

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

Volume 8, Number 1

January 2000

Fighting Ignorance with The Straight Dope

by David Bloomberg

Some of you may have heard of *The Straight Dope* by Cecil Adams. Some of you may not have. It is a question-and-answer column that runs mostly in alternative independent newspapers across the country, and originated in Chicago with the *Chicago Reader*. It does not run here in Springfield, but you can still read it on the web at www.straightdope.com and buy his collections in book form at pretty much any book store.

This is not your run-of-the-mill Q&A column, though. Cecil Adams tackles topics that are not found in any other place (hence its position in alternative papers), and tends to use biting wit where appropriate. Cecil is also quite a skeptic! *The Straight Dope's* motto is "Fighting Ignorance Since 1973 (It's taking longer than we thought)." In fact, his latest book, *Triumph of the Straight Dope*, is one of the Committee for Scientific Investigation of Claims of the Paranormal's "Media Picks" on their web page right now.

I've been reading *Straight Dope* books for years, and eventually found it on the web. As a result of his popularity, Cecil gets a lot of mail. In addition to his weekly columns, he has the Straight Dope Science Advisory Board to help by answering some other questions out of his mailbag, which are then posted to the web page. A few months ago, as if I didn't already have enough to do, I joined the Straight Dope Science Advisory Board.

Since then, I've written a number of mailbag answers, dealing with a wide variety of topics. However, because of my work with REALL, I tend to grab the questions about pseudoscience and the paranormal. To date, I've written four answers in these areas, and we at *The REALL News* are going to share them with you here. The first deals with a common shot taken at evolution by creationists. The second is about *The Celestine Prophecy* (fairly timely, since the author came out with a new book recently). The third is more pseudohistory than pseudoscience, but I think it's still of interest. The fourth deals some with silicone breast implants. I should give credit where credit is due and note that Ed Zotti, Cecil's editor, did some editing on these answers.

Dear Straight Dope:

I am not a believer in evolution, but I ran across this expression, and wondered why it isn't used in arguments against

evolution? The expression is: If man evolved from monkeys and apes, why do we still have monkeys and apes? — John Steward

Why isn't that argument used against evolution? Well, it is – it's just used incorrectly. Let's start with a quote from the recently re-released publication, *Science and Creationism: A View from the National Academy of Sciences* (Second Edition). In the section on "Human Evolution," the publication notes, "today there is no significant scientific doubt about the close evolutionary relationships among all primates, including humans."

Evolution does not work as a simple find-and-replace function. Have you ever seen the evolutionary "tree" diagrams in a science book? Those trees show how different species branch off and go in different evolutionary directions. That doesn't necessarily

mean everything else dies. As the National Academy of Sciences document notes, archaeological finds "reveal a well-branched tree, parts of which trace a general evolutionary sequence leading from ape-like forms to modern humans."

The NAS publication actually answers your question directly in its Appendix of Frequently Asked Questions. It says:

"Humans did not evolve from modern apes, but humans and modern apes shared a common ancestor, a species that no longer exists. Because we share a recent common ancestor with chimpanzees and gorillas, we have many anatomical, genetic, biochemical, and even behavioral similarities with these African great apes. We are less similar to the Asian apes—orangutans and gibbons—and even less similar to monkeys, because we share common ancestors with these groups in the more distant past.

Evolution is a branching or splitting process in which populations split off from one another and gradually become

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Purpose

The Rational Examination Association of Lincoln Land is a non-profit 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.

Annual Membership Rates: Regular, \$20; student, \$15; family, \$30; patron, \$50 or more; subscription only, \$12.

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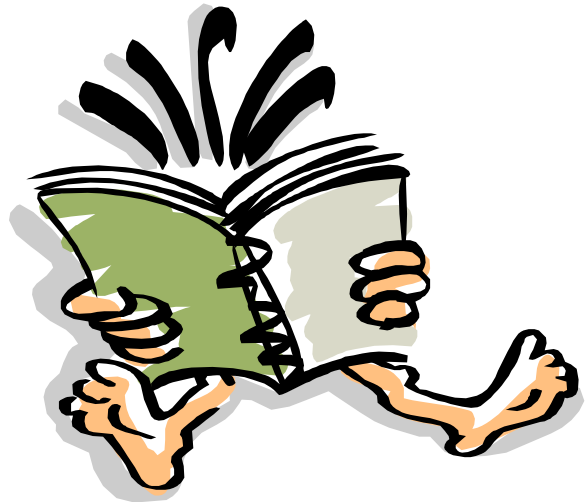
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Predictions

