

The REALL News

The official newsletter of the Rational Examination Association of Lincoln Land

"It's a very dangerous thing to believe in nonsense." — James Randi

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Why Did We Start Calling Them Grays?

by Martin S. Kottmeyer

The short and easy answer is surely, "Because Paul Bennewitz did." Throughout the early decades of the saucer mythos, we had no term for bald, big-headed aliens. We knew they were the most common form as early as the mid-1960s, but there was no label. The term "Grays" became noticeable around 1990 and it is now routine to use it. When I became interested in doing a history of big-headed aliens I did some searching on the Web and the earliest document I found using the term "Grays" was Paul Bennewitz's "Project Beta" which some evidence suggests was written circa 1983. The document circulated as part of the EBE-lore around the Dulce Base. It had wide currency in the latter half of the 1980s. Other Dulce Base proponents parroted the phrase in subsequent writings and it soon broke out of that circle and found its way into abduction lore. Nobody I asked has been able to think of any earlier use of the phrase so I conclude that whether or not Bennewitz was the first to use the phrase, he was certainly the person responsible for its spread throughout UFO culture.

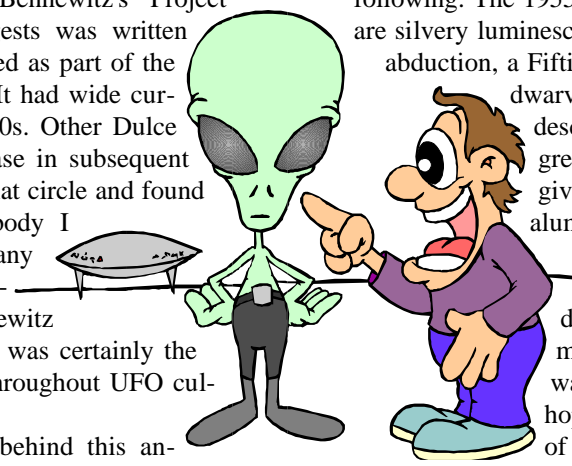
The harder question lurking behind this answer is why the expression came into being. Was it because bald and big-headed aliens are a gray-skinned race in actual fact? If so, it is a fact that initially escaped notice. In the mid 1960s, Jacques Vallee and, subsequently, Jim & Coral Lorenzen observed that bald, large-headed aliens were being seen repeatedly in UFO occupant reports. The Lorenzens observed there are differing descriptions concerning hair, eyes, and skin but brush it off as "of little importance." (Jim & Coral Lorenzen *Flying Saucer Occupants* Signet, 1967, p. 204.) In 1976, James McCampbell grouped together some 119 humanoid cases he variously terms "diminutives," "pygmies," or "dwarves." Within that group he found 23 forming a composite described as "thin, human-like creatures," about three-feet tall, with large bald heads, large round eyes, slit mouth, nostrils rather than a nose. Oddly, against current type, he said the "ears are large and pointed." There is no real doubt he is referring to the same type entity we now call "Grays." McCampbell does not dodge the skin issue. "Several colors of skin were

mentioned, but 'green' only once" The last comment was an obvious retort against the journalistic put-down 'little green men.' (James M. McCampbell *Ufology* Celestial Arts, 1976, p. 117.) The puzzle naturally is how McCampbell could miss the generality we now see if Grays were truly gray.

A reading of early case literature will confirm McCampbell's impression. Though skin color is rarely mentioned, where we do find it, we find no consistency. Of the firmer examples of the form, the examples that stand out include the following. The 1955 Kelly-Hopkinsville pointy eared creatures are silvery luminescent. The big-headed being in the Salzburg abduction, a Fifties tale, is white skinned. The tiny striding dwarves of the 1964 Johannis reminiscence are described, perhaps whimsically, as "earthy green." Barney Hill's description of the aliens, given to David Baker, has them as yellowish, aluminum gray. One troubling problem of other early cases is not knowing whether the absence of skin color in descriptions means they were close to human norms, lighting was poor, or the detail was just simply forgotten. While we might hope bright colors would gain attention, what of gray? Would it still be exotic enough to expect the witness to comment on its presence, or might its neutral character escape mention?

