



The Newsletter of The North Texas Skeptics

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Icons of evolution

by John Blanton

This is not a review of the book. This is a story about the book. There are a number of excellent reviews of the book, and I will present some references.

[Icons of Evolution](#) has the subtitle *Science or Myth*. As you have already guessed, this is a creationist book.

Author Jonathan Wells is usually presented as an advocate of *intelligent design* (ID). Traditionally, ID proponents tend to accept the notion of common ancestry and an ancient Earth. Many of them will agree that the universe is about 15 billion years old, and we all derived from a single source of life on the Earth. ID proponents, however, want us to believe that an intelligent agent is driving all of this development and making it happen in a way that benefits us.

From this perspective Jonathan Wells looks more like a young Earth creationist (YEC). While some ID advocates may have no problem with evolution, itself, they want us to reject natural selection as the sole driving force. Wells wants us to reject the fact of evolution, itself. Wells initially obtained a degree in theology, and during that time he began to form his objections to evolution. He has discussed his rejection of evolution and his decision to obtain a Ph.D. in biology in order to counter the theory of evolution in an on-line essay.¹

Chapters two through eleven of his book highlight the ten icons of evolution that Wells wants to refute:

- The Miller-Urey experiment
- Darwin's tree of life
- Homology in vertebrate limbs
- Haeckel's embryos
- Archeopteryx—the missing link
- Peppered moths
- Darwin's finches
- Four-winged fruit flies

Fossil horses and directed evolution

- From ape to human: the ultimate icon

According to Wells "Some of these icons of evolution present assumptions or hypotheses as though they were observed facts; in Stephen Jay Gould's words, they are 'incarnations of concepts masquerading as neutral descriptions of nature.' Others conceal raging controversies among biologists that have far-reaching implications for evolutionary theory. Worst of all, some are directly contrary to well-established scientific evidence."²

The Discovery Institute lists Jonathan Wells as a Senior Fellow on their web site:

Jonathan Wells has received two Ph.D.s, one in Molecular and Cell Biology from the University of California at Berkeley, and one in Religious Studies from Yale University. He has worked as a postdoctoral research biologist at the University of California at Berkeley and the supervisor of a medical laboratory in Fairfield, California, and he has taught biology at California State University in Hayward.

Dr. Wells has published articles in *Development*, *Proceedings of the National Academy of Sciences USA*, *BioSystems*, *The Scientist* and *The American Biology Teacher*. He is also author of *Charles Hodge's Critique of Darwinism* (Edwin Mellen Press, 1988) and *Icons of Evolution: Why much of what we teach about evolution is wrong* (Regnery Publishing, 2000).

Dr. Wells is currently working on a book criticizing the over-emphasis on genes in biology and medicine.³

He has also been prominent in recent debates over the introduction of ID into public school science curricula. As physicist Robert Park reported earlier this year and we reprinted in this newsletter, Wells was a driving force this year behind the effort to introduce ID into the Ohio public schools.⁴

As promised, here are some references to skeptical reviews of *Icons*.

The National Center for Science Education (NCSE) features on its Web site "Responses to Jonathan Wells's Ten Questions to Ask Your Biology Teacher." It so happens the ten questions correspond to the ten icons in Wells' book. For example:

Q: DARWIN'S TREE OF LIFE. Why don't textbooks discuss the "Cambrian explosion," in which all major animal groups appear together in the fossil record fully formed instead of branching from a common ancestor – thus contradicting the evolutionary tree of life?

A: Wells is wrong: fish, amphibians, reptiles, birds, and mammals all are post-Cambrian – aren't these "major groups"? We would recognize very few of the Cambrian organisms as "modern"; they are in fact at the roots of the tree of life, showing the earliest appearances of some key features of groups of animals – but not all features and not all groups. Researchers are linking these Cambrian groups using not only fossils but also data from developmental biology.⁵

Dave Wisker discusses "Jonathan Wells and Darwin's Finches" on the Web at the Talk-Origins site:

In Chapter 8 of *Icons of Evolution*, Jonathan Wells examines the case of "Darwin's Finches," and claims that textbooks exaggerate not only the importance of the finches to Darwin's thinking, but also the evidence that they are an excellent example of evolution in action. He also accuses biologists Rosemary and Peter Grant, who spent 30 years studying these birds, of exaggerating the evidence as well. As we shall see, Wells' case is weak. Darwin's Finches remain one of the best examples of adaptive radiation in the literature of evolutionary biology.⁶

