Suite 200  
Mail Stop 5475  
Bethesda, MD 20892-5475  
December 3, 2001

Dear Dr. Straus,

On behalf of the membership of the National Capital Area Skeptics, I commend your firm and unequivocal statement to Rep. Burton's committee, to the effect that no procedure from the world of Complementary and Alternative Medicine (CAM) is of proven effectiveness against anthrax.

In a time such as this, it is vital that the government communicates clearly and unambiguously about what it does and does not know when it comes to medical treatment of anthrax and other biological terror threats. As the authoritative voice on the state of CAM treatments, your statement exemplified precisely the unambiguous clarity that is required. You've helped citizens make more informed choices about their avenues of health care.

Your testimony, your support of CDC recommendations and FTC efforts to combat fraud, and distribution of recommendations and information resources to the public through the NCCAM web site, represent effective actions on behalf of consumer protection. In addition, your actions have served to safeguard the scientific integrity of NCCAM and strengthen the national response to bioterrorism. Thank you, and keep up the good work.

Best regards,

Paul Jaffe  
President, National  
Capital Area Skeptics

cc: Congressman Dan  
Burton



Helen E. Hester-Ossa

## Therapeutic Touch

edited by Béla Scheiber and  
Carla Selby

by Eugene W. Ossa

If I had to describe *Therapeutic Touch*, edited by Béla Scheiber and Carla Selby, in just one word, that word would be "comprehensive." Scheiber and Selby have put together 23 articles on the subject of therapeutic touch (TT) health therapy from many different perspectives, thus providing the reader with a well rounded picture of what TT is, the role it plays in the health care field, and the quality and kind of studies that test its efficacy as a health treatment.

TT is a type of health therapy that was introduced into nursing practice in the last 30 years. It is based on the theory that the human body emanates energy fields that are manipulated by the TT practitioner to achieve different healing effects on the subject. Scheiber and Selby start with an introduction on how they came to hear about this in 1988 when the Rocky Mountain Skeptics were asked for information about this practice. Starting from this point of complete ignorance of TT,

*continued on page 12*





*Therapeutic Touch continued from page 11*

Scheiber and Selby began a concerted investigation of and involvement with the justification and spread of TT that is so well detailed in this book.

This investigation of TT necessarily involved many different perspectives, some of which include:

- The history and origins
- The theoretical foundation
- Ethical issues surrounding TT
- Studies both pro and con
- Critique of studies both pro and con
- Current (year 2000) state of research
- A lot of discussion of what a proper study of TT would entail
- Treatment of TT by official and quasi-official agencies, as well as their response to requests for information and justification of their decisions
- Source material supporting the above, including letters and positions by many of the organizations involved in any of the topics above.

This multi-layered approach gives the reader a well-rounded picture of TT from its beginning to the present; it also allows the reader to make some well-informed judgments based on source material provided in the book. Not only is there a comprehensive appendix with many source documents, but also good bibliographies provided after each article in the book. This kind of documentation allows the reader to research in detail any aspect of TT. There is also a short but important basic description of the contributing authors, particularly useful in giving an idea of the expertise and involvement with TT of each author.

While this book is certainly critical of TT (Scheiber and Selby claim it is the first book published by critics of TT), it does provide "...unedited papers describing the best case experiments conducted by TT advocates...". Scheiber and Selby uphold the standards of good research practice regardless of the conclusion of the study. The book provides studies both favorable and unfavorable to TT. Sound methodology is sound methodology regardless of the point of view of the study, and one of the most interesting articles criticized both kinds of studies and proposed standards and protocols that should be used in future studies.

Another interesting point is the brief history of TT. In the most detailed article on this, there was a gloss of many ideas, including the medieval "laying on of hands," Franz Anton Mesmer, and the Fox sisters. Tying TT to Mesmer and the Fox sisters seemed a bit of a stretch, but once we got to Madame Blavatsky and the Theosophical Society, we were on solid ground for the theoretical underpinnings of TT through one Dora van Gelder Kunz. It's fascinating stuff and puts TT in perspective for me.