My bet is that Bennewitz got the idea that big-headed aliens were gray because of an article that appeared in the *National Enquirer* on March 6, 1979. The article authored by Glenn Singer proclaimed "Similar Descriptions of UFO Humanoids Come From All Over the World" The relevant text reads:

...Another Project VISIT member, Dr. Richard Niemtow, has developed a profile of what the humanlike space beings ("Grays" continued on page 5)



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Purpose

The Rational Examination Association of Lincoln Land is a non-profit, tax-exempt 501(c)(3) educational and scientific organization. It is dedicated to the development of rational thinking and the application of the scientific method toward claims of the paranormal and fringe-science phenomena.

REALL shall conduct research, convene meetings, publish a newsletter, and disseminate information to its members and the general public. Its primary geographic region of coverage is central Illinois.

REALL subscribes to the premise that the scientific method is the most reliable and self-correcting system for obtaining knowledge about the world and universe. REALL does not reject paranormal claims on *a priori* grounds, but rather is committed to objective, though critical, inquiry.

The REALL News is its official newsletter.

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From the Editor

Wally Hartshorn

Weather forecasting has to be one of the most frustrating and mystifying of all professions for those who practice it. (The most frustrating and mystifying profession would have to be computer technical support!) I was married just a few days ago, and since it was to be an outdoor ceremony, with no alternate rain site, I paid extremely close attention to the weather forecasts for several days.

The first forecast I saw was worrisome – “possible scattered showers.” How possible? How scattered? Scattered where? As the day drew closer, I was able to find one forecast for “cloudy and cool” (great!), one for “scattered showers” (hmm...), one for “rain” (bummer), and one for “thunderstorms” (yikes!). Twenty-four hours before the big event, I found a forecast that predicted showers and 65 degrees in the northwest part of town, possible showers and 80 degrees in the southeast part – a 15 degree temperature difference!

Then I found a web site that would provide hour-by-hour forecasts for each of the next 36 hours. That showed rain for three hours before the start of the ceremony, as well as rain during the hour of the ceremony itself, with 100% cloud cover and temperatures near 80 degrees.

Faced with the inevitable verdict of science, we bought a

(“Editor” continued on page 3)

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From the Chairman

David Bloomberg

First let me begin with a big **congratulations** to Editor Wally and his new wife, Dawn. I encourage all of our single members to get married so we can increase the size of REALL! Or, heck, just bring friends to the meetings instead. We're not picky.

And speaking of meetings, last month's video with the two biographers of Carl Sagan was pretty interesting. One concentrated on how skeptics reacted to revelations of Sagan's marijuana use (I wonder if more people would have come to a meeting titled, "Marijuana and Skepticism"); the other mostly discussed his efforts in the Search for Extraterrestrial Life (SETI). After the video we had a discussion that also dealt with SETI.

And so with that theme, we're moving into October's meeting.

On Tuesday, October 3, at 7:00 in the Lincoln Library, we'll have another Skeptics Society video. This one is "Sharing the Universe: Perspectives on Making Contact with Extraterrestrial Life," with Dr. Seth Shostak of the SETI Insti-

tute. Shostak is an astronomer and public programs scientist for the SETI Institute, which is the largest organization on Earth currently searching for radio signals from possible alien life. He discusses the latest science behind SETI, including the new optical SETI and SETI@home, which uses your home computer! (Well, at least it's using mine already.) Also discussed are the questions of whether we're alone in the universe or if it's teaming with life. If extraterrestrial life is out there, why haven't they contacted us yet?

If you liked the Sagan meeting, you'll love this one. And if you missed it in September, now's your chance to catch up on SETI.

On a completely different note, I recently got a new (used) car and with it, a new license plate. I was happy to find that SKEPTC 1 had not yet been taken, so I got it. If you see a car with that plate on it, give me a wave! (Don't honk – I hate that; it always scares the bejeezus out of me.)

If I don't see you on the streets of Springfield, I'll see you October 3rd! 🍀

("Editor" continued from page 2)

dozen golf umbrellas to shelter ourselves and those wedding guests unfortunate enough to be without protection.

When the day actually arrived, however, it was a gorgeous day, with partly sunny skies, temperatures in the middle 70s, and not the smallest hint of rain.

Some might say that this demonstrates that weather prediction is still an inexact science. However, my new wife and I are pretty sure that buying a dozen golf umbrellas somehow had something to do with changing the weather. We'll be conducting further experiments over the coming months (buying a snowblower to drive away the snow, leaving the windows down on the car to attract rain, etc), and will be submitting our results to a peer reviewed journal next summer.

