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Report on the 1992 CSICOP Conference: Part One

By Jim Lippard

"Fairness, Fraud, and Feminism: Culture Confronts Science" was the name of this year's annual conference of the Committee for the Scientific Investigation of Claims of the Paranormal, publisher of the *Skeptical Inquirer*. The conference was hosted by the North Texas Skeptics at the Harvey Hotel near the Dallas-Fort Worth Airport on the weekend of October 16-18. The conference featured five panel sessions on multicultural approaches to science, gender issues in science and pseudoscience, fraud in science, crashed saucers, and the paranormal in China.

The conference began on Friday morning with opening remarks by CSICOP chairman Paul Kurtz, who spoke briefly about various meanings of the term "skepticism." He distinguished the "total negative skepticism and unbelief" of Pyrrho and Sextus Empiricus from the "mitigated skepticism" of David Hume and "the new skepticism" which emphasizes inquiry rather than doubt. (Not coincidentally, Kurtz's new book from Prometheus is titled *The New Skepticism*.) He commented on the fact that this conference, like the Berkeley conference last year and other CSICOP conferences before that, is addressing issues which are not directly connected with pseudoscience and the paranormal. The CSICOP Executive Council has debated "how far afield" it is appropriate for the conferences to go.

Multicultural Approaches to Science

The first panel of the day, "Multicultural Approaches to Science: The Good, the Bad, and the Ugly," was moderated by Eugenie Scott of the National Center for Science Education, who began the session by stating that "I believe in objective reality. I believe that you exist even if I never saw you. ... I believe the nominalist/realist debate is irrelevant outside freshman philosophy."¹ She began with these statements because there are those who disagree, who maintain that consequences of ideas are more important than their content and that any idea is as valid as any other. She gave some examples from some materials criticizing textbooks for lack of an appropriate multicultural stance which have influenced textbook decisions in Berkeley, California. These materials consist of an excerpt from a textbook, followed by a comment, a format which Scott compared to the textbook critiques of fundamentalists Mel and Norma Gabler of Texas. Scott gave two examples from this material. The first criticized a textbook for claiming that the first people in the Americas arrived over a land bridge, characterizing this claim as "unsubstantiated theories of white anthropologists" and pointing out that "Natives believe they have always been here." The second example questioned a textbook's claim that horses were brought

to the Americas by the Spanish, arguing that horses may have always been in America or have been brought over by Persians in the 12th century.

The first speaker, Diana Martinez, professor of biochemistry at Michigan State University and member of the National Academy of Science's Committee on Standards, commented on "the good." Martinez maintained that multicultural education is important even in science classes because science and what scientists do is influenced by culture. Science is normally taught as something isolated from reality, in such a way that students come away knowing only collections of facts. By learning science from a familiar cultural base, students can recognize the importance of science in their lives, become scientifically literate, and become motivated towards science as a career. Martinez gave statistics showing the paucity of minorities in scientific fields and argued that this is a problem which multicultural approaches to science education can correct. She then gave some examples of how this might be done using Mayan math and astronomy, American Indian food plants and nutrition, and Diego Rivera murals.

The second speaker, Joseph Dunbar, a professor of endocrinology at Wayne State University, addressed "the bad." His talk, titled "Myths of Melanin," described the claims of the so-called "melanin scholars" that dark-skinned humans have special abilities in virtue of magical properties of the melanin in their skin. Dunbar described different kinds of melanin in skin pigment (eumelanin and pheomelanin) and how they differ from melatonin (secreted by the pineal gland) and neuromelanin. The "melanin scholars" do not distinguish these things, and use studies relating to the latter two substances to support their claims that melanin improves reaction time, allows communication with plants, protects DNA, converts sunlight into knowledge, and numerous other outrageous claims.²

Bernard Ortiz de Montellano, an anthropologist at Wayne State University (with a Ph.D. in organic chemistry), spoke on "the ugly." (Eugenie Scott introduced him with the comment that "bringing critical thinking to multiculturalism is 'the task of de Montellano,'" with due apologies to Edgar Allan Poe.) Ortiz de Montellano, who has written two articles on multicultural pseudoscience for the *Skeptical Inquirer* and one for *Creation/Evolution*, discussed the *African-American Baseline Essays* (also known as the *Portland Baseline Essays*).³ This collection of essays by promoters of an Afrocentric curriculum was published in 1987 by the Portland, Oregon school district and has been distributed to schools around the country as a resource for setting up a multicultural curriculum. Detroit, Boston, Atlanta, Indianapolis, and other school districts have had seminars on this material, but it is unknown how many are actually using the material in the classroom. The *Baseline Essays* assert that Egypt is the source of all civilization, that religion and paranormal abilities are important aspects of scientific