This book is ideal for a researcher because you can read it selectively if you're interested in one aspect of TT, but all the information is there for a comprehensive study, with even more details in the bibliographies and appendix. If you read the book from cover to cover, there is some understandable repetition, because the separate articles, many of them providing a brief introduction to TT, were written for different sources. All in all, this is a model book for presenting a comprehensive picture of a subject. ☺

***This multi-layered approach gives the reader a well-rounded picture of TT from its beginning to the present; it also allows the reader to make some well-informed judgments based on source material provided in the book.***



*Eugene Ossa is a historian who is also a senior systems analyst at the Library of Congress. He likes logical things.*

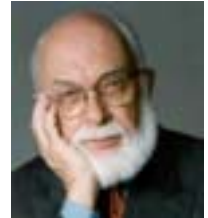
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# The Flying Saucer's 18<sup>th</sup> Century Precursors

by Richard Dengrove

What idea is more central to belief in flying saucers than that there are extraterrestrials out there superior to us? This idea is popular now and was popular in the 18<sup>th</sup> century, too.

In fact, existence of superior beings is an idea congenial to that hierarchical era. How were extraterrestrials superior: in their science and technology, even though technological superiority is more a 19<sup>th</sup> and 20<sup>th</sup> century idea. Take this quote from Benjamin Franklin's early writings:

That the INFINITE has created many Beings or Gods, vastly superior to Man, who can better conceive his Perfections than we, and return him a more rational and glorious Praise. As among Men, the Praise of the Ignorant or of Children, is not regarded by the ingenious Painter or Architect, who is rather honour'd and pleas'd with the Approbation of Wise men and Artists.

It may be that these created Gods, are immortal, or it may be that after many Ages, they are changed, and Others supply their Places.

Howbeit, I conceive that each of these is exceedingly wise, and good, and very powerful; and that Each has made for himself one glorious Sun, attended with a beautiful and admirable System of Planets.

Alexander Pope made this comment about extraterrestrial science in his *Essay on Man* (original 1733-34):

Superior beings, when of late they saw

A mortal Man unfold all  
Nature's law,  
Admir'd such wisdom in an  
earthly shape,  
And shew'd a Newton as we  
shew an Ape.

The superior beings would be angels, whom he discusses in his poem. Although he may not have believed in them, they were poetic. However, the term "superior" connotes that he was talking about superior beings on other planets too, a concept with which the poem shows he was familiar.

Of course, Pope may not have meant science or technology but something more spiritual. The next line reads:

Could he, whose rules the rapid  
comet bind,  
Describe or fix one movement  
of "his Mind?"  
Who saw its fires here rise, and  
there descend,  
Explain his own beginning, or  
his end?

Therefore, extraterrestrials were also superior in reason. Why? In this, the Age of Reason, being superior meant superior in reason. Take Voltaire's tale "Micromegas" (1752). In it Micromegas, an inhabitant of Sirius, 120,000 feet tall with a thousand senses, travels with a Saturnian only 6,000 feet tall with only 72 senses. They stop and listen to an Aristotelian, Cartesian, Malebrancheian, Lockian, Leibnizian, and Thomist savant/philosopher returning from an arctic expedition. Their superior reason allows them to see how very foolish the philosophies of the human 'atoms' are.

Of course, many moderns are ambiguous about reason right now, an attitude that is responsible for some of the bad saucer men, →

**Use of personal experience to establish the existence of extraterrestrials is more popular now.**

precursors continued from previous page

who are without emotions and cannot love (e.g., they have no compunction about experimenting on humans, or killing or enslaving us).

Even so, a Brazilian flying saucer cult, which, I heard, approaches the Mormons in size, still worships the “Rational Superior.”

