The Newsletter of The North Texas Skeptics

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In this month's issue:

FLIR

by John Blanton

FLIR is an acronym that stands for Forward Looking Infra-Red. It's a technology that uses far infra-red radiation for seeing without benefit of visible light. Why it's necessary to add the words "forward looking" is not clear, except that IR is not very satisfying as acronyms go, and it's too much like a Spanish verb.

FLIR is also the name of the latest video produced by Mike McNulty concerning claims that government forces killed innocent Branch Davidian members on the final day of the standoff near Waco. McNulty has previously produced *Waco: the Rules of Engagement and Waco: A New Revelation. Rules of Engagement* was honored as "Documentary Film of the Year" by the International Documentary Association for 1997. It received an Oscar nomination for "Best Feature-Length Documentary Film" for 1997. McNulty won a national Emmy award for "Best Investigative Journalism" in 1999 for his work in the production of *Rules of Engagement.*

We previously encountered McNulty when he appeared as a panelist on the *McCuistion* show on PBS. The May 2000 issue of *The North Texas Skeptic* carries an account of this plus additional details of the Waco controversy. [1]

McNulty's two previous videos were highly critical of government actions related to the Mount Carmel siege and the destruction of the Branch Davidian compound on 19 April 1993. The language used in these documentaries states in strong terms that government forces used fire from automatic weapons to prevent the escape of innocent civilians from the fire.

Branch Davidian survivors sued, claiming the US Government was responsible for the deaths of over eighty people in 1993. In 1999 former Republican senator John Danforth was appointed special counsel to investigate possible government culpability in the case. A key issue was the contention by the plaintiffs that FLIR video recorded by the

government on the final day of the siege provides incriminating evidence. Plaintiffs alleged that the imagery shows flashes from small arms, including automatic weapons fire, directed at the Branch Davidians. The plaintiffs contended that in some cases they can make out the movements of the shooters. The governments contention was that the flashes that appear in the video result from reflections of infra-red sources by debris on the ground and that no shooters are visible in the video. Senator Danforth retained Vector Data Systems to analyze the Waco FLIR and conduct FLIR test. On 19 March 2000 the government conducted tests at Fort Hood, Texas, to replicate the situation of 19 April 1993. FLIR videos were made from two aircraft flying 4000 to 6000 feet above the test area. The test area included debris on the ground and some scenarios with shooters firing weapons. The conclusion of Senator Danforth was that the test video invalidated the plantiffs' claims. Specifically:

1. Plaintiffs claimed the Waco video shows gun fire from locations where no shooters are visible. In the Fort Hood video shooters are always visible.

2. The government contended the flashes in the Waco video came from reflections. The Fort Hood video shows similar flashes from a debris field, where no shooters were present.

In July 2000 the case was decided against the plaintiffs. In US District Court a 5-person advisory jury reported to Judge Walter Smith "… the ATF had not fired indiscriminately or used excessive force. They also agreed that the FBI tanks' actions were not negligent and did not contribute to the fire, and that the FBI commanders were not negligent in their decision not to try to fight any fires at the compound during the tear gas assault." [2]

Response to the decision was swift, broad, and somewhat one-sided. While cooler heads accepted the verdict even if they did not agree with it, many opposed to the government action and to the administration in power at the time denounced the outcome of the trial, the validity of the Fort Hood tests, and even the integrity of Senator Danforth. A Google search revealed a large number of anti-government sites as well as many sites critical of the conspiracy theorists. [3]

One response to Judge Smith's decision was the latest McNulty video from COPS Productions L.L.C. In *FLIR* McNulty has followed up on his claim that the Waco video shows government gunfire directed at the trapped Branch Davidians. He now takes the added step of arguing that the Fort Hood video fails to make the government case and, furthermore, seeks to back up his claims regarding the Waco video. Specifically, McNulty asserts:

1. The Fort Hood tests are fatally flawed by not exactly replicating the conditions of the Waco siege: The Fort Hood tests did not use FLIR equipment identical to that used at Waco. The Fort Hood tests did not use the same weapons. Temperatures at Fort Hood were 20 degrees F cooler than existed at the siege. And finally, dusty conditions at the siege site enhanced the flash from the weapons, and the Fort Hood tests did not duplicate these conditions.

2. Government forces at Waco wore uniforms that suppressed their IR signature, accounting for why shooters would not be visible.

3. In the Waco video government agents can be clearly seen when standing on a plain, concrete, surface, but they readily disappear when they move onto the grassy areas, which provide a concealing, mottled background.