methodology, that Egyptians flew for travel and recreation, and many other ridiculous claims. The material on science claims that the ancient Egyptians used "Maat," religion as a scientific paradigm, according to which (1) there is a supreme consciousness or creator; (2) the universe came into existence via divine self-organization; (3) the universe is alive, all parts of it are related and are living; (4) man and life itself is a mystery; (5) there are material and transmaterial causes and effects. Ortiz de Montellano looked at some of the specific claims made in the science essay of the *Baseline Essays*, showing that the purported evidence for each was weak to nonexistent (or, in some cases, actually evidence to the contrary, as was the case with the alleged Egyptian "glider" model, whose dimensions were such that it could not possibly be flown).

Unofficial Session on Faith Healing

During lunch time, the North Texas Skeptics arranged for Christian critic of televangelists Ole Anthony to speak at the Excell Inn next door to the Harvey Hotel. Anthony was one of the prime movers behind PrimeTime Live's exposé of Robert Tilton, Larry Lea, and W.V. Grant. Anthony recounted the various legal tactics Tilton has been using against him and stated that his group will be filing a lawsuit against the television stations that air Tilton's program around the country. Tilton has sued Anthony for conspiracy to deprive him of his Constitutional rights under the First Amendment. At least one of Tilton's claims was dropped, regarding remarks Anthony made about his faith healing abilities, when the court ruled that, as part of the discovery process, Anthony was entitled to obtain the names and addresses of people Tilton claims to have healed.

Anthony stated that he wants to get FCC rules changed to say that claims made by a living person on a television or radio broadcast must be verifiable. When asked how that fits with the First Amendment, Anthony became angry at the questioner and stated that fraud is not protected by the Constitution. (Anthony did not bother to explain how the FCC would determine what is and what is not verifiable, nor how this would affect broadcast of such things as fiction, opinion, discussions of art, or religious broadcasts of any kind. The proposal seemed to me to be quite ill thought out.)

A fact sheet on Anthony's organization, the Trinity Foundation, Inc. (P.O. Box 33, Dallas, TX 75221, (214) 827-2625) states that the group was founded in 1972 and "sponsors several non-denominational home church groups with the goal of recapturing the First-Century Christian experience." The same fact sheet says that the group assisted in the production of a Canadian television documentary titled "Adolph Hitler, The New Age Messiah," which "shows how New Age philosophy inevitably leads to fascism." This and the FCC proposal lead me to question the reliability and objectivity of this organization, but it has apparently been effective in getting media scrutiny on a few televangelists.

Gender Issues

The afternoon session was on "Gender Issues in Science and Pseudoscience" and was moderated by York University psychologist and CSICOP Executive Council member James Alcock. Before the session began, Lee Nisbet, the conference chairman, gave what were supposed to have been his introductory remarks before the first session. They turned out to be as appropriate for this session as they would have been for the earlier one. He spoke briefly on "The Consequences of Inquiry"—how the process of discovery can destroy old ideas, giving Darwin as an example. He stated that our prior likes and dislikes should not determine what we think is true.

Alcock began by briefly describing the role of women in spiritualism (e.g., the Fox sisters, Eusapia Palladino, and the girls involved in the Cottingley fairies hoax). He asked why women were so prominent in spiritualism, why they are more likely to follow horoscopes, why they are less represented at CSICOP conferences than men.

The first panelist, social psychologist and CSICOP Fellow Carol Tavris, the author of *The Mismeasure of Woman*, began with a word of annoyance about the title of the conference. "There are loony feminists, but they are not the whole of feminism," she said. She went on to discuss the role of gender biases in science. "Notice how easy it is to see the bias in 'feminist science,' but not in the name of normal science?" she asked, suggesting that "chauvinist science" might be appropriate for science with a masculine bias. She discussed how research on sexual selection has assumed active males and passive females, and how women entering the field have made new discoveries by neglecting that assumption. Many bird species, for example, have now been found to have promiscuous females. When the male leader of a harem of birds was vasectomized, all of the females still conceived.

Tavris next discussed studies of sex differences in humans. She described two sources of bias in current opposition theories of bias: (1) normal (chauvinist) bias, or the "women as problem" view; and (2) feminist bias, or the "women as solution" view. The first view asks questions of the form "Why aren't women as _____ as men?", filling in the blank with such words as "moral," "rational," "intelligent," "aggressive," etc. The second view says that women are different from men—they're better. To illustrate the point, she described a series of hypothetical study results from the point of view of each. With a normal bias, studies might conclude that women have lower self-esteem, are more gullible, less self-confident, or have trouble developing autonomy. With a feminist bias, the same studies with the same results might conclude that men are more conceited, too inflexible about their beliefs, overvalue their work, and so forth.