In "Icon of Obfuscation," also appearing on the Talk-Origins Web site, Nic Tamzek addresses each of Wells' icons in great detail. It's worth the read if you are technically minded and maybe if you are not. For example, Tamzek examines Chapter 4:

Is the definition of homology circular? Wells spends this entire chapter thoroughly confused about homology, and does his best to confuse his readers as well. About five minutes of research by yours truly turned up a perfectly reasonable discussion of homology (Amundson, 2001) which nicely straightens things out: in a nutshell, homology is detailed similarity of organization that is functionally unnecessary, meaning the similarity is unnecessary (the trait in question may be, and usually is, functional).⁷

Eugenie C. Scott, director of the NCSE, has also written a review, which is on-line at <http://www.scienceormyth.org/icons%20of%20evolution.html>.

Kevian Padian is with the Department of Integrative Biology and Museum of Paleontology at the University of California, Berkeley. He is also on the editorial board of the journal Reports of the National Center for Science Education. His review is in PDF format at <http://www.journals.uchicago.edu/QRB/journal/issues/v77n1/770103/770103.web.pdf>.

The skeptical group New Mexicans for Science and Reason also discuss Wells and his arguments on their Web site at <http://www.nmsr.org/jonwells.htm>.

I have provided references to on-line reviews because these days the Internet is the most painless way to obtain access to needed information. Some of these URLs are a bit cumbersome, so if you are reading a hard copy of this newsletter your best bet is to log onto the NTS Web site at <http://www.ntskeptics.org>, and go to the on-line copy, where there will be links to send you directly to the source.

Watch for more on Jonathan Wells. He is a rising star in the creationist camp. He is also one of the best friends evolutionists have. His shoot-from-the-hip style and his transparent arguments make him an easy adversary for the better informed, of which there seem to be quite a few. Apparently it is true that a little knowledge is a dangerous thing. In Wells' case, the danger is to the cause of the creationists.

References

- 1 Jonathan Wells, "Darwinism: Why I Went for a Second Ph.D." At <http://www.tparents.org/library/unification/talks/wells/DARWIN.htm>
- 2 J. Wells, *Icons of Evolution*, p. 7. Regnery Publishing, Inc., 2000
- 3 <http://www.discovery.org/crsc/fellows/JonathanWells/>
- 4 <http://www.ntskeptics.org/2002/2002june/june2002.htm#new>
- 5 http://www.ncseweb.org/resources/articles/7719_responses_to_jonathan_wells3_11_28_2001.asp
- 6 <http://www.talkorigins.org/faqs/wells/finches.html>
- 7 <http://www.talkorigins.org/faqs/wells/>

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James Randi in Dallas

By Daniel R. Barnett

James Randi, one of the fathers of the modern-day skeptics' movement, visited Dallas on September 29, 2002, and gave an entertaining and informative presentation in which he bent spoons, played havoc with wristwatches, and detailed how nonsense was still firmly entrenched in modern America. The setting was the Bob Hope Theatre at the Owens Art Center on the campus of Southern Methodist University, with an audience of approximately 200 people in attendance, including delegations from the North Texas Skeptics, the North Texas Church of Freethought, and Metroplex Atheists.

After a short video presentation summarizing Randi's activities over the past 40 years as a magician, escape artist, and paranormal investigator, the man once known as "The Amazing Randi" explained to the audience that the crux of his "very peculiar business" is the study of two aspects of human nature: how people are fooled, and how people fool themselves. Unfortunately, gullibility still persists at high levels even in today's world; Randi detailed how the US Patent Office issued patents for three perpetual motion machines, various "free energy" devices, a counterfeit bill detector pen, and a clicking "stimulator" gadget that's supposed to relieve muscle pain – all within the past five years. Even though they all have legal patents, none of these devices work. The James Randi Educational Foundation, established in southern Florida by Randi, took the USPO to task over another worthless (yet patented) gadget, the Motionless Electronic Generator; in this case, however, the USPO is reconsidering the patent.