Many of the points made by McNulty are essentially correct. FBI standard issue is a 14-inch barrel military rifle, and the Fort Hood tests included standard M-16s with 20-inch barrels. It should be noted that the FBI states rifles with 14-inch barrels were also used in the Fort Hood tests. [4] Also, the Fort Hood tests did not use the same type of FLIR equipment, and Fort Hood test conditions were about 20 degrees cooler. Furthermore, combat clothing can reduce the wearer's IR signature, and certain backgrounds can help conceal personnel on the ground.

COPS, the producers of FLIR conducted their own tests, apparently in November 2000, and presented their imagery in the video. The COPS tests did not involve aircraft but used a long boom to place the FLIR equipment high above the ground. The COPS tests were also conducted at the same temperature as the day of the Waco assault and included a

variety of weapons, ammunition and ground debris.

A prime assertion of the government side of the case is that the flashes seen in the Waco FLIR are too long to represent muzzle flashes, and the Fort Hood tests demonstrated muzzle flashes much shorter than those that show up on the Waco FLIR. COPS seeks to refute this point by noting that the dusty atmosphere at Waco would have prolonged the duration of the muzzle flashes. The idea is that the heat from the muzzle discharge will heat the dust particles in the air producing a prolonged glow. To demonstrate this, COPS had someone throwing dirt in front of the weapons before they were fired, and they showed that a longer flash was produced under these conditions.

Additionally, COPS seeks to show in its video that it is problematical whether ordinary debris would have produced the flashes seen in the Waco FLIR.

In conclusion, FLIR reiterates McNulty's previous assertions that government agents at the rear of the Branch Davidian compound directed automatic weapons fire at the compound. He further contends this action killed innocent Branch Davidians directly and resulted in the deaths of others by preventing their escape. This is a serious charge that finds many friends. What are we to make of it all?

The problem is that McNulty's claims are made outside the context of a very large body of other information. In fact, it may be that the producers of *FLIR* have shot themselves in the foot. Here are a number of issues that *FLIR* failed to note:

1. A major claim of *FLIR* is that the smoky, dusty atmosphere at Waco produced the prolonged flashes seen in the video. By stirring up dust and firing into the dust they seem to have demonstrated their case. However, a reasonable person comparing the Waco imagery and the COPS imagery will find little in common. The COPS video shows a shooter firing directly into a dust cloud right after someone has thrown a handful of dirt in front of the weapon. While the narrator points out that only dust is present, and not dirt, at the time the weapon is fired, it is quite obvious that this procedure produces a heavy concentration of dust that quickly settles out. A look at the Waco video seems to show the ground quite clearly from over 4000 feet up without the obscuration that would result from a heavy concentration of dust at 65 degrees F.

2. McNulty purports to show muzzle flashes from invisible shooters. He asserts that their camouflage clothing hides them in the Waco imagery. However, the firing demonstration in the COPS video shows a shooter holding a weapon, and the barrel of the weapon shows very bright in the imagery. In the Waco FLIR no hot, bright gun barrels show up.

3. FLIR also completely ignores an issue previously pointed out by other detractors. While McNulty claims to show invisible shooters, there is at least once case in which a tank tread runs completely over one of these invisible "shooters." [5] This would appear to invalidate NcNulty's claim that the flashes could not have been produced by ground debris. If there is at least one case of muzzle flashes without a shooter, then it is up to McNulty to explain what produced those flashes and why this explanation does not apply to all the other cases.

4. The Branch Davidians were killed by their leaders. Eavesdropping federal agents recorded the leadership issuing orders to start the fire. Some children and adults and even leader Vernon Howell (AKA David Koresh) were killed at close range by small arms fire while deep inside the compound.

5. Motive. For 51 days the government tried to coax the Branch Davidians out and even effected the release of some children and adults. On the final day of the siege members of the rescue team risked their lives to save Branch Davidians from the fire. One has to ask: How did the government forces divvy up the chores that day. "Team one, you guys try to save as many people as you can. Team two, you try to kill as many as you can." Inquiring minds would like to know the answer to this riddle.