Tavris gave as a specific example of these interpretive biases an experiment with babies who could pull a cord to reveal a (Halloween?) mask. After the mask was removed, boys would continue pulling the

cord longer than girls would, which a male researcher concluded showed that they show more courage, fortitude, etc. than girls. A female researcher replied, "no, girls learn faster."

Tavris also pointed out that there is a psychiatric disorder in diagnostic manuals called self-defeating personality disorder which is based on "chauvinist bias." When some female psychologists suggested adding the male converse counterpart, "delusional domineering personality disorder," they were told that "there is no rich psychiatric tradition for such a disorder."

Tavris did maintain that there is one clear difference between males and females: that men are more violent. She did, however, qualify this by stating that women have been just as active in wartime as men, "to the extent culture permits," and that they are just as likely as men to regard enemies as beasts.

She also discussed one area where women are treated as the normal sex and men are treated as deficient—studies of love. For women, according to Tavris, love is the "feeling of squishiness" when the object of love is present, while for men love is behavior, doing things for the loved one. Studies of intimacy assume that what is important is the ability to talk about feelings, while ignoring behavior. This faulty assumption leads to the conclusion that men are inferior in this area.

Tavris rejected studies of biological differences between the sexes, pointing out that an article in *Science* arguing for sex differences in the brain cited a paper on rat brains for evidence of differently sized corpus callosum in men and women. The *Science* paper meanwhile cited another study of 500 fetal brains for another purpose, overlooking the fact that that study found no sex differences. Tavris stated that not only did *Science* refuse to publish letters pointing this out, it has refused to publish any papers which argue that there are no sex differences in the brain. Many studies, she said, are not finding the results (indicating significant sex differences) reported in headlines of periodicals such as *Time*, *Newsweek*, and *Elle*.

Finally, Tavris pointed out that when you look at actual behavior, gender is not a fixed category. People act in different ways in different contexts, and we do not need to attribute differences to static properties of persons. For example, people in the subordinate role in a relationship exhibit "female intuition," no matter what their sex.

CSICOP Executive Council member Susan Blackmore began her talk by asking the question, "Why are so few of us here women?" She examined and rejected a few possible explanations: (1) It's general to all of science. No, the situation is worse in CSICOP than in science in general. (2) Women are more likely to believe in the paranormal. Blackmore put up a slide with various quotes to this effect, including one from Zusne and Jones' *Anomalistic Psychology* (1982, Lawrence Erlbaum, p. 189): believers are characterized as "female, unintelligent, misinformed, poorly educated, authoritarian, and emotionally unstable."⁴ She then reviewed the literature on paranormal experiences and

belief, including some of her own studies. Only two studies found significant sex differences in paranormal experiences and only one study of sex differences in belief attempted to control for other factors. The latter study found no sex differences; the primary correlates of belief in the paranormal were "paranormal" experiences, belief in life after death, and practicing dream interpretation. So Blackmore rejected this explanation. (3) The kind of science that CSICOP is involved in is not attractive to women. This seemed to be Blackmore's favored explanation.

She next put up a slide contrasting features of "masculine" science with those of "feminine" science, according to feminist philosopher of science Sandra Harding.⁵ The contrasting terms were conquest/discovery, objective knowledge/subjective knowledge, control/participation, prediction/understanding, dichotomous/continuous, right-wrong/deeper understanding, fight and win/progress together. Blackmore did not come out and endorse this picture, but instead pointed out that it is itself a (false?) dichotomy.

She then shifted gears and described how, in 1982 at the 100th anniversary conference of the Society for Psychical Research, she criticized parapsychology for accomplishing nothing in a century. Parapsychology, she argued, makes no progress, does not build on past finding, has findings which disappear with better methods, does no prospective design of experiments, and has no repeatable experiments. She proposed doing psychical research without the psi hypothesis. Since asking the question "Does psi exist?" has not been successful, parapsychologists should try taking the experiences seriously and trying to understand them. Psi is only one possible explanation of these experiences.⁶

Blackmore discussed the Ray Hyman/Charles Honorton "debate" over the ganzfeld database of parapsychology experiments, Helmut Schmidt's psychokinesis studies, meta-analysis of random number generator experiments, and other recent studies in parapsychology which have had positive results, with the emphasis on Honorton's ganzfeld experiments. In response to Hyman's criticisms, Honorton developed an automated ganzfeld experiment which he repeated numerous times, reporting his results in "Psi Communication in the Ganzfeld," *Journal of Parapsychology* vol. 54, no. 2, June 1990, pp. 99-139. Blackmore asked, "What has been the response from CSICOP? Where is the panel on meta-analysis? ... It's not here." She described how the Italian skeptics asked three of the best known skeptics and three of the best known parapsychologists to write about the future of parapsychology, with commentaries on all six contributions by Honorton and Blackmore. The result? The skeptics repeated the same old arguments from the past. None mentioned Honorton's 1990 paper. Two mentioned meta-analysis, only to dismiss it briefly (one rudely, according to Blackmore). In other words, the skeptics are now exhibiting the failings which she criticized the parapsychologists for in 1982.

