The North Texas Skeptic

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Real science

by John Blanton

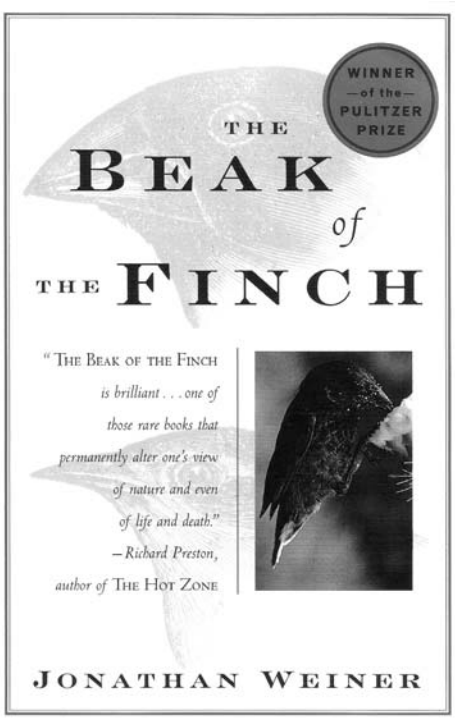
Jonathan Weiner
The Beak of the Finch
1995, Vintage Books, 303 pages

But first I need to mention Jonathan Wells.

I discussed *Icons of Evolution* by Jonathan Wells back in 2002. In the book Wells posits ten of what he calls icons—signature points upon which Darwinian evolution is supposed to hinge. [1]

Wells' ten icons are:

Miller-Urey experiment
Darwin's tree of life
Homology in vertebrate limbs
Haeckel's embryos
Archaeopteryx
Peppered moth
Darwin's finches
Four-winged fruit flies
Fossil horses
Hominid evolution



The Beak of The Finch by Jonathan Weiner

In the case of the peppered moth, Wells significantly points out photos of peppered moths resting on tree trunks or tree bark. The point is this: Published research reported

EVENTS CALENDAR

August program

Saturday 15 August 2009
2 p.m.

Center for Nonprofit Management
2900 Live Oak Street in Dallas

Presentation by John Brandt

John Brandt will present a program on food and nutrition myths.

Board meeting and social dinner

Saturday 22 August 2009
7 p.m.

Glorias
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on the effect of industrial activity on moth populations. There were moths of a peppery light color and moths with a peppery dark color. When our industry produced a lot of soot in the air, tree trunks (and everything else) acquired a dark grey coating. Moths of a lighter color stood out for all birds to see, and the moth population shifted to the dark end of the scale. When industry stopped pumping soot into the air, trees returned to their natural, lighter color, and dark moths lost their advantage. Researchers posted this as an example of natural selection in action.

In his book, Wells took great offense with these photos and disclosed the awful truth—the photos were staged. Dead moths were stuck on the trees and photographed to fool students into believing in Darwinism.

In this instance, the magnificent brain of Jonathan Wells, Ph.D., showed its power. I had completely missed this point when I viewed the photos in an earlier life. I had naively assumed a photographer was given the assignment to show students how moths of different colors looked when posted on bark of different colors. So the photographer got some moths, killed them, stuck them on some bark, and took the photos. It never occurred to me this was all a scheme to fool innocent students.

Wells is a senior fellow at the Discovery Institute Center for Science and Culture. The CSC is the major propagandist for Intelligent Design, a modern variation of creationism. Intelligent Design, they assert, is well supported by science and should be seriously considered as an alternative to purely natural mechanisms, such as Darwinian evolution. It would appear there is a thunderous clash of scientific viewpoints brewing.

Not quite.

Twenty years examining the Intelligent Design movement shows zero scientific activity. There have been symposia, public debates, slick video productions, and also books. Besides *Icons* we have *Darwin's Black Box*, *The Edge of Evolution*, *Mere Creation*, *Intelligent Design: The Bridge Between Science and Theology*, *The Privileged Planet*, and a number of others that presume to provide scientific support for Intelligent Design or against Evolution. The CSC also claims two papers published in real, peer-reviewed scientific journals.

For example, a few years back CSC director Stephen Meyer arranged with Intelligent Design sympathizer Richard Steinberg to publish a review article in a journal for which Steinberg was editor. Steinberg side-stepped the normal review process and published "The Origin of Biological Information and the Higher Taxonomic Categories" (*Proceedings of the Biological Society of Washington* 117 (2004): 213-239). It's what it takes to publish pseudoscience these days.