References

1 http://www.ntskeptics.org/2000/2000may/may2000.htm
2 The Dallas Morning News, 15 July 2000. http://www.dallasnews.com/texas_southwest/111922_waco_15tex.html

3 Here are some relevant sites:
http://www.rense.com/general12/danfo.htm
http://www.gospelcom.net/apologeticsindex/news1/an010412-01.html
http://www.lewrockwell.com/orig/nelson1.html
http://www.webleyweb.com/tle/le970315-02.html
4 "Waco Inquiry Failed to Test Correct F.B.I. Gun," Matt Kelley, *Associated Press*, available at
http://www.flirproject.com/current_events.html
5 "The Waco FLIR Flashes" by Ian Goddard at http://iangoddard.net/wacoflir.htm

[Back to top]

Stupidity kills

Editorial comment by John Blanton

But first a very old joke:

> Melvin was exploring along the cliff side when he got too close and slipped over the edge. Luckily, a few feet from the top he snagged a small vine that was growing out of the rock there, and he managed to hang on, saving himself from a 100-foot drop.
>
> Unable to climb back up, Melvin began to shout for help. Presently he heard a voice from the top of the cliff inquiring about his predicament. "Who are you?" shouted Melvin. Can you help me?
>
> "I am God came back the voice, and I can help you. But you must believe in me, and you must do exactly as I say."
>
> "Oh, yes. I do believe in you," shouted Melvin "and I will do whatever you say."
>
> "OK" came back the voice. "You must first let go of the vine."
>
> Melvin was silent for a moment. Then he shouted back "Is there anybody else up there who can help me?"

Melvin is like most religious people. He believes, and he knows he believes. But way in the back of his mind, he realizes it's mostly metaphor. He will not let go of the vine.

What's all this leading to?

Last September we encountered a number of gentlemen who were willing to let go of the vine. Together they blithely guided airplanes into immovable objects, absolutely sure in their minds they would immediately find themselves in the presence of God and drenched with rewards beyond their dreams. Since there was no collective "whoops" emanating from the fiery plumes of the crashes, skeptics cannot demonstrate to surviving believers the folly of this kind of thinking. Nobody ever comes back from behind that black veil saying "Hey, there's really nothing there."

So, what's the point? The point is that stupidity kills. Some people are stupid, and because of this stupidity they and many innocents die.

I will now make the following statement without proof: People need to live. If you have trouble with the truth of this, then stop reading now. Find something interesting on TV.

Those of you still reading, follow this argument: Since stupidity kills, and people need to live, it logically follows that eliminating stupidity would be a good thing. But how?

One of the stated objectives of the NTS is to reduce the amount of surplus stupidity in the world, stupidity being differentiated from ignorance. We are all ignorant (some more than others). Being ignorant is just not knowing. I really wish I knew the capital of Vermont, but I slept through that geography lesson. Being stupid, on the other hand is knowing, but not following the logical consequences of that knowledge. It's like meeting a very large Hell's Angel in a biker bar and telling him "Harleys really are sissy bikes, you know."

Back to the story. The NTS traditionally steers clear of strictly religious issues. For one, religious beliefs tend to be completely untestable. Secondly, combating religious stupidity would be like trying to stamp out a prairie fire with your bare feet. With the obvious consequences.

Maybe things have changed. Go back and read the first part. People are dying. Skeptics, too.

Should the NTS take on strictly religious issues, and which ones? A few candidates quickly come to mind: Life after death. Reincarnation. Literal truth of the Bible (Jewish and Christian) and the Koran. That's a big load without even considering Satanism and the various new age and pagan philosophies.

Not much in the way of scientific analysis can be applied to some of these points. References to archeological studies are useful in refuting some religious tenets. A careful consideration of logical consequences can be used to argue against others. As a last resort, to counter much of the foolishness only an appeal to reason is available.

We will consider some of these approaches for future action. Members are encouraged to weigh in on this matter. You know how to reach us.

[Back to top]

It'll Take a Miracle to Save their "Science"[1]

Dr. Kevin R. Henke

The following material may be freely copied and distributed as long as it's not altered, edited or sold. [We have added hypertext link at the end of this document. Ed.]

In the past, people commonly invoked gods, fairies, demons, witches and other supernatural beings to explain plagues, storms, earthquakes and other phenomena in nature. As examples, the Hebrew God often used lightning as a weapon (Psalms 18:14, 144:6) and the Vikings believed that thunder was Thor's hammer. Since then, naturalists and scientists have demonstrated that thunder and lightning may be explained without involving the supernatural.

Although scientists cannot explain every event in nature, we do not give up hope of eventually finding natural explanations for nature's mysteries. Science has an excellent track record in developing coherent and non-miraculous descriptions of the history of the Earth and the properties of its materials. We've cured diseases, gone to the Moon, explained many of the properties of atoms and radiation and clarified the origin and evolution of the Earth's crust.