Speaking of the United States government at work, Department of Energy officials at Sandia Labs asked Randi for his opinion on a particular dowsing rod, which Randi quickly dismissed as nonsense. Despite this vote of no confidence from Randi, the

DOE turned around and spent \$285,000 of taxpayer money to investigate the same dowsing rod – only to conclude that the rod was indeed worthless. Considering that the phone call to Randi cost only \$1.60, it seems that the DOE should have taken Randi's advice.

In a related story, the Customs Office purchased some useless DKL rods for use in "dowsing" drugs and contraband in luggage, but the agents aren't allowed to use them for that purpose. Randi explained how the agents got around this prohibition: "They send in the dogs, and if the dogs trigger in on something, then they send in the DKL rod." By this point, most of the audience members were laughing in disbelief.

What would a Randi lecture be without a little magic? Although he has escaped from straightjackets and other restraints in the past, this time Randi settled for bending a spoon while a volunteer held it. Randi explained that the trick was debuted in an issue of *Abracadabra* magazine from 1968, but hardly anyone picked up the trick – although alleged psychic Uri Geller has made a career out of bending spoons and telling people that he uses paranormal abilities to do it. Randi still insists, however, that if Geller is using psychic powers to bend spoons, "he's doing it the hard way." Randi didn't explain how he bends spoons (except to say that it's a trick), but he did demonstrate a trick where he takes a spectator's wristwatch and causes the hands to go haywire.

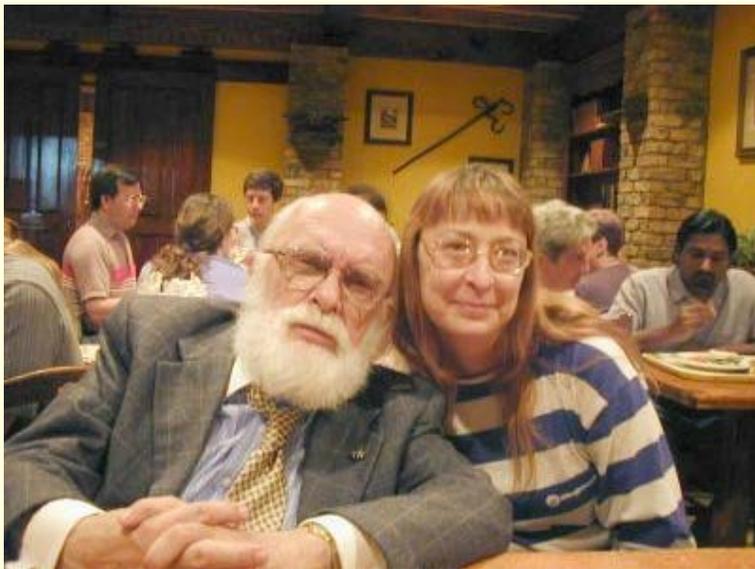
Even the "best and brightest" can still be fooled by magic at times. In a humorous anecdote, Randi discussed that when a college graduate receives a PhD from the dean, the parchment appears to contain a chemical agent that goes straight to the graduate's brain and destroys his or her ability to utter statements such as "I was wrong" and "I don't know." Then Randi discussed the PhDs at Lawrence Livermore Labs who were convinced that someone they met had the ability to make a matchbox stand on his arm without any trickery – and then Randi demonstrated the trick for the audience at SMU. Randi explained that he even directed the professors to an old book of magic tricks by Martin Gardner where the matchbox trick is taught – and never heard from them again.

Alternative medicine wasn't spared, either. Randi discussed how Therapeutic Touch (TT) is still being taught to nurse practitioners and even used by some nurses during surgery – despite the fact that Emily Rosa, a girl still in elementary school at the time, conducted a famous experiment that effectively debunked the claimed ability of TT practitioners to sense human energy fields. The experiment was published in *JAMA*, which provoked a heated controversy over TT and got *JAMA*'s editor fired because Emily wasn't an "academic figure." In addition, Randi covered the basics of homeopathy and its use of ultramolecular doses as alleged treatments for illness. One popular homeopathic remedy, Calms Forte, is diluted so heavily that one would need to consume 16 swimming pools filled with Calms Forte pills just to get one molecule of the active ingredient – which happens to be caffeine. Randi explained that he once swallowed two entire bottles of Calms Forte, far in excess of the recommended dosage, and didn't feel a bit sleepy afterwards.