The problem, according to Blackmore, is that the dichotomy—psi or not—puts enormous pressure on both sides not to change their views. The solution, according to Blackmore, is to get rid of our antipathy towards negative evidence, to stop setting ourselves up as “on one side” or another.

The third panelist, Steven Goldberg, chair of the sociology department at the City College of New York and author of the book *The Inevitability of Patriarchy*, began by disagreeing sharply with Tavis. Goldberg stated that most of what she talked about was not about science *per se*, but about politics or social life. Bias, according to Goldberg, is only relevant when it leads to error.

Almost without exception, scientific results in studies of sex differences are statistical. “Men are taller” doesn’t mean “all men are taller than all women.” Heights of men and women are overlapping bell curves with close means, but to conclude that the difference is therefore not important is wrong. A small mean difference can be a big difference at the extremes. Almost everyone over 6’8” is male.

Goldberg noted (in response to Tavis) that the studies which don’t find sex differences do not cancel out the studies that do. The experimenter might be using a different method and be looking at the wrong thing.

Goldberg described how he came to be involved in these issues. In 1971 he was writing a paper in which he stated that all sex differences are environmental, which he took to be common knowledge. He decided, however, to get a citation from the anthropological literature to support it, but was unable to find anything which held up under scrutiny. He found, on the contrary, that in every society males are stereotypically aggressive and females are stereotypically nurturing. You never hear a stereotype that’s totally false, said Goldberg. You never hear anyone say that “those damn Jews are dominating the National Football League.”

Hierarchies are dominated by males, everywhere in all societies at all times. Whatever is viewed in a society as having the highest status is more closely associated with males, whatever it happens to be. Men seek it out. Goldberg said he has offered a challenge to anyone to produce a single society that is a counterexample, but every suggested counterexample has proved not to be one when he examined the ethnography for that culture. Margaret Mead, he said, admitted that her studies do not show a reversal of sex roles, but 36 out of 38 recent sociology textbooks he has examined incorrectly represent her work as showing just that.

Social attitudes can sometimes be the crucial determinants of behavior, according to Goldberg, such as in the prevalence of premarital sex (maybe, he said). But for tendency to dominance, social attitudes are not the crucial determinant, he claimed. He appealed to hormonal sex differences that can be hormonally reversed as evidence of biological differences between the sexes. Feminists who have argued against him on this point, said Goldberg, typically refute a straw man (brain hemisphere studies) while ignoring the hormone studies.

Goldberg went on to claim that socialization cannot explain the tendency of male dominance, because it begs the question—why are males socialized to be dominant, and not females? On the contrary, he argued, societies attempt to fit with the characteristics they observe in the sexes, and so, for instance, men tend to do the heavy lifting.

Goldberg concluded his talk by pointing out that he was not arguing that males should dominate, but only that they do. You can’t derive what should be the case from what is the case. How things work is a scientific question, while how they should work is not.

The panelists were then given a chance to respond to each other, and Tavis stated that while there was a sense in which she agreed with virtually everything Goldberg had to say, there was another sense in which she disagreed with virtually everything he had to say. They both agreed that in all known cultures men are dominant in power hierarchies and women are the primary caretakers of children, but appeared to differ on the explanation.

Keynote Address: “Viruses of the Mind”

On Friday evening, after a fundraising dinner for the Center for Inquiry titled “The Price of Reason,” Oxford zoologist Richard Dawkins spoke on the subject of memes—the cultural analogue of genes. Children are programmed by evolution to absorb culture and language, but a side effect of this absorbency is a tendency to gullibility—making children “easy prey to Moonies, Scientologists, and nuns.” All of our genes are parasites of each other, said Dawkins, and the only differences between viral DNA and ordinary DNA is the way it’s passed on.

He compared DNA and computer viruses. Both are “copy me” programs which, in order to be most effective, are not too virulent and don’t wipe out everything immediately. Lethal genes for young organisms don’t reproduce.

Are there any other “humming paradises of code replication?” Dawkins asked. “Minds,” he answered. Information is exchanged between minds through language, body movement, etc. In human beings is a readiness to replicate ideas and a readiness to obey what has been replicated. As examples, he pointed to the fact that most people are religious and follow the religions of their parents, to crazes that sweep through schools with similar pattern to measles epidemics, and the worldwide epidemic of wearing baseball caps reversed.