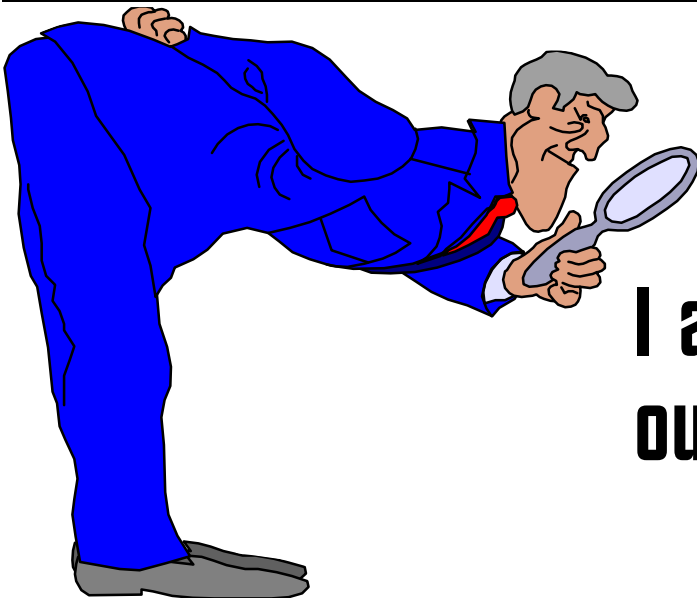
Or maybe we'll just enjoy being newlyweds.

In this Issue

Martin Kottmeyer returns with an interesting question: Why did we start calling them "Grays"? It's a question I hadn't really considered before, and Martin answers it well as usual.

We also have a couple of reprinted articles. One is a tongue-in-cheek article about "alternative engineering," which comes to us from the New England Skeptic Society. The other is a book review by our own David Bloomberg that originally appeared in the *State Journal-Register's* books section.

Lastly, David has numerous brief reviews and ratings of books that you will find of interest. 🍀



**I am not trying to
prove that I am right...
I am only trying to find
out whether.**

— Bertolt Brecht

Alternative Engineering

by Steven Novella, M.D.

Are there real alternatives to scientific medicine? Are such alternatives by definition anti-scientific? What if our society were gripped with fascination in alternatives to other applied sciences?

A new phenomenon is sweeping the country, gaining the attention of both consumers and manufacturers alike. Increasingly disenchanted with the cold metallic world our modern technology is producing, people are beginning to take a close look at more natural alternatives. Collectively called Alternative Engineering (AE), a host of new and old methods are gaining scientific respectability.

Alec Waterston is one such self-styled alternative engineer. He has no degree or formal training in engineering, which he explains is an advantage: "I am not limited in my thinking by mathematics or logic. I do not have to pay homage to the likes of Newton or other western male pedagogues. My complete lack of training frees me to consider unique and innovative solutions to engineering problems, unfettered by the annoying constraints of 'reality.'"

Alec's latest project is a design for a 1,200 foot non-suspension bridge. He claims the bridge will be able to span this distance without pylons or overhead suspension, and will be supported only by the ancient art of Feng Shui. "This wisdom, which is thousands of years old, is the art of channeling energy through design and form. This energy can be used to support a 1,200 foot bridge, or even larger structures." City planners are intrigued by these designs, as such bridges will cost less than half of those built by conventional designs.

Alec has his critics, however. Anthony Trellis, a professor of engineering at State University, claims that Alec's designs run contrary to basic principles of physics and material science. An exasperated Trellis commented, "A bridge built based upon Waterston's designs simply cannot stand. It would be unsafe in the extreme."

Alec is not perturbed by such criticism, however. "Of course professor Trellis does not like my designs, because they challenge his precious status quo and turn his world upside-down. The protectionism of the old guard, however, is starting to crumble, like one of their obsolete buildings."

Skeptics have suggested that before we spend millions of taxpayer dollars on such projects, and subject American motorists to the unknown risks of driving over a Waterston bridge, Waterston's basic principles should at least be tested to see if they work. This is especially true since Waterston's designs seem to run contrary to conventional wisdom.

"I'm too busy building bridges to jump through some skeptic's hoops. They will never be satisfied, anyway. The Ameri-

can motorists should be free to decide for themselves if they wish to drive over one of my bridges. I respect their intelligence and ability to make smart decisions for themselves. They don't need to be told by some bureaucrat, or professor in an ivory tower, which bridges are safe and which are not," responds Waterston.