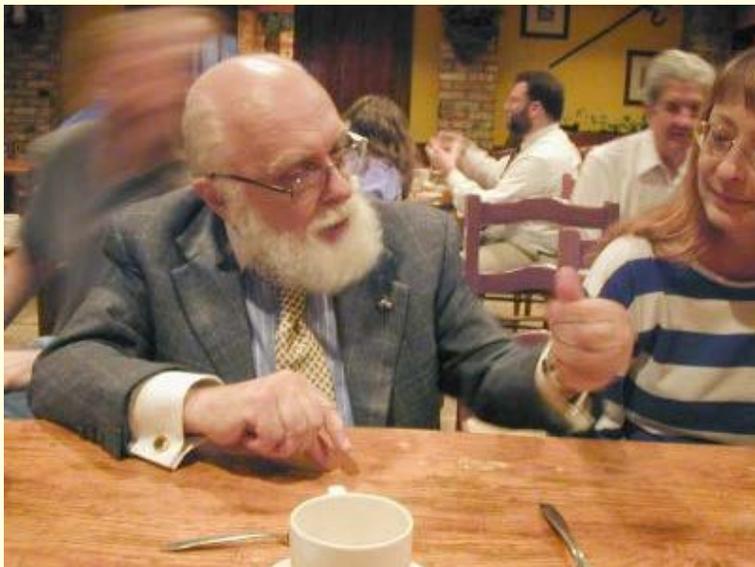
In keeping with the subject of how people are fooled and how they fool themselves, Randi also detailed some of his encounters with faith healers and psychics. His investigation of evangelist Peter Popoff, who claimed to receive messages from God about his followers at healing rallies across America, revealed that the street addresses and names he recited were coming not from God, but from Popoff's wife, who read the information off of prayer request cards from a remote unit and transmitted the messages to a wireless receiver that Popoff wore in his ear. As for psychic medium John Edward, he was caught making 26 guesses in 50 seconds to one person about his relatives. Only three of the guesses were correct – and then only due to personal information that the audience member consciously or unconsciously fed to John Edward. Don't look for this on an episode of *Crossing Over* with John Edward anytime soon.

The James Randi Educational Foundation still has a \$1,000,000 prize just waiting to be claimed by anyone who can reliably demonstrate supernatural or paranormal phenomena. Although many have tried to claim the prize, nobody has succeeded as of yet. Besides, Randi – who has been given the rare privilege of handling a moon rock by NASA – asserts that humanity should spend more time pursuing real science instead of dubious supernatural phenomena. In a poignant remembrance of his friend, the late Carl Sagan, Randi ended his lecture by reiterating Sagan's revelation that "we are made of starstuff," a reference to the fact that the elements that humans are made of were (and still are) forged in the cores of massive stars that eventually explode. Randi's mind appears to be made up: "We've got a great future ahead of us if we don't listen to the fakers...I'm going to the stars. Who wants to come with me?"

After a short Q&A session, Randi signed autographs for audience members and then retired to a nearby La Madeleine with a group of folks from NTS and NTCOF. We had a wonderful time chatting with Randi (and watching him perform another trick with assistance from Ginny Barnett) on topics ranging from faith healers to Arthur C. Clarke novels and almost everything in between.



**Ginny and Randi. Following Randi's talk at SMU, we all got very cozy at a nearby restaurant.
Photo by John Blanton**



**Watch the hands! At the table forks, spoons, and napkins disappeared, then turned up in surprising places
Photo by John Blanton**

The North Texas Skeptics extend their thanks to Paige Santini and the Collegium da Vinci at SMU for their support and some free posters, to the folks at the Owens Art Center and La Madeleine for their hospitality, and – last but certainly not least – to James Randi for spending a little time with his friends in the Lone Star State. We hope to see you again soon, James!

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What's new

By Robert Park [Robert Park publishes the *What's New* column at <http://www.aps.org/WN/>. Following are some clippings of interest.]

NASA wager: Pascal is alive and well and living in Huntsville.

Research managers at Marshall Space Flight Center still dream of the payoff if the Podkletnov gravity shield worked. Marshall scientists who are willing to talk, give it no chance at all.

Anti-gravity: was this the lightweight story of the year?