Also, 18<sup>th</sup> century extraterrestrials were superior to us morally. Among those espousing this was Immanuel Kant (1755). He speculated Jupiterians and Saturnians were superior to us morally because the cold had cooled their passions. They might, in fact, be without sin. Whereas Mercurians and Venusians were inferior and, among them, sin abounded. We on Earth would be in the middle.

Are his Jupiterians and Saturnians like the saucerites of Adamski and other early contactees and the gorgeous Space Brothers of later cults, who came from ethically higher planes as well as other planets. Kant is not so specific as to make his extraterrestrials beautiful women and handsome, longhaired blond men, as Adamski does..

So much for the similarities between flying saucers and the 18<sup>th</sup> century; now for the difference. The people in the 18<sup>th</sup> century claimed to arrive at these notions by reasoning, mostly Platonic reasoning, now known as the Great Chain of Being. One premise was that the creator sought the greatest variation of things possible, including an infinite number of extraterrestrial species above man.

We, on the other hand, claim to arrive at our notions by science, like the study of flying saucer sightings, which was greatest from the 1940s to the ‘60s. And we arrive at notions by personal experience, like the contactees who have been taken aboard flying saucers. Use of personal experience to establish the existence of extraterrestrials is more popular now than in the 18<sup>th</sup> century.

Shards of the Great Chain, we presume, are proven by observation or experience, just as modern man assumes, based on observation, that the lion is the king of beasts.

Before I end this article, I have noted another similarity between current belief in flying saucers and 18<sup>th</sup> century beliefs. This comes

from Richard Blackmore’s poem *Creation* (1712):

We may pronounce each orb  
sustains a race  
Of living things adapted to the  
place...  
Were all the stars, those beautiful  
realms of light,  
At distance only hung to shine  
by night,  
And with their twinkling beams  
to please our sight?...  
Are all those glorious empires  
made in vain?

In short, WE ARE NOT ALONE. 

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*Richard Dengrove is the librarian for the Food and Nutrition Service, Department of Agriculture. He lives with his wife, Heidi, in Alexandria, Virginia. His ambition is to write a history of occult magic one of these days.*

Helen E. Hester-Osxa



**“Alternative medicine must be held to the same standards of evidence as conventional medicine, but integrative medicine must be held to the higher standards of evidence than with alternative or conventional medicine alone.**

alright. Is she harming herself or wasting her money? What would you do?”

That was a question posed by Dr. Jonas as he began his talk about alternative medicine.

“I worked with Chip Denman [founding member of NCAS] on a project to investigate a claim by Jacques Benveniste. Talk about a related topic about ultrahigh dilutions and homeopathy. At NIH, how you evaluate different claims is an area of interest.

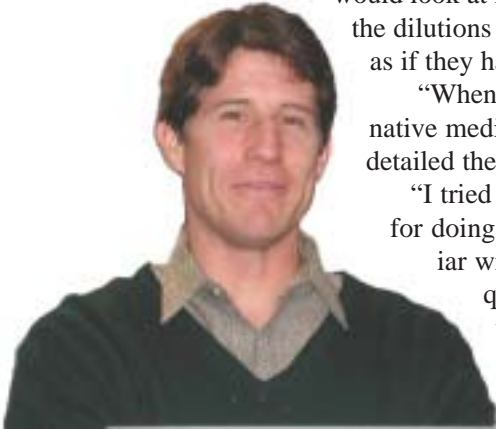
“I was introduced to some of these areas through German medical conferences. The Germans used many of the techniques I was trained to use, plus methods termed quackery here. Many of them used herbs. The No. 1 prescription for depression in Germany is St. John’s Wort. They also use homeopathy. I would look at it [the medicine] and the dilutions were so small, it was as if they had nothing in them.

“When NIH opened the alternative medicine department, I was detailed there for 3 years.

“I tried to formulate standards for doing research. I was familiar with methods, and the question was, can you use good scientific methods in alternative medicine? You HAVE to use good

methodology, or you come up with false conclusions.”