Naysayers, like Professor Trellis, however, are quick to disagree. They argue that individuals should not have to be scientists or engineers in order to drive safely over our bridges. Regulations are not designed to limit freedom, but to provide a basic level of safety and protection for the public. This attitude, however, is increasingly being dismissed as overly paternalistic and protective.

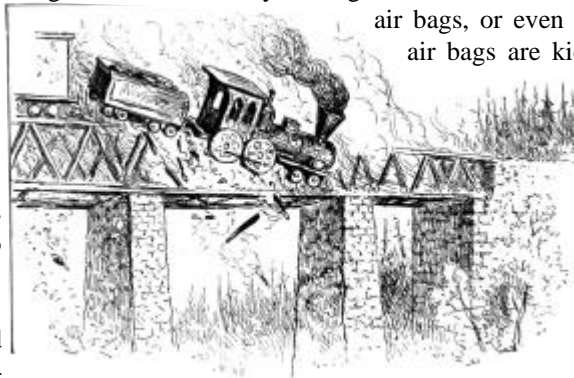
Civil engineers are not the only ones to rediscover the ancient wisdom of pre-technological societies. The auto industry is also catching on. Natural Designs is a new car company based in Kansas. President and CEO, Andy Wiere, received a degree in engineering from Harvard 20 years ago, but then was fired from his teaching position after excessive drug use nearly destroyed his life. Now he has returned with a new company and a new philosophy, which many consumers find appealing.

"What I am advocating is a mixture of the best of modern scientific engineering with the older anti-scientific and superstitious ideas of earlier times," explains Wiere. "I call this approach Integrative Engineering."

What has this new approach created? Well, Natural Design's newest model sedan, the Millennium 2000, does not use air bags, or even seatbelts. "Seatbelts are dangerous, and air bags are kid killers," complains Wiere. So he has come up with something better. The interior of the Millennium 2000 is coated with a patented psychoactive material, called Natural Safe. "All a driver or passenger has to do is think safe thoughts, and this miraculous material will do the rest. In a crash, the material will gently repel any safe thinking person in the vehicle, leaving them free from injury."

Consumers are convinced. Not to be outdone, GM and Ford both have started putting Natural Safe coatings in their cars. Amy Zinger, of Arkansas, survived a 40 MPH head-on collision in one such vehicle. "I was wearing my seatbelt, and the air bag did deploy, but I know it was the Natural Safe that saved my life." Motivated by such testimonials, more and more consumers are insisting on only buying cars treated with Natural Safe.

One problem faced by Natural Designs, however, is that outdated safety regulations, such as those requiring seatbelts, do not account for these new integrative designs. Recently, however, this has all changed. Senator Hakem, from Natural Design's home state of Kansas, has pushed through legislation that will exempt manufacturers that use Alternative or Integra-



tive principles from regulations designed to protect consumers. This was hailed as a great step forward.

Still, hard headed skeptics will not go away. "All I'm asking for is a simple crash test," exclaimed noted skeptic, Perry DeAngelis. "If the stuff really works, heck, I'll buy it." Skeptics have been increasingly calling for such tests, arguing that testing should take place prior to implementation, especially when human lives are at stake.

But Wiere explains why such tests won't work. "Crash dummies are not people. The psychoactive material will therefore not respond to them. The fact is, these innovative designs cannot be subjected to the same testing and principles as traditional engineering. But consumers who drive our cars feel safer – now how can you argue with that?"

Still, DeAngelis points to recent studies which seem to indicate that drivers of Wiere's cars are twice as likely to die in a crash as are drivers of conventional vehicles. But Wiere merely scoffs "What are you going to believe: numbers on a

piece of paper, or people?"

Despite the skeptics, Alternative Engineering seems to be here to stay. Wiere has just been named the chairman of the new Department of Integrative Engineering at State University, where he hopes to train the next generation of engineers in his philosophy. Meanwhile, Senator Hakem has pushed through Congress another bill that calls for the creation of an Office of Alternative Engineering. This new office will divert money being wasted on maintaining this country's infrastructure, and use it to study and promote alternative principles in engineering.