“What would it feel like from the inside if one’s mind were inflicted with a mental parasite, a mind virus?” Dawkins asked next. An effective mental virus in the “neosphere,” Dawkins asserted, would be good at coexisting with other viruses and disguising the fact that it had been picked up. A medical textbook diagnosis of such an infection might read that: (1) The patient is impelled by deep inner conviction that something is true, compelling, and convincing, without any evidence. (2) The patient makes virtue of beliefs not having evidence,

and may even think that the less evidence, the more virtuous the belief. "Lack of evidence is a virtue" is itself a self-supporting mental virus. (3) The patient thinks that mystery is a good thing. We should enjoy mysteries, and revel in their insolubility. (As an example, Dawkins gave the Catholic doctrine of transubstantiation—that wine literally becomes the blood of Christ; the appearance of wine that remains is "an accidental property that inheres in no substance." Dawkins repeated philosopher Anthony Kenny's observation that if this doctrine makes sense, then "for all I can tell, my typewriter might be Benjamin Disraeli" and referred to author Douglas Adams' "electric monk" who does your believing for you and is capable of believing "things they have trouble believing in Salt Lake City.")⁷

Dawkins enumerated several additional symptoms, such as an eagerness to be deceived by religious leaders ("Send me your money so that I can use it to convince other suckers to send me their money, too"). He was particularly repelled by the view promulgated by some televangelists that the more difficult it is to give, the more God likes it.

He then addressed the question of whether science is itself a virus, answering it in the negative. While ideas become fashionable and spread, he refrained from using the virus analogy for all ideas because viruses are pointless—they are good at spreading because they are good at spreading. Good programs, on the other hand, spread because they are good programs—good at performing some function, not just at spreading. Faith, according to Dawkins, spreads despite the complete lack of any useful virtues. "Religion," Dawkins concluded, "is an infectious disease of the mind."

In the question and answer session, Robert Sheaffer pointed out that religions seem to have some useful characteristics, such as working as a system to control mutual envy, give rules for behavior, and so on, and Dawkins answered that "you may be right."

[To be continued in the January/February AS. In the next installment: panels on scientific fraud and crashed saucers, the CSICOP video, and CSICOP's 1992 awards. —Editor]

Notes

1. I disagree with Scott's last sentence. The nominalist/realist debate *is* relevant outside freshman philosophy classes—for example, in *graduate* philosophy classes.
2. Dunbar pointed out a couple of cases where there were some studies which bore some resemblance (though quite distant) to the claims of the "melanin scholars." For example, a study did find that reaction times of people with brown eyes were faster than those of people with blue eyes for some task. The "melanin scholars" claim that this can be attributed to melanin. What they don't note is that all the participants in this study were white males.
3. "Multicultural Pseudoscience," *Skeptical Inquirer* vol. 16, no. 1, Fall 1991, pp. 46-50; "Magic Melanin,"

Skeptical Inquirer vol. 16, no. 2, Winter 1992, pp. 162-166; "Afrocentric Creationism," *Creation/Evolution* vol. 11, no. 2 (issue XXIX), Winter 1991-92, pp. 1-8. These articles address the specifics of the *Baseline Essays*.

4. The passage continues with "However, there are several reasons for exercising caution when interpreting these data" and offers many qualifications.
5. Harding is the author of a number of books, including *Whose Science? Whose Knowledge?* (1991, Cornell University Press). In an August 31, 1992 message to the BITNET SKEPTIC Discussion Group, Bernard Ortiz de Montellano pointed out that Harding in this book uncritically accepts bogus claims from Afrocentric pseudoscientist and "melanin scholar" Hunter H. Adams. Harding cites Adams as a reference for the claim that ancient Egyptians invented the telescope, based on alleged Russian discovery of an ancient Egyptian lens. Adams in turn cites Peter Tompkins' book, *Secrets of the Great Pyramid* (Harper & Row, 1971), which in turn cites Peter Kolosimo, *Terra Senza Tempo*, published in 1969 in Milan. Tompkins points out in a footnote that "Several attempts to check these data with Soviet academicians have so far been without result." Ortiz de Montellano points out that Tompkins is also coauthor of the 1973 book *The Secret Life of Plants*, about Cleve Backster's claims that plants feel pain, enjoy music, communicate with humans, and so forth.
6. Blackmore has taken her own advice, and some of the fruits of her research include non-paranormal explanations of out-of-body and near-death experiences and other "psychic" experiences. See her "Near-Death Experiences: In or Out of the Body," *Skeptical Inquirer* vol. 16, no. 1, Fall 1991, pp. 34-45 and "Psychic Experiences: Psychic Illusions," *Skeptical Inquirer* vol. 16, no. 4, Summer 1992, pp. 367-376.
7. See his book, *Dirk Gently's Holistic Detective Agency*. A "holistic detective" investigates a case under the assumption that all things are connected, and therefore everything is evidence, reminiscent of Carl Hempel's raven paradox ("All ravens are black" is equivalent to "all non-black things are non-ravens," so whatever is evidence for one is evidence for the other).