- More Weird Web Sites
- Book Reviews
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From the Chairman

Well, here we are in the year 2000. (Ok, we're not in 2000 yet as I write this, but you know what I mean.) At least we'll hear less about "the millennium" (unless the media finally figure out that they were wrong all along to call 2000 the new millennium, and decide to keep it going for another year). That said, what better to talk about at our next meeting than what did or didn't happen at the turn of the non-millennium?

So our January 4 meeting will feature a discussion, **Y2K and Millennial Madness: What Did and Didn't Happen**. This will not be a presentation with one person talking, but a discussion amongst the members. I think it will be fun. And there will even be **refreshments!** (You wouldn't believe how many times people ask about that.)

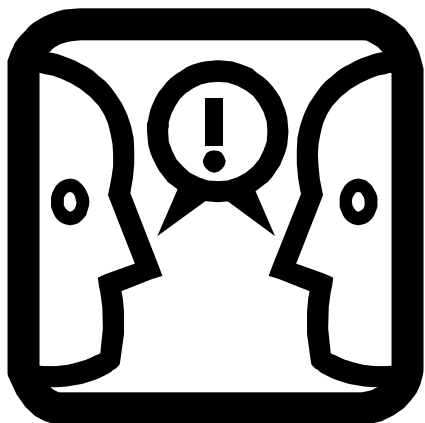
I'd like to thank our speakers from the December meeting, Rense Lange and Jim Houran (Jim wasn't mentioned in the pre-meeting stuff because we weren't sure if his schedule was going to work). I can't summarize the entire talk, which involved a bit of math and psychology, but I can tell you that pink poltergeists were involved, and it all had something to do with Editor Wally being brought to the front of the room to stand there and say "eep" repeatedly.

If you missed the meeting (and shame on you if you did), Rense and Jim have a book coming out later this year which deals with this topic, among others.

Membership Renewals

Just a reminder to everybody, since I have a little bit of space here: Lots of memberships expire in the January-March timeframe. Please remember to renew so you don't miss an issue or a meeting announcement. We've got some interesting stuff lined up (though we're always looking for more), including an excerpt from Michael Shermer's new book, *How We Believe*.

So please join us as we move from the nineties to the, um, zeroes, I guess. Presuming the world doesn't end, I'll see you January 4! ♡



From the Editor

Well, here we are in the year 2000. Oh wait. David already said that. Bummer. (eep) So what should I write about? I suppose I should write about what's in this issue.

There's not too much to say about it, other than that it's an all-David extravaganza! (eep) I've been spending quite a bit of time travelling to and from Colorado Springs recently to visit my girlfriend, which has sometimes made creating each issue a bit of a challenge time-wise. (eep) As the deadline for this month's issue approached, we realized that we had absolutely no articles in the queue awaiting publication!

Luckily, David had written several appropriate items for *The Straight Dope*, a popular column by Cecil Adams. (eep) After verifying that he retained the copyright on his writings, our dilemma for this month was solved!

Which leads us to the dilemma for future months....

Article Submission Deadlines for the Year 2000

You might have noticed that we tend to run articles from the same authors over and over again. Why do we do that? (eep) Because those are the people who keep writing articles for us. They're all very good, but perhaps you long for a bit more variety, no? Well then help us add some variety to the lineup in our eighth year of publication — write some articles! (eep) If just half of our members wrote just one article per year, you'd never see another article from David again! (Uh, sorry, David!)