In contrast to science, the young-Earth creationists (YECs) of the RATE (Radioisotopes and the Age of The Earth) Project readily admit that the supernatural is a necessary part of their "science." For example, Vardiman (2000, p. 5) openly confesses:

"The presence of supernatural 'process' during Creation is essential to our approach, however."

Humphreys (2000, p. 334) also acknowledges that young-Earth creationism depends on miracles and actually welcomes them. Concerning the decay rates of radioactive isotopes, Humphreys (2000, p. 367) states:

> "It appears that Christ already has direct control of the nuclear (and other) forces, and furthermore that He is

> intimately involved with them. So even if we cannot follow all the links in the chain of causes back past a certain point, we can be confident that Jesus Christ is not only at the end of it, but at every link along the way. The point I am trying to make is that we should avoid the pitfall of insisting on completely naturalistic explanations for accelerated [radioactive] decay. Instead, my approach is to push the science we think we know as far as is reasonable, but remain ready at every point to see that God has intervened, and is intervening."

Of course, ANY mystery or problem can be superficially covered up with miracles. Anyone can yell: "God did it!" Whereas forensic scientists and paleontologists can often use remaining evidence to reasonably explain past unwitnessed events, YECs have no way of testing miracles or verifying the existence of supernatural beings.

Young-Earth creationism is based on an unbelievable and unjustified faith, whereas the track record of the naturalistic approach of science is well-established, highly reliable and often imported into our daily lives to explain everything from crimes to missing car keys. Also, when faced with the most obvious errors and contradictions in their Biblical interpretations, YECs certainly have vivid imaginations and, by invoking miracles or other unlikely excuses, they can easily plaster over the most blatant inconsistencies in their Bible interpretations and their young-Earth mythology — errors and contradictions that YECs probably would not excuse if they were found in the Book of Mormon or the Koran.

In contrast to the unjustified promotion of miracles by YECs, science has repeatedly shown that the use of the supernatural as a "short-cut" to solve natural mysteries is premature, unnecessary and ultimately unsatisfying. Invoking miracles resolves nothing. Miracles are unproven. Many individuals view miracles as cheap copouts and invalid and lazy counterfeits to the persistence and hard work required by science. No credible person wants a "science" based on "God did it!" Science requires careful experimental designs without any interference from religion or politics, countless measurements and data verification, long-suffering and patience and deep thought to interpret the results and construct viable theories. Anyone can invoke miracles and make other excuses, but the true test of a patient researcher is the ability to solve problems with hard scientific work, and not rely on flimsy, ad hoc miracles as cheap shortcuts when the research becomes agonizing or threatens to encroach on popular religious beliefs.

The YEC approach to problem solving also would not produce satisfying results in any other aspect of our lives. That is, no one wants their garage mechanic to tell them that their car has demons, no one wants their doctors to "cure" diseases by chasing away the "evil spirits" with crosses and Psalms, no one wants their children to claim that the "boogie man" broke the expensive vase, and no one wants a defense lawyer telling them that Satan and witchcraft killed the victim and not the defendant. In both science and our daily lives, we want elegant, useful and natural explanations and not superstitious, groundless, contrived, worn-out and miracle-based excuses that haven't been widely accepted since 1699.

By filling in the unexplained with supernatural "solutions," YECs are liberally relying on the infamous "god of the gaps" scenario. See The "God of The Gaps" Argument.

Time and time again science has demonstrated that the "god of the gaps" is premature. Yet, YECs continue to invoke miracles to explain mysteries and inspire the faithful (e.g., Gentry, 1988 and his haloes), only to have scientists later develop reasonable natural hypotheses (Odom and Rink, 1989). Once the knowledge gaps close, the supernatural explanations are exposed for what they really are: unnecessary and shoddy. Because of the long history of embarrassing lessons that have resulted from relying on miracles, it's not surprising that "god of the gaps" and other invocations of the supernatural are anathema to any good scientist and many theologians.

The YEC approach to science and the Bible is also clearly hypocritical. For YECs, any scientific claim, no matter how well verified, may be met with skepticism, especially if it deals with the origin and age of the Earth.

However, the same level of skepticism is never applied to the Bible. No matter how juvenile the YECs' literal interpretations of the Bible may be, they are given an ad hoc exemption from any criticism. The Bible is simply assumed to be infallible and inerrant, despite overwhelming evidence to the contrary, see A List of Bible Contradictions and Capella's Guide to Atheism.