A Visit to Dinosaur Valley State Park

By Richard A. Crowe

On Sunday, October 18, participants at the 1992 CSICOP conference had an opportunity to visit Dinosaur Valley State Park near Glen Rose, Texas, eighty miles southwest of Dallas-Fort Worth. The two buses chartered for the trip left the Harvey Hotel at 8 a.m. and arrived at the park about 9:45 a.m. After about a one-hour stopover, the buses departed, returning to the hotel shortly before 1 p.m. Glen Rose is the site of many

dinosaur tracks preserved in the limestone bed of the Paluxy River; they were first given scientific notoriety in the 1930s by Roland Bird. During the 1970s and 1980s, renewed interest in these tracks developed when creationists claimed that some of them were "man-tracks," apparently constituting "hard evidence" that humans lived contemporaneously with dinosaurs.

Our trip to Dinosaur Valley Park was guided by physicist Ron Hastings, who teaches physics and advanced math at Waxahachie High School and who is one of the co-founders of the North Texas Skeptics. Dr. Hastings has been the leading local critical investigator of creationist claims concerning the Paluxy River tracks since about 1982. Hastings became involved in creationist claims through their misuse of physics concepts and through the urgings of creationist friends (who he characterized as young-Earth, flood-geology, Biblical literalists). One of these friends showed him a film called *Footprints in Stone* that documented the discovery of the alleged "man-tracks" by Reverend Stanley Taylor in the early 1970s.

As the buses headed toward Glen Rose, Hastings briefed CSICOP participants on the history surrounding the tracks and gave us some insights into what we would see at the site. The Paluxy River is one of the few places in the world where both three-toed theropod prints made by bipedal dinosaurs and round elephantine sauropod prints made by four-legged dinosaurs are evident in abundance. The prints were preserved in the river bed by means of a three-step process. First, the animal walked across soft, moist cohesive sediment. Second, the imprint filled with sediment of contrasting texture that did not distort the original print; both layers then hardened. Finally, differential erosion removed the softer rock type on top, leaving the imprint exposed.

When we arrived at Dinosaur Valley State Park, we stopped to look at casts made from prints which had long since been extricated and taken to New York City for display. Typically such prints are spaced by 1.5 meters along a trail. Foreprints often appear to be distorted due to overlap by the rear feet. Claw extensions are usually always visible, and the direction of the middle claw is used to determine which foot made the imprint (left curves left, right curves right).

At the river bed itself, Hastings pointed out a number of theropod and sauropod prints clearly seen under six inches of water. We then crossed the river on a rock bridge and were shown a trail of sauropod prints; one of these was associated with a groove that Hastings stated could have been due to a "tail-drag." After an inspection of more theropod prints, we reached a ledge where Hastings showed us depressions that were alleged by Reverend Carl Baugh during the early 1980s to be a trail of "man-tracks." Hastings demonstrated how these depressions were filled in with a water-oil mixture by some creationist investigators so as to resemble human prints. In fact, the tracks are spaced by 2 meters, and would have been Olympic leaps for humans! Hastings reminded us that creationists use the Biblical passage in Genesis 6:4, which says "There were giants in the earth in those days....," to explain away this spacing

problem for the man-track hypothesis. Baugh and other creationists in effect used the fallacious argument "if it looks like a man-track, it must be a man-track" to justify their claims. There are in fact many other depressions along this ledge, described by Hastings as a "track-maker's Rorschach [ink-blot] test." Basically, one can find any kind of track one wants to find (like seeing faces in clouds). Richard Dawkins, who joined the tour, then reiterated that point standing beside the alleged "man-track" and quoting from Shakespeare's *Hamlet* (as he did in the BBC production of his book *The Blind Watchmaker*).