Steven Novella is an Assistant Professor of Neurology at Yale University School of Medicine, President and Editor for the New England Skeptical Society, and an Associate Editor of the Scientific Review of Alternative Medicine. This article first appeared in the New England Journal of Skepticism, Fall 1999, and is reprinted with permission. ♡

("Grays" continued from page 1)

look like from the characteristics most frequently mentioned by abduction victims. 'He's got no nose, his eyes and ears are slanted, his mouth is small, and he's got no teeth,' the Galveston, Tex., physician reported. 'He's four feet tall, hairless, with a lot of gray coloring. His arms are a little long - like a monkey's. His head is a little larger than a human being who is that tall. He's emotionless and quite possibly communicates almost entirely by telepathy.' (Emphasis added)

The text indicated this profile was developed out of 130 abduction reports collected for John Schuessler's Project VISIT. The results are hyped with the claim – "amazed experts believe it would be impossible for the victims to have conspired together or to have independently dreamed up such similar accounts." Cautious readers will note the phrasing of the results do not demand the conclusion that short, large-headed, hairless are generally gray. It speaks of these traits as the most common among 130 accounts, not that these traits are strongly correlated.

To illustrate the fallacy, let's say you have a bluebird, a canary, a cardinal, and two elephants. Though the most frequent form is a bird and the most frequent color is gray, you nevertheless have no gray birds. The *Enquirer* article naturally gives no details of the study. I'm unsure if the study was ever published in full anywhere. I've seen other items about Project VISIT and don't doubt such a study was done, but with so little known about the methods employed it is hazardous to put much faith in it.

It is possible to reconstruct the probable data used by Project VISIT by using Thomas E. Bullard's much better known and fully explicated study of 270 abduction cases up to 1982. Within this population, 83 cases mention skin color. Bullard cites 25 cases that use the word gray to describe the skin color of the aliens. (*UFO Abductions: The Measure of a Mystery* FFUFOR, 1987, p. 248) There are other cases that come close with words like ashen gray, gray-white, blue-gray, and smokey, but I'll take a purist approach and focus only this 25. Bullard's tally parallels the earlier study. Gray is the most common color

reported. Scrutinizing the earliest of these cases reveals however they don't involve bald, large-headed humanoids. The Peruvian C.A.V. case, The 1973 Pascagoula case, and the 1975 Sandra Larson case involves space mummies. The 1971 Hodges & Rodriguez case involve tall beings with yellow eyes and webbed hands that work for a big bodiless brain.

All the other gray-skinned cases in the list occur in or after 1975 or were explored by hypnotic regression subsequent to 1975. A pair of important developments dominated that year. It was the year *The UFO Incident* aired, the television adaptation of the Hill case. It was also the year of the Travis Walton and Moody cases, both of which gained substantial notoriety and both of which featured big-brained bald humanoids. The Moody humanoids had whitish-gray skins.

Five of the post-1975 cases involve one individual – Betty Andreasson. Her aliens have the proper form, but too precisely follow the aliens in *The UFO Incident* to admit doubt of the film's influence on her. The 1976 Casey County triple abduction includes a description by Elaine Thomas of small humanoids, but there is no large head mentioned. The Toni & Daryl regressions in 1977 involve beings 5'2" to 5'8" tall with no talk of big heads. Other cases in the list of 25 involve data gathered after March 1979 and could not have been used in the Project VISIT study. While the situation is not precisely analogous to our gray-bird illustration – we do have Moody and Andreasson with gray-skinned & large-headed humanoids – we are not seeing a very strong correlation between color and form. Large-headed humanoids may be common and gray-skinned aliens may be common, but the number of people who reported humanoids that are unambiguously gray-skinned and large-headed was close to zero at the time of the Project VISIT study.

This correlation grew stronger with time and of course nobody would dispute the correlation is strong in data limited to the Nineties. But would that be true if Bennewitz had not started calling them Grays in the Eighties?

[Martin Kottmeyer lives in Carlyle, Illinois and is a frequent contributor to The REALL News. He has also written articles for Magonia, UFO Brigantia, and The Wild Places.] ♡

Stopping the Voodoo Is What He Does So Well

by David Bloomberg

There are many examples of people claiming to make great scientific breakthroughs, only to have reality show otherwise. These range from cold fusion and perpetual motion machines to ESP and homeopathy. But they all have one thing in common, says Robert Park. They are all voodoo science.

Park, a professor of physics who writes a weekly electronic bulletin, *What's New*, and directs the Washington, D.C., office of the American Physical Society, has put together a number of his encounters with this type of activity in a new book, *Voodoo Science: The Road from Foolishness to Fraud* (Oxford University Press, \$25).