To give us enough time to edit your article and put the newsletter together, we need to have it no later than two weeks before the meeting. (eep) Here's the schedule for this year:

<u>Issue</u>	<u>Deadline</u>	<u>Publication</u>	<u>Meeting</u>
February	Jan. 18	Jan. 25	Feb. 1
March	Feb. 22	Feb. 29	Mar. 7
April	Mar. 21	Mar. 28	Apr. 4
May	Apr. 18	Apr. 25	May 2
June	May 23	May 30	(June 6?)
July	June 20	June 27	(July 4?)
August	July 18	July 25	Aug. 1
September	Aug. 22	Aug. 29	Sept. 5
October	Sept. 19	Sept. 26	Oct. 3
November	Oct. 24	Oct. 31	Nov. 7
December	Nov. 21	Nov. 28	Dec. 5

Also, please keep in mind that this newsletter is only 8 pages long. Subtract 3 pages for standard items and that leaves only 5 pages for articles, so try to keep your submissions short — 2 or 3 pages in 10 point Times Roman (about 15K-20K of text). (eep) ♡

REALLity Check

by David Bloomberg

Believe it or not, we are *still* catching up from the overflow a couple months ago! I have a few newer things, and we should have room this month so let's see how far we get now.

Give The People What They Want – Who Cares If It Works?

The *Chicago Tribune* reported, in a front page story, that Rush-Prudential Health Plans, Chicago's third-largest health insurance company, was going to offer discount coverage on alternative medicine care (9/23). Why? Because, "We just realized that this is a service the American public wanted," according to their chief executive. And other insurance companies are looking to follow.

So to hell with caring about what works – they just care about the bottom line. That line is that the public is interested in alternative medicine, so they'll jump in to give it to them, apparently not caring at all if such treatments actually do anything.

How do we know they don't care? Well, among the treatments they'll cover is homeopathy – which is so anti-scientific as to be ridiculous. **Dr. Clair Callan**, president of the Illinois State Medical Society, said, "There is really no good scientific studies on any of these methods of therapies." Amusingly, one person wrote a letter to the editor to note that she was wrong – there *have been* scientific studies on them, and those studies have shown them to be worthless. But that doesn't seem to play into this decision.

Joe Alien?

Space.com reported on a fairly weird news item (9/30). RJ Reynolds put out an ad for Winston cigarettes that showed a "classic flying saucer" and said, "If aliens are smart enough to travel through space, why do they keep abducting the dumbest people on Earth?"

I thought it was mildly amusing, but apparently others took it much more seriously. **Peter Gersten**, the director of Citizens Against UFO Secrecy (CAUS), said the ad is "defamatory" and "actionable." He said he was sending a protest letter to Reynolds, and was going to demand that they withdraw the ads and apologize. Of course, it's possible that Reynolds might just view it as proving their point.

I'm still trying to figure out what alien abductions have to do with cigarettes – although I remember reading a science fiction book many years ago in which aliens visit earth and get hooked on tobacco (which they pronounce "tofacco" because

they can't say the "b" sound), which is even more addictive to them than it is to humans. Maybe they smoked Winstons, and Reynolds is trying to cash in on that.

Just When You Thought Things Couldn't Get Much Sillier

The *Chicago Sun-Times* reported on a new style trend that incorporates "secret powers" – powerbead bracelets (10/8). Want to find love, be healthy, live long, or have a better attitude? Slip on the right powerbead bracelet, and it will all come true!

These beads, "modeled after Buddhist prayer beads," have secret powers (although they can't be terribly secret anymore, since they were published in the paper), and all you have to do is wear them. Ha! Silly me! I thought you got money by working, investing, or having rich relatives. Nope. You get it by wearing a bracelet made from mother of pearl beads. You get love from rose quartz, health from turquoise, happiness from magnetic hematite, etc.

But beware! While the "real" bracelets sell for \$20-40, there are "knock-offs flooding the market" for as little as a buck each. These pieces don't have the quality of the real ones, though. Although, just what "quality" that is, I'm not really sure.

Don't Bet On It

Also in the *Sun-Times*, there is apparently a weekly feature called "Strange but True," which answers scientific type questions. One of the questions on November 28 was, "If ESP works, why aren't casino operators worried about it?"

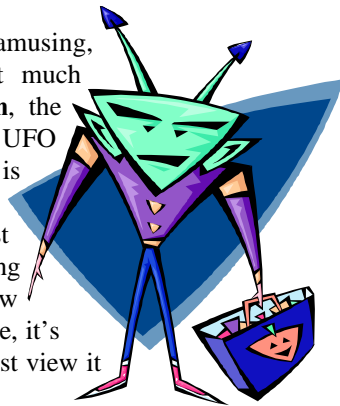
Bob and Rich Sones, the authors, answer that casinos keep a close eye on their profits and would have noticed such powers cropping up: "Tallies kept by the operators for years have shown no significant deviation from pure chance in these results." So they give three possible conclusions. Either telepaths are "too ethical to use their powers in casinos" (but, I might add, not too ethical to use them in 900-numbers to get five bucks per minute), or "ESP doesn't work in casinos" or "ESP doesn't exist."