During the 1980s, Hastings was a key member of an investigative team that examined on-site the claims of Carl Baugh and other creationists. This team dubbed themselves the "Raiders of the Lost Tracks." Together, the "Raiders" found that all of Baugh's "man-tracks" were either erosional features, trace fossil patterns conveniently interpreted, or genuine depressions associated with exposed dinosaur trails.¹ The most controversial prints were found at the so-called Taylor site, now on private property. Hastings explained to the CSICOP group that due to lack of time (and lack of permission), we would not have the opportunity to see these prints first-hand. Along four of the dozen or so trails at this site are tracks which were claimed to be human by creationists. Some of these trails contain elongated prints which were not at first clearly recognizable as dinosaurian. It was only after investigation by Hastings and Glen Kuban, spurred by creationist "man-track" claims, that the nature of these tracks was revealed. When the elongated (but shallow) depressions were exposed to air, the tridactyl outline of the print was revealed by a strange discoloration; apparently, the outside anterior end of the depression oxidized due to the presence of some iron-rich compound and turned reddish-brown.² Evidently, these tracks were made when the dinosaur's "heels" touched the mud (plantigrade) whereas most of the tridactyl prints were made by dinosaurs walking or running on their toes (digitigrade). Although there are plantigrade dinosaur tracks in other parts of the world, Hastings and Kuban had not initially realized this fact.

As a result of the discovery, a delegation of creationists from the Institute of Creation Research (ICR) in San Diego was invited to visit Glen Rose and inspect the tracks. By 1986, the official position of the ICR was that it is "improper for creationists to continue to use the Paluxy data as evidence against evolution." The ICR has now screened off the Paluxy "man-track" section of its San Diego museum from the public, and has dissociated itself from any "man-track" claims. Furthermore, the film *Footprints in Stone* has been removed from circulation. Hastings reiterated that "no self-respecting creationist" now asserts that any Paluxy dinosaur prints are of human origin, although the "man-track" claims are apparently still being taught to local school-children. Moreover, Baugh's "Creation Evidences Museum," established in 1983, is still in operation near the entrance to Dinosaur Valley State Park. Here, Baugh

has on display "man-track evidence" (imitative carvings), as well as "out-of-order" fossils such as a "hammer in Ordovician stone" (a 19th-century miner's mallet), human bones in "Cretaceous rock" (apparently due to a Utah "cave-in" 250 years ago), a "fossilized Cretaceous human tooth" (a fish incisor), and a "fossilized female finger" (an iron oxide nodule).³ Unfortunately, the CSICOP group did not have the opportunity to visit this "museum" (imagine a group of skeptics showing up there unannounced!); the reason was somehow appropriate: it is closed on Sunday morning.

Notes

1. See Ron Hastings, "The Rise and Fall of the Paluxy Mantracks," *Perspectives on Science and Christian Faith* 40(3, 1988):144-155.
2. See Ron Hastings, "New Observations on Paluxy Tracks Confirm their Dinosaurian Origin," *Journal of Geological Education* 35(1987):4-15.
3. See Ron Hastings, "For Your Information: A Creationist Blunder Table," *Bulletin of the Houston Geological Society* (June 1992):39-41.

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The End of Crop Circles?

By Chris Rutkowski

In the latest issue of *The Crop Watcher* (#12, July/August 1992, pp. 3-4), a circlezine from England, editor Paul Fuller has this to say:

Even the paranormally-inclined cerealogists have admitted that 1992 produced fakes galore, with few prepared to stick their necks out and claim that a single (NB!) British circle qualified as "genuine." In some ways, this restrained response could be construed as an over-reaction to last summer's hoax revelations, but in reality the awful truth has dawned on cerealogists everywhere—that most modern crop circles really are man-made hoaxes and that if there ever was a "genuine" phenomenon in the first place it has now been utterly swamped by a smokescreen of wishful thinking and media-inspired mythology. Sad words indeed but a fact which most researchers now seem to be accepting with some reluctance.

Later on, Paul notes that "leading cerealogists accept that they have lost the crop circle battle and that it is time to flee the sinking ship." A number of cerealogists are said to be emigrating to the USA!

As for the remaining "meteorologically-caused" circles, Terence Meaden, that theory's main proponent has now stated that "Anything other than a simple circle is definitely a hoax." and he has now restricted the number of "genuine circles" to "fewer than a dozen a

year." Paul further notes: "It remains to be seen whether Meaden's meteorological theory can survive such trauma."

Later in the issue, there appears a map of England, showing the locations of "Known Crop Circle (Groups of) Hoaxes." I can't reproduce it here, but to give readers a flavour for what's on it, the editor notes that "there are so many known hoaxers that we couldn't squeeze them all in!" Good old Doug and Dave, who got all the publicity, are on there with their small number of formations.

In North America, we know that Rob Day [a Canadian skeptic —Ed] made a few hoaxed circles in Alberta, a farmhand was caught by my colleagues and I in Manitoba, and at least one set of hoaxers admitted to some circles in the American midwest.

So, we wonder, echoing Paul Fuller:

Is cerealogy (or, to quote some, "crop circle mania") finally DEAD?