Videos include *Icons of Evolution*, *Unlocking the Mystery of Life*, *The Privileged Planet*, and also *Expelled*, *No Intelligence Allowed*. The later title may not have a CSC connection, but it shows TV personality Ben Stein connecting Darwinism with Nazism and the Holocaust.

Isn't doing science wonderful? It's an idyllic armchair world of publication, and presentation. And no sweat.

Not quite. *The Beak of the Finch* presents the world of real science.

For over 30 years beginning in 1973 Peter and Rosemary Grant worked studying the finches on the Galapagos Islands. One hundred and seventy years ago the Galapagos finches gave Charles Darwin inspiration during the development of his theory of evolution. Finches (dead) he brought back from the voyage of the Beagle turned out to be variations with a common ancestry. They were different species of finches that developed only on the Galapagos. Darwin's finches represent one of Jonathan Wells' icons of evolution.

Spending six months out of every year for years on end in the Galapagos, the Grants and others on their team carefully cataloged every finch on a small island and observed as populations hatched and died. They caught the birds and measured their beaks and noted their individual songs. Did I mention they measured the beaks to a fraction of a millimeter?

There were no armchairs in their camp, to say nothing of running water and air conditioning. The equator runs right through the small Galapagos cluster, and there is often no rain for months. The sun is blazing hot. The Grants raised two daughters in this environment, alternating with stays back at Princeton University to lecture and to publish.

And Wells sees fit to critique the Grants' work.

The Grants, observed Wells, did not observe any speciation. Nor did they see any net evolution within a finch species. When extended dry spells forced the finches to crack harder and scarcer seeds, the population shifted to birds with thicker and tougher beaks. When the rains returned, and the variety of food increased, the tough-beaked birds gave way to ones with more adroit beaks. No net change, Wells observed.

Wells did not mention other research covered in *The Beak of the Finch*, which is not to imply he based Icons on Weiner's book.

The Beak of the Finch covers more than beaks. In the streams of Venezuela, Margarita Island, Trinidad, and Tobago guppies are in their natural environment. They swim about the quiet ponds, but always close to the bottom, because they have enemies in the form of several species of fish and a freshwater prawn. The stream beds are often carpeted with multi-colored gravel, just as in your aquarium, and guppies that look like the speckled bottom of the stream live to spawn another day.

About the time the Grants were studying finches in the Galapagos, John Endler was doing a similar study of the guppies. He noted that in the head waters of a stream there might be few predator fish, but as a stream neared the sea after traversing a number of water falls, the guppies' enemies grew in number and variety. The predators that were downstream could not get up the water falls, so upstream guppies enjoyed less predation.

Endler noticed that as predation increased downstream, so did the pressure of natural selection. Where predators came in numbers guppies that did not well match the stream bottom became quite rare. In regions where the streams don't have colored gravel bottoms, the guppies have a problem.

Bold spots may show off male guppies to potential mates, but the boldest males get seen and eaten before they can spawn. Spotless males can avoid getting eaten, but they also avoid getting spotted by female guppies on the prowl. Endler observed that successful guppies were ones that struck a careful balance. Their spots were quite small and escaped the view of predators several inches away. However from the distance of a couple of centimeters they showed up on a female's radar and remained in the gene pool.

Endler took the experiment a step further and constructed ten artificial guppy ponds at Princeton University. He seeded the ponds with guppies and let nature take its course. The guppy populations took off, and Endler introduced the guppy predators into the experiment, selectively. Some ponds did not get predators. Also, Endler provided different gravel bottoms for the ponds and studied the results. Natural selection took place.

Populations under the pressure of predation conformed to the requirements of survival, matching the gravel bottom and cautiously displaying spots for the female sex. Populations free of predation developed gaudy spotting in a race with sexual selection.

There's much more. Jamie Smith conducted research with sparrows on the island of Mandarte in British Columbia. British Columbia does not suffer the drought and the equatorial heat of the Galapagos, but it does have seasons of severe wind, snow, and cold. This research again revealed clear population response to the pressure of natural selection.