The Eastside Journal in Bellevue, WA, quotes a Boeing spokesman as saying the company is not funding any anti-gravity research (WN 2 Aug 02), nor is it attempting to duplicate Podkletnov's results. HA! Nick Cook warned us they would say that. He would say it's just disinformation, part of the massive government cover-up.

Entropy: The second law of thermodynamics still holds.

Claims that the Second Law of Thermodynamics has been violated are often found in fringe journals. This one is in *Physical Review Letters* <http://link.aps.org/abstract/PRL/v89/e050601>. The title: "Experimental Demonstration of Violations of the Second Law of Thermodynamics in Small Systems and Short Timescales," says it all. The authors discovered that when statistical laws are applied to systems that aren't statistically significant, they don't work. I experienced this myself. As a boy I once batted 1,000 for an entire day. Ted Williams batted only 406, and for that he has to hang upside down in liquid nitrogen until science figures out how to revive him. The statistics aren't promising.

Misconduct: Inquiry at Bell Labs is broadened.

The scope of the investigation into possible data fabrication has expanded to include four papers dealing with superconductivity. As with the dozen or so papers that initiated the inquiry, involving the use of organic molecules in microelectronics, the lead author on the novel superconductivity papers was Jan Hendrik Schon. This is a trip into unfamiliar territory for physicists, who have seen few cases of outright fabrication. However, the Council of the American Physical Society has issued formal statements dealing not only with fabrication and plagiarism, but with far more prevalent forms of misconduct, such as automatic co-authorship of someone who has made no substantive contribution to the work: Integrity in Physics <http://www.aps.org/statements/87.1.html> Professional Conduct <http://www.aps.org/statements/91.8.html>

Misconduct: Maybe the disease is being spread by mosquitoes.

Following a year-long internal investigation, Lawrence Berkeley National Laboratory has fired a physicist, Victor Ninov, for fabricating data in the 1999 "discovery" of elements 118 and 116 and formally retracted the *Physical Review Letter* that announced the discovery (V. Ninov et al. PRL 83, 1104; 1999). The physics community was already in shock over the investigation of Jan Schoen at Bell Labs, who had seemed to be a rising star, for allegedly fabricating results (WN 24 May 02). In both cases, questions are now being raised about other work (WN 24 May 02).

This raises serious questions for the physics community and the APS in particular. If instances of misconduct now turn up in other work published by the two, the boast that "the system worked" won't fly. The responsibility of coauthors also needs to be clarified. While Ninov and Schoen were first authors on the papers in question, they had as many as 15 coauthors. Does being an "et al." mean you have certified a paper's validity?

Misconduct: Shoen investigation committee finds fabrication.

A committee appointed by Bell Labs to investigate allegations of falsified data in papers on which Jan Hendrik Shoen was the lead author, confirmed the worst fears of the physics community. The Committee, chaired by Malcolm Beasley, concluded it was "a clear, unambiguous case of scientific misconduct." The panel cleared Shoen's coauthors of scientific misconduct, but concluded, that "by virtue of their coauthorship, they implicitly endorsed the validity of the work. There is no implication here of scientific misconduct; the issue is one of professional responsibility." The panel noted that this difficult issue has not been carefully considered by the scientific community. It will certainly be considered now. Victor Ninov had as many as 15 coauthors in his fabricated work on super-heavy elements (WN 19 Jul 02).

The question: why would a bright, respected scientist do this?

In a prepared statement, Schoen said he believes his discoveries are real. He is not the first scientist to attempt to anticipate what Nature will do. Nor is he the first to go into denial if the experiment shows that Nature has something else in mind.

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Skeptical Ink

By Prasad Golla and John Blanton

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A PAGE FROM THE SKEPTICAL BOOK OF WORLD RECORDS

On July 3rd, 1938, Fred Knox first tested his anti-gravity shield from atop the Empire State building.



Harvey Skeedadle has sold 498 copies of his free energy generator.



Madame Floss has predicted the outcomes of 900 horse races. None of them came true.

Max Snuff made 114 UFO sightings while he was in the sixth grade at Tucker Middle school. He was 47 at the time.



William B. Thimble is the only person who was not born under one of the astrological signs. Nothing has ever happened to him.



Phone Psychic Charlotte Screed once kept a client on line for 23 hours straight. She failed to notice he had died.

Grolla & Blanton 10/01/2002

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