“There were major gaps between researchers and users,” says Jonas. “I spent about 90 percent of my time working with scientists to use methods they were familiar with, and working with the practitioners trying to get them to use scientific method. Those are key issues. Most alternative medicine arises out of daily practice and ignores



scientific method, and, in turn, scientists ignored it. We are trying to bridge the gap.”

Alternative medicine must be held to the same standards of evidence as conventional medicine, but Jonas says integrative medicine must be held to higher standards of evidence than with alternative or conventional medicine alone. Jonas says “We must raise the standard of research to higher than acceptable methods.” He gave an example of arrhythmia medicine prescribed years ago in good faith by physicians based on scientific testing, that turned out to be killing people. Jonas says there must be additional quality criteria for integrated medicine that involve model validity ethical considerations, and sound construction strategies.

**Evaluation of Evidence**

**Research Quality** is based on three factors, says Jonas:

**Internal Validity** (How likely is it that the effects reported are due to the independent variable [the treatment]?)—This is judged by randomization; baseline comparability; change of intervention; blinding; outcomes; and analysis.

**External Validity** (How likely is it that the study accurately reflects the system under investigation?)—This is judged by generalizability; reproducibility; clinical significance; therapeutic interference; and outcomes.

**Model Validity**—This is judged by rigorous evidence hierarchy.

Look at the top of the pyramid for the most important information.





### The Audience and the Evidence

Decision points in medicine are as follows:

- Public is influenced by stories
- Practitioners are influenced by probabilities
- Clinical investigators are influenced by comparative effects
- Basic scientists are influenced by mechanism
- Policy and payment decisionmakers are influenced by certainty, “proof”

### Treatment of Allergies with Homeopathy

“So, back to that patient with seasonal allergies who wants to try a homeopathic remedy from a health food store. Is she harming herself or wasting her money? Would you let her?” asked Jonas.

Several audience members offered various suggestions from “No way” to checking for adverse effects. Jonas said “The FDA doesn’t even judge homeopathy under food supplements because the quantity of any substance is so small, they [the FDA] don’t think it would be harmful.”

A Homeopathic Galphimia Glauca in Pollinosis study done over a period of 1 year, using homeopathy, showed a 70 percent chance of the patient getting better on the alternative medicine.

“Some things on the surface are not as simple as they seem. There is a complexity issue,” said Jonas

What about the different medical histories of the patients? Randomized controlled trials are necessary to make sure that the intervention is not affecting the outcome.

“What’s the big problem here?” asked Jonas. There are problems that people will use other treatments, some will drop out, and that’s why we [researchers] try to do large-scale randomized studies.

How do you factor in that there’s a lot of variability in response? You distribute the variability through randomness, and a large enough group.

“There’s another problem because no one wants to publish a negative study, and there’s an 8 to 1 ratio in publishing positive studies rather than negative studies,” said Jonas. “Let’s assume that we

have looked at the quality of the study and that it is about 70 percent effective. The dilemma is that it appears to contradict the rational scientific thinking that if there’s nothing in the homeopathic treatment, it shouldn’t have more of an effect than the placebo. The patient’s belief is high, but our belief is low, because we think it can’t possibly work, and the evidence is small in between. Welcome to the world of medicine,” said Jonas. “We have to play evidence off our own beliefs and that of others.”

An audience member pointed out that, in the alternative study, if it does work, then there can’t be “nothing” in it, but there has to be “something” in it.

Jonas, pleased with the logic of the audience, said, “So we should begin doing research into the results of homeopathy. I want you all to be judges.”

Jonas continued: “Regression analysis shows that, if you look strategically at the effects of the placebo group and the homeopathy group, the differences could be attributed to chance.”



*The capacity crowd waited expectantly for Dr. Jonas to begin.*



*continued on next page*



**“Of course, I am always reluctant to contradict anyone’s grandmother, except when the results might be dangerous.”**

**Cortland Forum**

But what about the “file drawer effect” (studies that didn’t get published because they were negative)? If you take all the studies, and eliminate the file drawer effect, it does not make the more positive effect of homeopathy invalid, says Jonas.