If the book illustrates one thing it is this: Contrary to what some creationists assert there is on-going and fruitful research into Darwinian evolution. Real scientists are working in the real world and doing real research with little opportunity to enjoy an armchair. The contrast with the lack of activity by the creationists is breath taking.

For the record, despite what Jonathan Wells had to say about the peppered moths, in the case of the finches he agrees that natural selection does work. Additionally, published research

does not claim the finch studies offer proof of speciation or net evolutionary development. One wonders, then, what was all the fuss with *Icons of Evolution.*

On a final note, if the Grants did not observe any net evolution of the finches during their research, they must have observed the remarkable evolution of technology during this time. When they started in 1973 there were no personal computers, and the book details their later work as they archived their data on large numbers of floppy disks. The Grants are now emeritus professors, and it's fairly certain each of their personal computers will be connected to terabyte hard drives sitting on their desk tops. Readers who have observed the evolution of computers will have to appreciate the irony.

Jonathan Weiner received the Pulitzer Prize in 1995 for *The Beak of the Finch*. He has also written *The Next One Hundred Years*, and *Planet Earth*.

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References

1 http://ntskeptics.org/2002/2002october/october 2002.htm#icons

The Child of Pain

by Daniel Barnett

Sometime in the spring of 1847, Constantin Hering picked up the February 15 issue of *Comptes Rendus des Séances de l'Académie des Sciences*, a French science journal, and flipped through the pages until he found himself reading a notice from Italian chemist Ascanio Sobrero. The previous year, Sobrero experimented with Scheele's glycerin by treating it with nitrosulfuric acid and wound up with a pale yellowish oil that was heavier than water and dissolved in alcohol and ether.[1] Hering's curiosity was aroused by Sobrero's further comments about the oil's effects when tasted by researchers:

> Il est sans odeur; sa saveur est douce, piquante, aromatique. Il faut toutefois être sur ses gardes en faisant cet essai, car il suffit d'en tenir une très-petite quantité (ce qu'on peut en prendre en y mouillant légèrement le bout du petit doigt) sur la langue pour en éprouver une migraine assez forte pendant plusieurs heures. Cette action sur le corps humain a été constatée par plusieurs personnes dans mon laboratoire, et je l'ai éprouvée plusieurs fois sur moi-même avant que je fusse certain qu'elle a des propriétés toxiques. [2]

Sobrero christened this oil *piroglicerina*, but the English-speaking world eventually came to know this compound as nitroglycerin. In addition to producing migraines for any researcher who dared to taste it, nitroglycerin proved to be an unstable and powerful explosive. In fact, Sobrero's face was badly scarred when a test tube full of *piroglicerina* exploded in his laboratory. Soon afterwards, Sobrero reflected on his deadly discovery: "When I think of all the victims killed during nitroglycerine explosions, and the terrible havoc that has been wreaked, which in all probability will continue to occur in the future, I am almost ashamed to admit to be its discoverer. "

But Hering had no interest in using Sobrero's oil as a weapon. He was fascinated with nitroglycerin's ability to cause profound headaches in otherwise healthy European chemists.

Hering's impatience in obtaining the oil grew as his attempts extended from weeks to months; despite his laboratory, he felt he had neither the time nor the skill to produce Sobrero's oil. Hering enlisted the help of Morris Davis, a chemist at Lovering's sugar refinery.

Finally, Davis brought Hering a vial containing a tiny amount of Sobrero's *piroglicerina*. Hering would later remark: "There were scarcely twenty drops, but it held, besides, a world of expectation. Like a new-born son, wrapped in his glass swaddling-clothes, the child of pain was at last brought forth. "

Davis was the first to taste the oil, and quickly developed a migraine similar to that experienced by Sobrero and his assistants. That night, Hering delivered the vial to the northwest corner of Juliana Street and Vine Street in Philadelphia , where stood the home of his friend, Dr. Jeanes.

Jacob B. Jeanes was born on October 4, 1800, one of six siblings in a family of Hicksite Friends. His three brothers, Joseph, Joshua, and Samuel, would go on to establish a successful dry goods business in Philadelphia . As for Jacob, he entered the Medical Department of the University of Pennsylvania under the preceptorship of Joseph Parrish, graduating in 1823. He published his *Homœopathic Practice of Medicine* in 1838. In 1845, he served as President of the AIH.