With the odds the way they look, I'll put my money on the third answer.

Pyramidiots – Need I Say More?

How can I resist a newspaper article that is titled, "Egyptians decry the 'Pyramidiots'"? I can't. (*Chicago Tribune*, 12/1)

So who are these "pyramidiots"? (I love that term. Can you tell?) They are mystical tourists who are visiting Egypt not just for sightseeing but for "a spiritual quest for knowledge, a chance to tap into ancient mysteries." Part of this journey involved going to the Great Pyramid's King's Chamber and ly-



ing in the marble enclosure where the Pharaoh Khufu's dead body used to lie. Ick. And then they joined hands and chanted.

The false millennium this year is apparently bringing the pyramidiotis in droves, increasing tourist visits to Egypt in December 60% over most months.

It's also increasing claims that the Egyptians didn't actually build the pyramids or Sphinx or whatever. Salima Ikram, an Egyptology professor at American University in Cairo, noted, "It's a bit insulting when you've spent a great deal of time studying ancient Egypt and someone comes up and said you've either lied to them or know nothing about the subject you've studied." These folks who so annoy him sound like creationists who claim the second law of thermodynamics means evolution can't be real. Oh, really? Gosh, why didn't all the scientists who have preceded you think of that? Thanks for the brilliant insight! But I digress.

Amusingly, those promoting these weird viewpoints complain in the article that they are being ignored or fought, and say that proves it's a scientific conspiracy because they're right. Then they turn around and say that because one of the skeptics who argues against them was willing to sit down and talk to them, it means there must be something to what they're saying. What?! So if skeptics argue with them, that proves they're right; and if skeptics talk to them, that proves they're right.

Like they said, pyramidiotis.

Cold Shoulder to Cold-Eeze

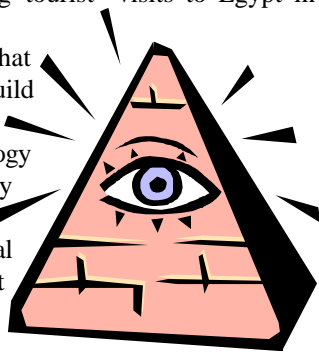
The Federal Trade Commission (FTC) put their foot down and has stopped the manufacturer of Cold-Eeze zinc lozenges, and one of the sellers of the product – the QVC home shopping network – from making unbacked claims.

According to the *Chicago Tribune* (11/24), the FTC had sued the companies, "saying they had made unsubstantiated claims that Cold-Eeze could prevent colds, relieve the symptoms of allergies and hay fever, reduce the risk of contracting pneumonia and reduce the severity of cold symptoms in kids." The makers of Cold-Eeze also made claims about Kids-Eeze Bubble-Gum, saying it could reduce the severity of cold symptoms in children as well. The companies agreed to settle the charges and not make these claims anymore.

I would have liked to see some *penalty* associated with this settlement, but I guess we have to take our wins where we can find them.

Spaced Out

The *Bloomington Pantagraph* (10/30) reported on a talk presented by a "UFO researcher" at Illinois State University. And reporting is about all they did. They certainly didn't take any actual journalistic look at the claims – just retold what this "researcher" told them.



The "researcher" is Yvonne Smith, a hypnotherapist and executive director of the Close Encounter Research Organization. She talked about what her patients told her under hypnosis. If that doesn't cause alarm bells to start going off in your head, then you haven't been reading this newsletter very long.

But don't worry, the *Pantagraph* reporter apparently never thought to look into the claims. He didn't bother to find that such claims made under hypnosis are almost certainly the result of false memories created during the therapy. It must never have occurred to him that he might have a journalistic duty to check these things out before passing them along as if they were facts. He just inserted "she said" at the end of each bizarre statement, and that was about it.

So what did she say? She talked about alien abductions, the insertion of needle-like probes through the skull, a high-level breeding program, lost time, unexplainable rashes, and tracking devices. And her evidence? Well, she said it.