Having worked as a scientist and science communicator for so long, Park makes his main point quickly in the Preface: "Of the major problems confronting society ... there are few that can be sensibly addressed without input from science. As I sought to make the case for science, however, I kept bumping up against scientific ideas and claims that are totally, indisputably, extravagantly, wrong, but which nevertheless attract a large enough following of passionate, and sometimes powerful, proponents."

He realized that some people decide on scientific beliefs by how they would like the world to be, rather than on how it actually is. Alas, that's not how science works.

Many of the beliefs and claims he writes about were, at least originally, seriously believed by their proponents. Some, however, are simply frauds perpetrated against a gullible public. He says it's hard to tell where to draw the line – especially since some start out as true believers even if they eventually turn to fraud. This is the reason for his all-encompassing term that doubles as the book's title.

Part of the problem, he says, is the way the media often work. In many cases of "controversy," the media pit two talking heads against each other, quoting one scientist and then the other. The impression this may give is that there is an equal division of opinion. In too many of these cases, though, one scientist represents the opinions of 99% while the other represents the fringe 1% (or less).

Park notes that real science is "argued in the halls of research institutions, presented at scientific meetings, published in scholarly journals." Voodoo science, however, is often presented directly to the media, avoiding the crucial scientific process of review, debate, criticism, and testing.

In discussing voodoo science, Park also describes what real science is and how scientists must use it. Scientists must "expose new ideas and results to independent testing and replication" and "abandon or modify accepted facts or theories in the light of more complete or reliable experimental evidence." If they don't do these things, they are not doing their jobs as

scientists properly. Instead, they may go off into the path towards voodoo science.

As just one of many examples, Park discusses how a company managed to sucker a number of people into buying "Vitamin O." All sorts of claims were made for this wondrous nutritional supplement. It was described as "stabilized oxygen molecules in a solution of distilled water and sodium chloride." In less technical terms: salt water. The Federal Trade Commission eventually stepped in after the "scam" was exposed by others, including Park himself in several interviews. After this book went to press, the company settled with the FTC for \$375,000 in consumer redress. The product had been sold for about \$20 per two-ounce bottle, meaning that if they are reimbursing every customer (which may not be the case, as it is a negotiated settlement), they managed to sell almost 19,000 bottles of salt water to unsuspecting – and uncritical – consumers.

Another example has already brought a threatened lawsuit by one company named in his book. According to an article in *Nature*, BlackLight Power, a company that promotes what Park called "pure boloney" in an interview with that journal, sent Park a letter "requesting that [Park] stop making defamatory comments in the press about the company and its president." Park responded, "The issue is whether anybody believes it, and whether people who don't believe it have a right to say they don't believe it."

Well, Park says it. He also explains why the claims are scientifically ridiculous – the company claims to harness energy from hydrogen that is pushed below its normal state into a nonexistent particle they call a "hydrino." The problem, which Park explains, is that there is absolutely no evidence that such a thing exists, and loads of evidence that it doesn't. No news yet on whether the company will be following through and suing him, thus meaning they will have to back up their claims in court.

Backing up claims is the main area where voodoo science proponents come up short. Sometimes, it's somewhat difficult to investigate such things, as with the original cold fusion claims. Other times, it's fairly simple, as with Joe Newman, a free energy machine claimant who goes around the country saying, "Put one in your home, and you'll never have to pay another electric bill." Park notes that Newman moved to a new area and says, "Back in Lucedale, everybody knew that Joe Newman's house was connected to Mississippi Power Corporation lines."

Indeed, he spends a great deal of time talking about Mr. Newman and other free energy proponents, including cold fusion. These folks pop up repeatedly throughout his discussions as examples of voodoo science and the public's willingness to

(*"Voodoo Science" continued on page 7*)



Book Recommendations

by David Bloomberg

Time once again for some short book reviews. As a reminder, the scale goes from 0 to 5 stars.