YECs are stuck in the circular fallacy of "Jesus 'said' that the Bible is infallible (Matthew 5:18) and Jesus' words are infallible because they're in the Bible (2 Timothy 3:16)." The YECs' addiction to miracles and their approach to the

Bible will certainly hinder their ability to effectively understand nature and deal with reality. That is, don't expect any YECs to successfully use their miracle-based "Flood geology" to find petroleum and ore deposits; see Why I left Young-earth Creationism.

References

Gentry, Robert V., 1988, Creation's Tiny Mystery, 2nd Edition, Earth Science Associates, Knoxville, TN.

Humphreys, D.R., 2000, "Accelerated Nuclear Decay: A Viable Hypothesis?" in Radioisotopes and the Age of the Earth, L. Vardiman, A.A. Snelling and E.F. Chaffin (eds.), Institute for Creation Research, El Cajon and Creation Research Society, St. Joseph, Mo.

Odom, A. Leroy and William J. Rink, "Giant Radiation-induced Color Halos in Quartz: Solution to a Riddle," Science, vol. 246, October, 1989, p. 107-109.

Vardiman, L., 2000, "Introduction," in Radioisotopes and the Age of the Earth, L. Vardiman, A.A. Snelling and E.F. Chaffin (eds.), Institute for Creation Research, El Cajon and Creation Research Society, St. Joseph, Mo.

1 This article is on-line at http://home.austarnet.com.au/stear/miracle_henke.htm.

[Back to top]

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.]

Baskerville effect: Is superstitious fear a health risk?
Actually, this was not a really big week for science-policy news. What we did find was a report in the *British Medical Journal* that Chinese and Japanese Americans have a 7% greater death rate from chronic heart disease on the 4th day of the month. There was no such peak in the deaths of white Americans. Since both Chinese and Japanese regard the number four as unlucky, the researchers conclude that cardiac mortality increases on psychologically stressful occasions. They named the effect after Charles Baskerville, a character in the Arthur Conan Doyle story "The Hound of the Baskervilles," who suffers a fatal heart attack from extreme psychological stress. This led the principal author, UCSD sociologist David Phillips, to conclude that Conan Doyle "was not only a great writer but a remarkably intuitive physician as well." Whoa! Sir Arthur Conan Doyle was in fact hopelessly superstitious, believing devoutly in the existence of fairies.

Unbaskerville effect: If superstition can kill, can it cure?
A 1999 study claimed that coronary patients in a Kansas City hospital did better if volunteers prayed for them without their knowledge (WN 29 Oct 99). But a just-released study at the Mayo Clinic found no significant difference between heart patients who were the object of intercessory prayers and those who were not.

Remote censoring: HHS is given authority to classify.
It's no secret that restricting the spread of scientific knowledge is one of the responses to terrorism being considered in Washington at the highest levels. The story is that the head of one scientific society was summoned to the White House and admonished that a few papers published in the society's journals might have aided terrorists. It's reminiscent of the 1980s, when societies were pressured to exclude papers from open scientific meetings if they dealt with "sensitive but unclassified" information that might aid Soviet weapons scientists. What's different today is that the society feeling the

pressure is in the biological rather than physical sciences. Marty Blume, the APS Editor in Chief reports that he has not been contacted since Sep 11. Although he's not unhappy to be ignored, Blume was somewhat chagrined that physics has become so irrelevant. According to the *New York Times*, the President just granted the Secretary of Health and Human Services power to classify information as "Secret." So much for Clinton's policy of reducing reliance on classification. As for WN, some people still think it should be censored, but that's not news.

Bio-terrorism: Links to the head of a white house commission?
Three *New York Times* writers, Judith Miller, Stephen Engelberg and William Broad have turned out an incredibly timely piece of investigative reporting at its best. *Germs*, Simon & Schuster, 2001, begins with a chilling account of the first bio-terrorism attack on U.S. soil: the deliberate salmonella poisoning of hundreds of residents in Wasco County Oregon in an effort to keep them away from the polls, and thus take political control of the region. The attack was carried out by members of a free-sex cult led by Bhagwan Shree Rajneesh, who was subsequently deported. What *Germs* doesn't tell you is that one of Rajneesh's followers was a psychiatrist named James Gordon (WN 16 Aug 96), who wrote The *Golden Guru*, an admiring book about Rajneesh. Gordon was involved in the effort to take political control of Antelope, Oregon. Incredibly, James Gordon now heads the White House Commission on Complementary and Alternative Medicine Policy (WN 19 Oct 01), created in waning days of the Clinton Administration.