You know what I say? I say she should stop hypnotizing people until we can be sure she isn't inadvertently leading them to believe things that aren't true. She should stop making bizarre claims unless she can back them up. And most importantly, this reporter should take a few more classes in investigative journalism. ☹

Straight Dope

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different. As the two groups become isolated from each other, they stop sharing genes, and eventually genetic differences increase until members of the groups can no longer interbreed. At this point, they have become separate species. Through time, these two species might give rise to new species, and so on through millennia."

In other words, the "ape-like" animals that eventually gave rise to humans split up into several branches, all of which evolved in different directions. Some of those lines became extinct; others survived. One of the surviving groups includes you and me (and in theory P.E. teachers, although one wonders). Other survivors include the various species of monkeys and apes we find today.

So, John, I've convinced you, right? Attaboy – always nice to have another ally in the fight against ignorance. Incidentally, you can find the NAS publication on the web at <http://books.nap.edu/html/creationism/>. Lots of good info in there!

Dear Straight Dope:

Please tell me if the book, The Celestine Prophecy is fact or fiction. I really enjoyed it believing it was non-fiction. Now I'm told it is fiction. What's the dope? – Anonymous

Well, there's a simple answer and a more complicated one.

The simple answer is: Yes, it's fiction. James Redfield, the author, did not actually go through this wondrous journey.

But if that were all we had to say, this would be an awfully short answer. So I did a little more research (where research

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Straight Dope

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equals talking to somebody who knows a lot about this topic). I contacted Joe Szimhart, who had reviewed *The Celestine Prophecy* for *Skeptical Inquirer* magazine back in the January/February 1995 issue. According to his bio there, he is “a specialist in controversial new religions, therapies, and cults that use thought-reform techniques.” In other words, he knows what he’s talking about.

According to Szimhart’s review, the original edition, before it was picked up by Warner, was classified as “New Age.” The Warner edition was reclassified as fiction. Szimhart said “New Age fiction” is a good description. Further, he noted that it follows the genre of the “true story” type of occult fiction from the mid- to late-nineteenth century. This tradition can be found in the writings of many such authors, from Edward Bulwer-Lytton in the nineteenth century to Carlos Castaneda more recently.

Szimhart noted that the “Insights” found in this book are a literary device “used by writers with a deep need to get what they believe is a serious personal vision across to the public through the vehicle of a magical autobiographical experience.” In other words, it’s sort of a “magical autobiography.” Szimhart doesn’t even have a very high opinion of the way he did that, calling it a “didactic regurgitation of simplistic occult notions that have been expressed by more or less talented writers and by fringe groups for more than a century.” Yow!

Of course, this book was only one part of Redfield’s overall New Age package. The book advertised a newsletter and an audiobook astrological reading by Redfield, who is also an aura reader. I’ve also seen a *Celestine Prophecy Workbook* in the stores. Now I hear you asking, if it’s fiction, why would there be a workbook? It seems this fictional book was simply a way for him to get across his New Age views, which are further built up by his readings, workbook, workshops, etc. It would be kind of like if J.R.R. Tolkien had actually believed in elves and evil wizards and had followed up his books with seminars and workbooks explaining how you can beat evil and move on to a better afterlife by following in the footsteps of Frodo. (I use this as an example only; I’m not comparing Redfield’s writing skills with Tolkien’s.)

So there you have it. The book is fictional, but meant to bolster Redfield’s own allegedly non-fiction viewpoint. Of course, I could go into how astrology, aura reading, and the like are just as fictional as this book, but Cecil has already covered astrology in one column (see www.straightdope.com/classics/a3_071.html) and discussed a bit on auras in another (see www.straightdope.com/classics/a3_069.html).

Dear Straight Dope:

Current popular opinion says that Cleopatra was black. But wasn’t she in fact Greek? Were their previous Cleopatras that were black? (or African, whatever, although since they were in Egypt they would be African no matter what their skin color). – H. W. Nix

I’m not sure it’s quite true to state that “current popular opinion” says this – although it’s an opinion some people may

hold. Alas, opinion is all it is.

To quote Mary Lefkowitz, author of *Not Out of Africa: How Afrocentrism Became an Excuse to Teach Myth as History* (1996), the short answer to your question is: “There is no evidence for thinking so.”

