

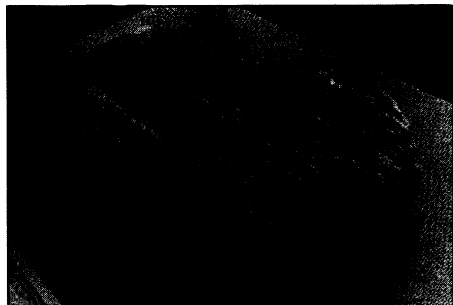
SCIENCE AND THE PUBLIC

Anti-Evolution TV Show Prompts Furor

The claims of creationists—the young age of Earth, that fossils put the lie to the theory of evolution—routinely send biologists into fuming fits. But those fits pale before the indignation spilling out, mostly over the Internet, since Sunday evening, 25 February, when a major U.S. television network ran a “special” suggesting that humans co-existed with the dinosaurs, and that the scientific establishment was suppressing the evidence.

The program, *The Mysterious Origins of Man*, “is absolutely shameful, [and] it sort of sets us back 100 years,” says paleoanthropologist Donald Johanson of the Institute of Human Origins in Berkeley, California. The show, which was aired by the National Broadcasting Company (NBC), purports to present evidence from “a new breed of scientific investigators,” but many scientists charge it is merely a potpourri of pseudo-science lore, and some are urging a boycott of the program’s sponsors. “What makes me so upset is their distortion of science and what science is all about,” says Jere Lipps, director of the Museum of Paleontology at the University of California, Berkeley. But the show’s creator, New York-based independent producer Bill Cote of B.C. Videos, told *Science* that “there is hard evidence that man lived 200 million years ago on the planet.”

The show, hosted by actor Charlton Heston (famous for his film role as Moses),



GLEN J. KUBAN

Star attraction. The “Burdick Print,” viewed by most scientists as a fake, was shown on TV as evidence that people co-existed with dinosaurs.

also presents claims that the lost city of Atlantis is in the Antarctic and that “technologically advanced man” existed before history began. But what has scientists really steamed up is the segment about humans and dinosaurs living at the same time. That contention is based on so-called “man tracks” found near authentic dinosaur trackways in the Paluxy Riverbed in Texas, as well as the famous “Burdick print,” a humanlike footprint in an unattached block of stone named after creationist Clifford Burdick, who first publicized it. The “man tracks” are actually partial dinosaur tracks, says Lipps. The Burdick print, on the other hand, was deliberately carved by someone in the 1930s, according to Glen Kuban, a computer scientist and amateur paleontologist from Cleveland

who is a longtime student of the Paluxy sites. Paleontologist Martin Lockley of the University of Colorado, Denver, agrees and says “this is just reviving stuff that has already been debunked.” Vouching for the authenticity of the prints was one of the show’s “new breed” of investigators: Carl Baugh, a fossil hunter and former Baptist minister who heads the Creation Evidences Museum in Glen Rose, Texas, near Dinosaur State Park.

Lipps and other scientists have tried without success to get a response from NBC. When *Science* contacted NBC Entertainment in Burbank, California, the division that aired the show, a spokesperson said: “We don’t have a statement because to my knowledge there have been no complaints.” Another spokesperson said the show was presented as an “alternative scenario” and not as fact.

Yet the decision of a major TV network to air this show “illustrates that the position of evolution is very spongy in the population outside of the academy,” says Eugenie Scott of the National Center for Science Education in El Cerrito, California. She says her center is getting pleas for help “from teachers who say they are dealing with fallout from the NBC program in their science classes.” Leonard Krishtalka, director of the Natural History Museum at the University of Kansas, finds the situation rich with irony: “I’m sure in a few months [NBC news anchor] Tom Brokaw will have a special on the deplorable state of science knowledge among American school children.”

—Constance Holden

XENOTRANSPLANTATION

Yellow Light for Pig-Human Transplants

An influential British panel is urging that transplants of organs from animals to humans not be approved until scientists understand more about the risks of transferring infectious agents between species. In a report* published this week, the independent Nuffield Council on Bioethics says pig-to-human transplants would be ethically justified if the risks are acceptable, but it has moral and scientific reservations about primate-to-human transplants.

Progress in xenotransplantation has been outstripping the existing regulatory framework on both sides of the Atlantic for animal experimentation and the care of transplant patients. In September 1995, the U.K. biotech company Imutran, based in Cambridge, announced success in transplanting transgenic pig hearts into cynomolgus monkeys, and predicted that it would begin human “feasibility

studies” in 1996 with organs from pigs genetically modified to avoid rejection. And the U.S. Food and Drug Administration (FDA) last year approved a controversial experiment in which an AIDS patient received a transplant of baboon bone marrow—apparently unsuccessfully (*Science*, 21 July 1995, p. 293).

The Nuffield report is “the first pronouncement” on the ethical aspects of such work, says the council’s executive secretary, David Shapiro. It saw no strong ethical barriers to the use of pig organs, arguing “it is difficult to see how, in a society in which the breeding of pigs for food and clothing is accepted, their use for life-saving medical procedures ... could be unacceptable.” But the report cautions that “the burden of proof should lie with those developing the new technology to demonstrate that it will not cause serious harm.”

As for primates, the panel pointed out that the risk of primate organs transmitting pathogens is far higher because of their biological similarity to humans. And it could not condone raising primates solely as tissue

banks. “To develop the use of primates for xenotransplantation, when there is an ethically acceptable alternative, would not be justifiable,” the panel concluded.

The report recommends that the U.K. Department of Health immediately establish an Advisory Committee on Xenotransplantation to draft a code of practice for raising “pathogen-free” source animals and guidelines on monitoring patients. “We think there ought to be quite a careful regulatory framework,” says rheumatologist Mark Walport of London’s Hammersmith Hospital, a member of the report’s working group. “It is important that this is externally regulated ... that researchers should be protected from their own enthusiasms.” But David White, Imutran’s director of research, sees a downside: “I don’t think we’d be prepared to sit around twiddling our thumbs while the government organized a committee and our patients were dying.” But he adds, “if a committee was in place we’d be happy to submit our proposals.”

—Claire O’Brien

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* Animal-to-Human Transplants: The Ethics of Transplantation, Nuffield Council on Bioethics, 28 Bedford Square, London, WC1B 3EG, U.K.