According to Hering's own writings, Jeanes sampled a small amount of the oil one evening at Hering's residence; after laughing off his colleague's warnings, Jeanes placed the *piroglicerina* in his mouth and started dictating his first symptoms to Hering coolly. Suddenly, Jeanes exclaimed, "Indeed, you are right, here it is! Oh, how it seizes me!" He clutched his head with both hands and started pacing the room in what must have been agonizing pain, describing his sensations as best as he was able while Hering jotted them down vigorously.

The Homœopathic Medical College of Pennsylvania

It was on a Tuesday evening in February 1848, at the northwest corner of Juliana Street and Vine Street in Philadelphia, that three physicians would change the face of homeopathic education in America . Hering, fresh from his experiments with Glonoin, and Walter Williamson, descendant of the first white settlers of Pennsylvania, gathered at the home of Jacob Jeanes. The doctors settled in the Quaker homeopath's parlor and began discussing a response to various pleas and requests arising from diverse sources as the August 1845 *Homœopathic Pioneer* and the recommendations of the AIH itself, on whose Central Bureau all three homeopaths now sat.

The purpose of the meeting was to lay the groundwork for a Homœopathic Medical College of Pennsylvania, a more permanent successor to the defunct Allentown Academy . Such a college would possess all of the rights and powers enjoyed by other medical colleges in Pennsylvania , including the right to award the degree of Doctor of Homœopathic Medicine. It would be a safe haven where medical students could learn the art of homeopathy – this time, in English – without interference or ridicule from allopaths.

To establish such a college, all three doctors agreed that they would have to persuade the state legislature of Pennsylvania to grant a charter for the school. At the end of the night, Hering, Jeanes, and Williamson succeeded in crafting a petition to be sent to Harrisburg . After being shown to a few friends of the supplicants on Wednesday morning, the document was on its way to Harrisburg by Thursday along with hundreds of signatures, 18 of them from physicians.

At the time, however, it seemed unlikely that the legislature would vote in favor of the act. Jeanes then turned to his wife's brother, Charles Brown, who had recently assumed his seat in the House of Representatives at Washington, DC, after his service in the Pennsylvania state legislature. Brown wrote his friends and former colleagues at Harrisburg, asking them to support incorporation. The bill passed the House on February 12 and the Senate on April 5; the Governor signed it into law on April 8.

The trio responsible for the original petition wasted no time. On April 10 – which was, coincidentally, Samuel Hahnemann's birthday – they met with the other Corporators in the Athenæum Building at Sixth and Adelphi. Judge Anson V. Parsons was appointed Chairman, with Francis Sims as Secretary. The Act to incorporate the Homœopathic Medical College of Pennsylvania [3] was read and approved, and a nine-man committee was appointed to draft a constitution and bylaws for the new school. Hering, James, and Williamson all assumed positions on the committee, as did Parsons. The constitution was unveiled at the next Corporators' meeting on April 27.

The first meeting under the new constitution was held on May 1, 1848, at the Assembly Building at Tenth and Chestnut, where Parsons was elected President of the college. All subsequent meetings, in which committees were reshuffled, a dispensary was agreed upon, and strategies for fundraising were debated, would be conducted at the Athenæum until September 28 of the same year.

The school's original campus was fairly meager – it consisted of a few rooms in a building at the rear of a pharmacy located at 229 Arch Street .

The Homœopathic Medical College of Pennsylvania finally held its first graduation exercises on March 15, 1849, during which six men stepped before the Honorable A. V. Parsons to receive their degrees. Thus, the first incorporated homeopathic school in America also awarded the first certified homeopathic degrees in America .

Soon afterwards, the College bid farewell one of its founders. At an officers' meeting on April 9, 1849, Jacob Jeanes announced that he was resigning his post at the college in order to devote his time to other efforts, not the least of which was an extensive private practice. Pemberton Dudley later remarked:

> Few events in the College history have been occasion of more lasting regret. Dr. Jeanes' influence upon the young college had been both stimulant and conservative…Genial and forbearing, resolute and uncompromising, he could profess and practice a real friendship for his allopathic foe, but neither threats nor ridicule, neither argument nor diplomacy, could yoke his conscience nor fetter his thought. [4]

The College awarded another 20 degrees at its second commencement on March 2, 1850. By this time, the enterprise was so successful that it vacated the Arch Street pharmacy and settled into larger quarters at 1105 Filbert Street.