In fact, she specifically addresses this question in that book, spending almost 20 pages on it. So if you want a more detailed answer, that’s the place to go. Since we have a little less space here, I’ll distill down some of what she said.

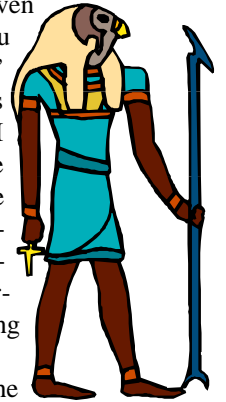
Lefkowitz begins by noting that, until recently, it never even occurred to anybody to ask this question. The information we have identifies her as a Macedonian Greek and her ancestors were Ptolemies, descended from one of Alexander’s generals. Cleopatra was a name traditionally given to women in the royal family, so, as you indicated, there were in fact “previous” Cleopatras. The one in question here was Cleopatra VII, daughter of Ptolemy XII and his sister (ewww). Sticking with the tradition of keeping it in the family, she married two of her own brothers in succession (the first “died in suspicious circumstances, [and] she had the second murdered,” which is definitely taking sibling rivalry to extremes).

She was able to speak Egyptian (the first in her family to do so – her parents, er, aunt and uncle, er, whatever, must’ve been so proud!). She also did dress in the manner of Egyptians (no info on whether she walked like an Egyptian, though). The surviving coins of the day show her as “impressive rather than beautiful, Mediterranean in appearance, with straight hair and a hooked nose.” Alas, coins weren’t in color, so what hue her skin had we can’t say.

Lefkowitz does note that there is a slight possibility that Cleopatra might not have been a full-blooded Macedonian Greek, because we don’t know the precise identity of her father’s mother. Apparently, grandma was not the wife of gramps, but his mistress (maybe he wanted to taste the forbidden fruit of somebody outside his immediate family, like a cousin). The assumption has always been that grandma was another Macedonian Greek, because the Ptolemies were a bit xenophobic, and somebody would likely have written about a foreigner being that close to gramps (examples of such writings exist when it happened with others).

Lefkowitz notes that most writers who have raised the question at hand here haven’t been ancient historians. She says the first American writer to suggest that Cleopatra had a black ancestor was J.A. Rogers, in *World’s Great Men of Color*. Unfortunately, Rogers somewhat muddled Cleopatra’s family history, claiming her father was Ptolemy XIII (nope, Ptolemy XII) and her grandfather was Ptolemy XI (nope, Ptolemy IX). Then he claimed that Ptolemy XIII (who was actually Cleopatra’s brother and husband and cousin and, oh, you get the idea) showed pronounced Negro traits – although this claim doesn’t seem to have any actual support.

Some of the evidence used to support the claim of Cleopatra’s alleged African roots come from, of all places, Shake-



speare. Because in *Anthony and Cleopatra*, Shakespeare called her “tawny.” Rogers and other supporters claim this was a 17th-century way to describe mulattoes, and so since Shakespeare obviously thought of her that way, she must have been.

Um, OK. But a full look at the passage in question shows that really isn’t what Shakespeare meant here; in fact, Shakespeare would have probably called her an “Ethiophe” if he meant “black.” And, frankly, if the best evidence we have is a word in a Shakespeare play, well, that ain’t gonna cut it in history class.

Another amusing piece of “evidence” comes from Rogers and others pointing to *Ripley’s Believe It Or Not*. Why? Because Ripley, “who says he has proof of all his facts, calls Cleopatra ‘fat and black.’” So, Rogers doesn’t have to back up his claim because he says somebody else says he has the evidence. So there!

Other authors have followed Rogers and made similar claims, but with evidence that has been just as poor. For example, John Henrik Clarke used a modern portrait of a black Cleopatra as evidence, and also refers to the Book of Acts, claiming she described herself there as “black” – Lefkowitz and author Frank Snowden point out that this is a bit odd since Cleopatra isn’t even mentioned there!

In general, the folks making this claim seem to be jumping through lots of illogical hoops. The main line of “reasoning” seems to be that because we don’t know who her grandmother was, she must have been a black and it was covered up by white Europeans. Is it possible that her grandmother was black, and that she was therefore ¼ black? Yes. Is it likely? No. Is it supported by any evidence? No. This looks like a UFO conspiracy – there is no evidence, so people in power must be suppressing that evidence. Those who are passing this off as Truth have apparently already made up their minds, and that is that.