PCAST: Bush names Advisory Council on Science and Technology.
The co-chairs were already known, Jack Marburger, the President's Science Advisor, and Floyd Kvamme, a Silicon Valley venture capitalist. Most of the 24 members are from the information- technology industry. Unlike past Councils, there is virtually no representation from research scientists. Even the few academics best known as administrators. The sole exception is Charles Arntzen, a plant biologist from Arizona State University.

Dietary supplements: There are lots of them, but do they work?
There is a widespread belief that the FDA wouldn't allow all that over-the-counter stuff to be sold if it weren't safe, but the '94 Dietary Supplement and Health Education Act exempted suppliers of these "natural" substances from the need to demonstrate safety or efficacy, as long as no claim is made that it actually cures you of anything. They can claim it enhances the immune system, for example, but not that it prevents colds. The media seemed to go along with the herbal fad, and the DSHEA sparked a huge growth in supplement sales. But when Stephen Strauss was chosen to head the alternative medicine program at NIH (WN 16 Nov 01), he began insisting that this stuff be scientifically tested to see if it works. Studies found that some popular supplements may even be dangerous. Now a move is getting underway to repeal the DSHEA.

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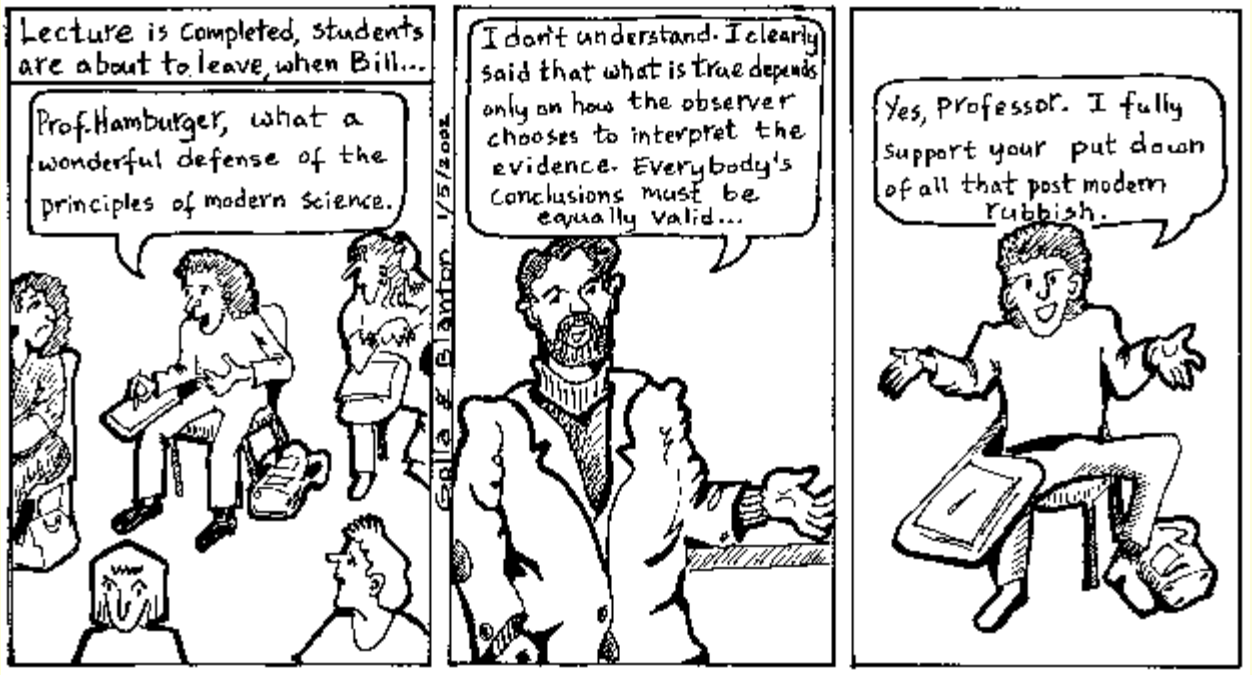
[Back to top]

Skeptical Ink

By Prasad Golla and John Blanton


Lecture is completed, students are about to leave, when Bill...
Prof. Hamburger, what a wonderful defense of the principles of modern science.
Golla & Blanton 1/5/2002
I don't understand. I clearly said that what is true depends only on how the observer chooses to interpret the evidence. Everybody's conclusions must be equally valid...
Yes, Professor. I fully support your put down of all that post modern rubbish.

[Back to top]