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References

1 Sobrero A. Sur plusieurs composés dètonants produits avec l'acide nitrique et le sucre, la dextrine, la lactine, la mannite et la glycérine. *Comptes Rendus des Séances de l'Académie des Sciences* 1847 (Feb 15);24:247-248.

2 English translation: *It is odorless; its flavor is soft, prickly, and aromatic. However, whoever performs this experiment should be very careful; even a very small quantity*

(obtainable by slightly moistening the tip of the small finger) placed upon the tongue causes a severe headache of several hours' duration. This effect was observed by several people in my laboratory, and I tested it on myself several times before confirming its toxic properties.

3 Laws of General Assembly of Pennsylvania , 1848, 394. (Act No. 300)

4 Bradford, Thomas Lindsley. *History of the Homoeopathic Medical College of Pennsylvania ; The Hahnemann Medical College and Hospital of Philadelphia* . Philadelphia ; Boericke and Tafel; 1898. p. 25-26.

Challenge activity

by John Blanton

As you probably noticed if you watch the news on CNN, several North Texas Skeptics currently underwrite a $12,000 prize for a successful demonstration of the paranormal. Actually, CNN seems to be completely unaware of this, and they have never mentioned it on their news program.

Anyhow, somehow the news got out, and we get about four inquiries a year from people who want to challenge for the prize. In July I received a note from Scott Moresi:

> Dear North Texas Skeptics,
>
> I am writing this letter to provide you with the information requested on your web site concerning your paranormal challenge. I will try and keep this short as I am sure you must deal with many, many applicants every week. I will also try to keep the content of this letter as close to scientific testing protocol as possible.
>
> My paranormal ability is to make others weaker in relation to myself purely with my mind. To define 'weaker in relation', I mean that I can cause people to give very little resistance when performing opposed strength tests. While they may actually become weaker objectively (as in they would not be able to lift as much weight) this is not my claim. I must remain part of the equation

Unfortunately, Scott was wrong on two points: We certainly do not get many applicants every week. Second and significantly, Scott must not remain part of the operation. At least not in the manner he has suggested.

In brief, what Scott suggested is this: He will focus on a subject and thereby weaken the subject (with respect to Scott). The subject will then try to resist while Scott presses down on the subject's outstretched arms. When Scott is successful in weakening the subject, the subject will not be able to resist (much) Scott's downward force.

So, what's wrong with this? Anybody watching up close can observe whether the subject was able to resist, more or less. The problem is Scott is in complete control of how much force Scott applies. Some people call me skeptical, but I believe Scott may be tempted to apply more force when he claims to be weakening the subject. Of course, Scott would never selectively apply more or less force just to win a $12,000 prize.

Scott mentioned his proposal represents a double-blind test. Not even close. Double blind would be when none of the subject, the person applying the force, or the person judging knows whether Scott has focused and weakened the subject. Scott's test would not even be *single-blind*, since Scott will know whether the subject is to successfully resist.

In return, I proposed this: Scott needs to focus on the subject and weaken (or not) the subject. The subject will have no knowledge of Scott's intentions. Neither will the person doing the judging (could be the subject). The subject should merely attempt to lift a weight or some similar activity. If Scott is able to weaken a subject's arms, it should not matter whether the subject is pushing against Scott or some other force.

I have received no further communication from Scott.

Oops. Scott was almost correct. Challenge activity has been heating up recently. The phone calls and e-mails keep coming. Here is one:

> From: Tommy Cook
> To: skeptic75287@yahoo.com
>
> John, my name is Tommy Cook and my daughter Holly has been talking to you about our ability to walk a table. This is something that our family has been involved in for years and I would like to have the opportunity to demonstrate this ability to you. Please contact me … so we can talk about this. I look forward to hearing from you.
>
> Sincerely,
>
> Tommy Cook

I am not to sure what "table walking" is, but there are stories about table tipping and other tricks that spiritualists have employed in times past. Maybe we were in for a rare treat. I responded:

> From: "John Blanton" <skeptic75287@yahoo.com>
>
> To: Tommy Cook
>
> Tommy,

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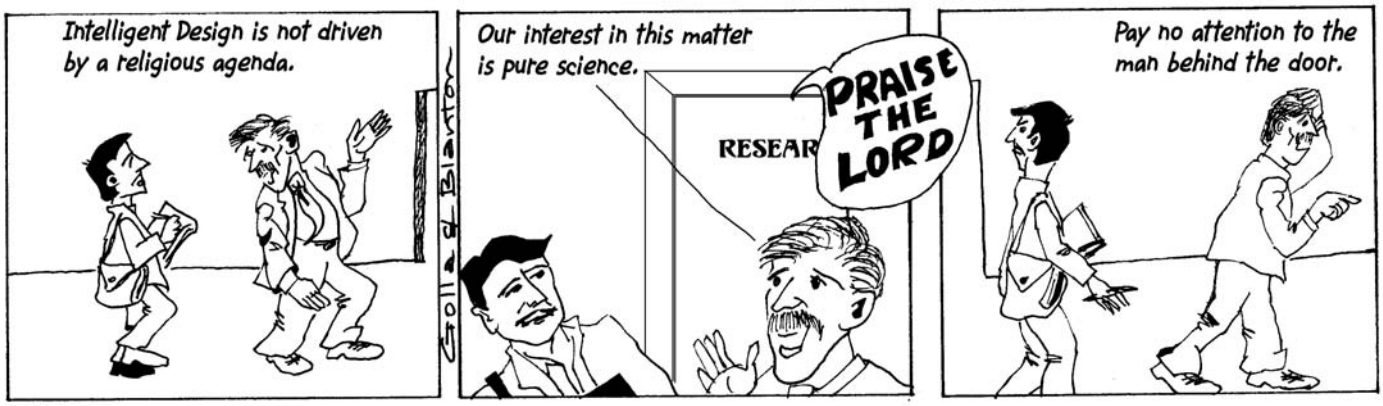

Right now I am in Anaheim. Where are you located? It's possible we can meet before I go back to Dallas.

John Blanton

That got the formalities out of the way. I explained to Tommy Cook that he needed to carefully review the requirements for the NTS Paranormal Challenge posted on our Web site. Before we would engage him in a serious test he would need to give us a demonstration. As I pointed out in an e-mail, we have had a number of people come forward claiming all sorts of paranormal powers, and none of them have ever gotten past this initial demonstration. Nobody ever showed up with anything to demonstrate.

Tommy Cook responded:

From: Tommy Cook
To: John Blanton skeptic75287@yahoo.com
Date: Monday, July 27, 2009, 11:25 AM

John, Thinks for getting back to me.

…

Do you have a place that I could demonstrate. I lay my hands on a small table and within 30 minutes to an hour I can get the table to move a lot. Usually it just slides around in all directions and even will come up on a side. With my daughter I has seen much more activity because the more force and ability the more phenomenal the experience. I even cover the table with baby power so as to make it more compelling and expel as much doubt as possible to its validity. Let me know your thoughts. I write about this in my book "Fourth and Long" in chapter 14 which I have attached for your enjoyment.

Sincerely,
Tommy Cook

Tommy sent us a copy of his Chapter 14, and I found it to be intriguing reading. Hopefully I will get a chance to meet Tommy Cook later this year and will then have something additional to report.

In the mean time, if you are out there, and you want to challenge for the prize, then turn off the TV. You will not see us on CNN. Get your stuff together and join the swarm (several each week according to Scott) who have proposed challenges. Our Web site describes what is required to challenge for the prize. Read the instructions carefully and contact us if you still have questions. Save yourself some wasted time if you are not truly ready to do the impossible, which is what the *paranormal* implies. We require an up front demonstration before we even get serious about setting up a test. Many have challenged, but nobody has ever gotten past the demonstration phase. Close to half of all challengers drop out after the first round of communication.

This brings us to another point—all correspondence relating to the NTS Paranormal Challenge will be published in our newsletter and on our Web site. Which is what you are reading now. You can get the full story here:

http://www.ntskeptics.org/challenge/challenge.htm

You may now return to your regular television programming. ❐

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Yes, I agree with your purposes in exploring paranormal and pseudoscientific claims from a responsible and scientific point of view, and while I do not endorse the a priori rejection of paranormal phenomena and pseudoscientific claims, I believe that such claims must be subjected to the fair and systematic testing which rational enquiry demands.

Signature _____Date _____

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