While perusing through today’s paper I saw an article that said that silicone implants can’t be directly linked to big (pun?) health problems in women. That started me thinking and – what’s the deal with silicon (the element) and silicone? Are they related? Silicon seems to be just ‘bout everywhere and in everything, from computer chips to implants to weather sealants to God know what else. I’m old enough to remember the days when silicon/silicone wasn’t an everyday presence in our lives and now it seems that, without it, “modern life” will just about fall apart. What is it ‘bout silicon (scientifically) that makes it so flexible for so many uses? My guess (after some thinking) is that it may have something to do with its being metallic(?), plentiful (i.e., sand) and its being right below carbon on the periodic element table (talk about useless knowledge; I still remember some H.S. chemistry). Beyond that, I seek your resources and enlightenment. – A curious mind

OK, from the top. Yes, it is true that a number of large and prestigious scientific studies have shown that silicone breast implants are not linked to the systemic diseases that many claimed they caused. Unfortunately, this knowledge comes a bit late for many of the lawsuits that manufacturers

have already lost or settled. It seems that many of the plaintiffs (and juries) were unaware that correlation is not the same as causation. They went by the false logic of: “I got implants; I got a disease; they must be related.” Studies have shown, however, that the occurrence of such diseases is no higher in women with breast implants than in women without. Thus, silicone implants don’t cause the diseases. It’s simply coincidence and while I feel bad for the women who have gotten these diseases, that doesn’t mean silicone is to blame.

The worst effect this may have had, other than on the stockholders of the manufacturers, is that companies are now potentially less likely to use silicone in their medical devices. Scientifically, we know that it is safe, but just try to convince the public of that. Cecil tries his best to fight ignorance, but ignorance has a huge head start. Even with our help here at the Mailbag, it’s hard to fight sensationalized and unscientific media accounts.

OK, off my soapbox and back to your question. What’s the deal with silicon and silicone? To start, silicon is the second-most abundant element in the Earth’s crust, making up about 26% of the elements found there (oxygen is the first, with about 50%, aluminum is third, with about 8%). Therefore, as noted in *Introduction to Ceramics*, Second Edition, by Kingery, Bowen, and Uhlmann (known as the ceramic engineering bible, in case you were wondering), “It is not surprising that the dominant minerals are silicates and aluminum silicates.” Silicon, like carbon and boron, forms a wide variety of binary compounds with metals, which means it sees a lot of use. Also, since these materials are so widely available, they are fairly inexpensive.

You may think you’re old enough to remember when silicon wasn’t all over the place, but it’s more likely you just didn’t know it. You can find silica (SiO₂) in such “low-tech” uses as glass, glazes, enamels, refractories, bricks, abrasives, and whiteware.

As for the more high-tech aspects, silicon is very useful because it and germanium (and some forms of tin as well) behave as semiconductors. Careful control of the chemical purity of these allows precise control of their electronic properties. While germanium was used first in this capacity because it was easier to purify, silicon is superior. Since the late ‘60s, it’s been almost all silicon.

Finally, yes, silicone and silicon are related. The polymer silicone contains the element silicon as part of its backbone structure. Silicone is chemically inert, flexible, stable, and resistant to weathering and temperature. What’s more, the textbook *Inorganic Chemistry*, by Shriver, Atkins, and Langford, notes that silicone’s “low toxicity leads to [its] use in medical and cosmetic implants.” So, it’s excellent for use in medical devices – presuming people stop falsely blaming it for their diseases. Lest anybody think, “Oh, sure, it’s easy for him to say – he doesn’t have to worry about using silicone,” I would like to point out that I specifically sought out the silicone pacifiers for my son because I felt they were safer than the other polymer choices. ♡

Our Next Meeting

Y2K and Millennial Madness:
What Did and Didn't Happen
A Group Discussion



Welcome to the year 2000! At long last, we'll begin to hear less about "the millennium." That said, what better to talk about at our next meeting than what did or didn't happen at the turn of the non-millennium? This will not be a presentation with one person talking, but a discussion amongst the members. Join in the fun! And there will even be **refreshments!**

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