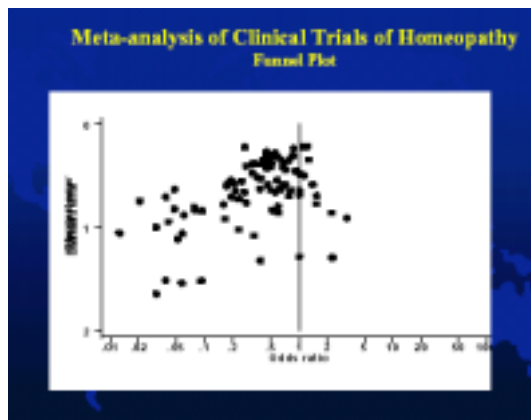
“We need higher levels of evidence than we normally apply,” Jonas continued. It can be summarized in the phrase, “Unusual claims need unusual proof.”

The final two slides of his presentation were telling ones, however. In examining for bias, Jonas suggested checking for symmetry, using meta-regression to look for correlations and heterogeneity, relationships between pollen changes and biological changes. When you find evidence of bias, report it; evaluate treatment effect vs. bias; consider excluding lower

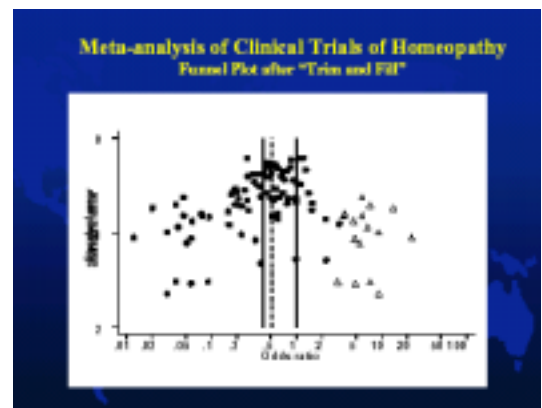
quality studies; and consider excluding biased evidence. Once these steps were taken, both halves of the graph looked about the same.

For those interested in a database of medical studies, says Jonas, “the Cochrane Collaboration is an international group that does statistical reviews of randomized control trials. It is a wonderfully rich database that starts at the top of the hierarchy. They are also looking at herbs, mind/body, nutrition. There are similar studies being done on herbal medicines.” (<http://www.cochrane.org/>)

Oh, by the way, Dr. Jonas told his seasonal allergy patient who asked about trying alternative medicine to go ahead off the current conventional medication he had prescribed and try the other medication—and let him know how it worked. ☒



Graph showing efficacy of homeopathic treatment.



Corrected graph.

**“We live forwards, but we understand backwards.”**

**William James**

## A Skeptical Mind is a Sound Mind

Several NCAS members were featured in a February 6, 2002 article entitled “A skeptical mind is a sound mind,” by Sahely Mukerji, a staff writer with the *Silver Spring Gazette*. The subhead read, “Group advocates rational inquiry when dealing with unusual, fringe-science claims.”

The article discusses the genesis of NCAS in 1987 and quotes founding member Chip Denman, who teaches a course called ‘Science and Pseudo Science’ at the University of Maryland, as saying, “We help people figure out how to think and not what to think. . . . I’m not here to get a person who believes in Ms. Cleo or horoscopes. The fact that the

horoscopes appear on the comic page speaks for itself.”

Also mentioned are NCAS founders Grace Denman and Jamy Ian Swiss, and members Jim Giglio, Doris Bloch, and Rita Malone.

“This organization doesn’t seek to convert people,” Malone is quoted as saying. “It encourages people to find out the missing information.”

NCAS president Paul Jaffe was pictured holding an extraterrestrial alien figurine.

To read the full text of the article, go to <http://www.gazette.net/200206/silverspring/news/90601-1.html>



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