Chris Rutkowski is a Science Educator for the Royal Astronomical Society of Canada and an Instructional Designer and a Photographic Laboratory Curator at the University of Manitoba. He has published numerous articles on UFOs (see AS, July/August 1992, p. 6 for some references to his work). This is a slightly revised version of an article posted to the Usenet sci.skeptic group on September 21, 1992.

Next Issue

The January/February issue of *The Arizona Skeptic* will feature the Phoenix Skeptics' predictions for 1993, part two of the report on the Dallas CSICOP conference, and more.

Upcoming Meetings

The Phoenix Skeptics will meet at the Jerry's Restaurant on Rural/Scottsdale Road between McKellips and the river bottom, with lunch at 12:30 on the first Saturday of each month except where it conflicts with a holiday.

Articles of Note

Steve Fishman, "Hunting for a Miracle," *Health* 6(1, February/March 1992):38-46. On alleged miracles at Lourdes—how the number has declined as scrutiny is increased.

Stephen S. Hall, "Cheating Fate," *Health* 6(2, April/May 1992):38-46. On spontaneous remission.

Jim Moseley, "Beckley Does It Again!" *Saucer Smear* (November 1, 1992):3. Reports on Tim Beckley's "National New Age & Alien Agenda Conference" held in Phoenix, at which Jerry Wills played guitar in an impromptu rock session. Wills, whose story as a UFO abductee was reported in the pages of this newsletter (AS, July/August 1988, p. 3), now claims to have been one of the aliens who crashed and died at Roswell, New Mexico, but was reincarnated as a human. (See also Robert Sheaffer's "Psychic Vibrations" column in the *Skeptical Inquirer*, Fall 1991, p. 33.)

Bob Saltzman, "A Disease Called 'The Sound,'" *Harper's* 285(October 1992):28-29. An excerpt from an article in the July 9 *Taos News* about a 17 Hz hum which has been disturbing Taos residents.

Brian Siano, "Bad Satan Psycho-Juju: False Memories, Broken Families, Child Sacrifice, and the New Satanic Panic," *Philadelphia City Paper* (October 23, 1992):10-12. The "Skeptical Eye" columnist for *The Humanist* writes about the False Memory Syndrome Foundation, the exposure of phony ex-Satanists Mike Warnke, John Todd, and Laurel Wilson ("Lauren Stratford"), and claims of Satanic Ritual Abuse.

Jon Trott and Mike Hertenstein, "Selling Satan: The Tragic History of Michael Warnke," *Cornerstone* 21(#98, 1992):7-9, 11-14, 16-17, 19, 30, 38. Mike Warnke travels the country billing himself as a former Satanist high priest turned Christian comedian. He is the author of the 1973 book *The*

Satan Seller, which played a major role in spawning the recent hysteria over satanic ritual abuse, human sacrifice, and other conspiratorial activities. The Christian magazine *Cornerstone* tracked down his friends and family and discovered that his story is a fabrication. The August 17, 1992 issue of *Christianity Today* also reported parts of the story. This exposé follows *Cornerstone's* earlier exposure (in 1990) of Lauren Stratford's book *Satan's Underground*.

Jay Grelen, "Christian Comedian Set to Close Doors of Troubled Ministry," Lexington (Kentucky) *Herald-Leader*, (September 30, 1992):C13. Reports that, as a result of the *Cornerstone* exposé, Word Records has suspended sale and promotion of Mike Warnke's 13 comedy records and two videos, some bookstores have ceased selling his books, the IRS has revoked his ministry's tax-exempt status, and his ministry is shutting down.

The Arizona Skeptic is the official publication of the Phoenix Skeptics and the Tucson Skeptical Society (TUSKS). The Phoenix Skeptics is a non-profit scientific and educational organization with the following goals: 1. to subject claims of the paranormal, occult, and fringe sciences to the test of science, logic, and common sense; 2. to act as clearinghouse for factual and scientific information about the paranormal; and 3. to promote critical thinking and the scientific method. The contents of The Arizona Skeptic are copyright © 1992 by the Phoenix Skeptics unless otherwise noted. Material in this publication with Phoenix Skeptics copyright may be reprinted provided that The Arizona Skeptic and the author are provided copies of the publication in which their work is reprinted. Address all correspondence to the Phoenix Skeptics, P.O. Box 62792, Phoenix, AZ 85082-2792. Submissions for publication in The Arizona Skeptic may be sent to Jim Lippard, P.O. Box 42172, Tucson, AZ 85733 or electronically to LIPPARD@CCIT.ARIZONA.EDU. All manuscripts become the property of the Phoenix Skeptics, which retains the right to edit them. Subscription rate is \$12.50 per year. Editor: Jim Lippard. Production: Ted Karren.

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