Case Closed: Lee Harvey Oswald and the Assassination of JFK, by Gerald Posner (DoubleDay Books, \$17.95, paperback): Posner put his investigation skill to work on the John F. Kennedy assassination conspiracies in this book, uncovering information that stabs at the very heart of conspiracy-minded claims. He shows, for example, that although several people told corresponding stories about seeing Oswald at a certain place and time to a Congressional committee, they had originally told very different stories – until they were coached and had their stories molded. He even uncovers evidence that the very same committee overlooked and uses new forensic methods that were unavailable at the time to re-review the evidence and show that Oswald was, indeed, a lone gunman. ★★★★★

Killing the Dream : James Earl Ray and the Assassination of Martin Luther King, Jr., by Gerald Posner (Harvest Books, \$15, paperback): Posner went to work on the MLK assassination here. The results are the same – no conspiracy. He obviously spent a great deal of time going through the evidence, the testimony in various trials, and even digs up some new information. Along the way, he shows how all the claims of conspiracy are easily shot down by the facts. Unfortunately, the book, and those facts, seem to be of little interest to the King family and the many others who would rather continue to believe the debunked claims of various proven liars. The only flaw, if it can be called that, I found here was that he often doesn't take the extra step of making sure certain claims are quite dead. He puts forth all the evidence and seemingly expects the readers to figure it out. This is all well and good, but I would have liked it better if he had gone that little bit further. ★★★★★

The Triumph of Evolution and the Failure of Creationism, by Niles Eldredge (W.H. Freeman, \$24.95): Eldredge, one of

the original proponents of “punctuated equilibrium” along with Stephen Jay Gould, launches an all-out assault on the anti-science of creationism. He tackles their methods, results, and poor science, showing how all of their claims are based solely in religious belief, not in the science they so often claim. Among the topics he hits is the microevolution/macroevolution claim we so often see (creationists admitting that “microevolution” – evolution within a species – takes place, but refusing to admit that it goes the extra step to explain speciation as well); he shows how they are not at all two different things, but are in fact the very same. A must-read for anybody who ever talks to creationists. ★★★★★

Dreaming Souls: Sleep, Dreams, and the Evolution of the Conscious Mind, by Owen Flanagan Oxford University Press, \$25): Flanagan puts forth his theory that dreams did not evolve, but instead came along for the ride. He says they simply exist because thinking while awake is important and sleeping is important, and thus some thinking while sleeping occurs, even though it has no evolutionary value (or harm). It's an interesting idea, and he shoots down claims of dreams meaning anything in terms of prophecy or psychology. I'm not entirely sure whether or not I agree, but I couldn't find any faults with his reasoning. It is, however, a little dry and I found my thoughts beginning to wander occasionally. ★★★

Virus: The Co-Discoverer of HIV Tracks Its Rampage and Charts the Future, by Luc Montagnier (W.W. Norton & Co., \$24.95): Most of this book is about the discovery of HIV, the science behind AIDS, treatment, etc. However, there are several parts that make it worthwhile mentioning here. The main reason I bring it up is because of his section on Peter Duesberg, who denies that HIV causes AIDS. Montagnier quickly and easily dispatches with Duesberg's objections and explains how scientists know that HIV is indeed the cause for AIDS. I'm saving it for the next time somebody publishes a pro-Duesberg article. ★★★★★☹

(“Voodoo Science” continued from page 6)
buy into it.

The bad science of cold fusion set off a chain reaction in the press and government. Many in the press covered the story uncritically, as if it were the solution to all of our energy problems – which it probably would have been, if only it had been true. Government practically threw money at it. Literally millions were wasted.

But that isn't even close to the largest wastes of money caused by voodoo science. Park discusses the scare about power lines causing cancer, pointing out that the evidence never supported the fear-inducing claims. He concludes one chapter by noting, “the total cost of the power-line scare, including relocating power lines and loss of property values, was estimated by the White House Science Office to be in excess of \$25 billion.”

This leads him into a discussion of junk science in the

courtroom, where he details how the courts treat science and how this has changed for the better in the past few years.

Park concludes by discussing how some scientists eventually move from foolishness to fraud. He explains that scientists who hold an opinion more dear than the proper methods and results will come to a fork in the road. They can either admit their mistakes, which can be difficult if they have been very public about their claims, or they can move into denial and forever search for the experiment that will get them the “right” results, all the while making excuses about why they haven't gotten there yet. This, he says, is “the road to fraud.”

Since some will continue to take this road, others must stand up to point it out. Park believes this is a scientist's obligation, and he, for one, will continue to do so.

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Our Next Meeting

Sharing the Universe: Perspectives on
Making Contact with Extraterrestrial Life
By Dr. Seth Shostak of the SETI Institute



In this Skeptics Society video, Shostak, an astronomer and public programs scientist for the SETI Institute, discusses the latest science behind SETI, including the new optical SETI and SETI@home. Also discussed are the questions of whether we're alone in the universe, and if it's teaming with extraterrestrial life, why haven't they contacted us yet?

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