

Science and Reason, Foibles and Fallacies, and Doomsdays

Heidelberg Conference attracts 300 delegates from 23 countries

KENDRICK FRAZIER

In the twenty-two years since its beginning, the modern skeptical movement has gone from an idea in the minds of philosopher Paul Kurtz and a handful of concerned colleagues to a widely recognized international network of organizations. Ninety-two skeptics organizations in thirty-three countries now examine paranormal claims, explore the boundaries between science and pseudoscience, and consider social, philosophical, and educational issues involving science and the public.

In the 1980s the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP)—which started it all—began holding conferences about every eighteen months in cities and academic settings around the United States. In 1996, CSICOP celebrated its twentieth anniversary with the first World Skeptics Congress at the place of its founding, the State University of New York at Buffalo (SI, September/October, 1996).

The Second World Skeptics Congress, July 23–26, 1998, in the picturesque city of Heidelberg, Germany, was the most cosmopolitan ever. The sessions took place in a modern lecture hall at the ancient and historic University of Heidelberg (founded in 1386). The congress featured three and a half days of sessions, most in English, some in German, with more than 300 registrants from twenty-three countries.



Heidelberg, site of the Second World Skeptics Congress.

It was sponsored by CSICOP and co-sponsored by the European Council of Skeptical Organizations and the German skeptical organization GWUP (*Gesellschaft zur wissenschaftlichen Untersuchung von Parawissenschaften*).

With the dawn of new millennium looming, the conference theme, "Armageddon and the Prophets of Doomsday" served as a convenient springboard to a wide range of topics in and out of science. Millennium prophecies, natural disasters, and environmental concerns were at the core, but there was ample time to consider antiscience and the postmodernists, alternative

medicine, the problems of memory, the paranormal and skepticism in China. And there were some case studies—reports of investigations into such matters as dowsing, the Shroud of Turin, and "bio-energetic products." There was also a workshop for skeptics.

And—as is not always the case at these session-packed conferences—there was some time for socializing. The traditional conference banquet was replaced by an informal evening on a double-deck boat sailing up the river Neckar, culminating in illuminations of high-perched castles and a magnificent fireworks show, the sounds echoing off the canyon walls.



Paul Kurtz

"As we approach the year 2000 we are surrounded by prophets of doom who predict that terrible disasters await us," said CSICOP Chairman Paul Kurtz in opening the congress. We have a natural yearning to know the future and a certain mixture of optimism and apprehension about it. The trick, he emphasized, is to apply the methods of scientific inquiry in examining all claims, including those about doomsdays and disasters, whether concerns arise from secular, religious or New Age origins.

If you think these science-minded skeptics would therefore automatically pour cold water over every expectation of disaster, you'd be wrong. The threat of catastrophic comet and asteroid impacts onto Earth was deemed real, global warming was taken seriously, sudden climate flip-flops were seen as a strong possibility, and the Year 2000 problem with the world's computers was far from dismissed. ("Will the worst happen?" asked science and technology writer Wendy



Alan Hale

Grossman, author of the recent book *net.wars*. "Who knows? The most informed technical minds believe that the chances are that at least some things will fail.")

There was lots of real science. Astronomer Alan Hale, co-discoverer of Comet Hale-Bopp, the largest and most dramatic comet in decades, discussed the scientific significance and popular lore of comets and gave a personal account of his discovery.

He then lambasted the combination of scientific illiteracy, willful delusions, a radio talk-show's deceptions about an imaginary spaceship supposedly accompanying the comet, and a cult's bizarre yearnings for ascending to another level of existence that led to the Heaven's Gate mass suicides.

Hale says that well before Heaven's Gate, he had told a colleague, "We are probably going to have some suicides as a result of this comet.' The sad part is that I really was not surprised."

"Comets are lovely objects," he said, "but they don't have apocalyptic significance. We must use our minds, our reason."

Fellow New Mexico scientist David E. Thomas gave an entertaining talk about his debunking of the "Bible Code" (SI, November/December, 1997). Using the same "equidistant-letter sequence" methods that author Michael Drosnin used in computer-searching the text of the Hebrew Torah, Thomas showed how he could find similar "messages" in other literary works.

Drosnin had claimed that using his methods, the words "Nazi" and "Hitler" appear linked in the Torah but not in Tolstoy's novel *War and Peace*. Thomas found both in *War and Peace*. "I won't call Drosnin a liar," said Thomas, "but here is a claim he made that is demonstrably false."

Using Drosnin's methods Thomas also found that the King James version of Genesis contained such phrases as "The Code Is Bogus" and "Darwin Got It Right." Applying them to Drosnin's own book, *The Bible Code*, Thomas



Amardeo Sarma, convenor of the German skeptical organization GWUP and a member of the CSICOP Executive Council, was honored by CSICOP at the end of the Second World Skeptics Congress with a "Special Citation for Distinguished Contributions to the Skeptical Movement." Sarma was recognized by the Executive Council for his "outstanding dedication and effectiveness in furthering the cause of science, reason, and skepticism in Germany and worldwide."

found "The Code is Evil."

Giving import to such post-hoc data-mining procedures, Thomas noted wryly, is a double-edge sword. Thomas says he even found in *War and Peace* a "prediction" that Michael Jordan and the Chicago Bulls would win the 1998 National Basketball Association title. (They did; see News and Comment, this issue.)

"Either Tolstoy is the Supreme Creator of the Universe—or perhaps the Bible Code is just an arcane mathematical technique that allows one to harvest detailed hidden messages from any text."

Keynote speaker Elizabeth Loftus, the University of Washington psychologist and expert on the malleability of memory, described a litany of new studies that show, in her words, "the power of imagination to make people believe that they have had experiences that they didn't have." As she summarized: "People have been led to remember nonexistent events from two weeks ago, from their childhood, and even from the day after they were born. These findings fill in our understanding of the rather flimsy curtain that separates imagination and memory."

Numerous other foibles, fallacies, falsehoods, and examples of false science were revealed and targeted in a variety of presentations.

In Europe, homeopathy has wide popular and political support, said Willem Betz, professor of medicine at Brussels University and a national delegate to a program in which fifteen European countries collaborate to set rules for recognition of alternative medicine. Proponents of homeopathic medicine "know quite well" that it "would be quite impossible to meet the criteria, so they offer countless arguments why

the strict rules should not apply to homeopathy."

He also gave an example of typical "homeopathic logic": Its proponents contend both that "proof is not possible" and that "proof is piling up." Said Betz: "Never give an aura of science to nonsense."

Prominent Dutch astrophysicist Cornelis de Jager, a former president of the International Council of Scientific Unions, one-time general secretary of the International Astronomical Union, and current chairman of the European Council of Skeptical Organizations,

used well-tuned humor to take on the absurdities of those who attach great mystical significance to measurements of the Great Pyramid. He had the audience in stitches with his deadpan talk about the "meaningful" measurements he took in the corridors of his home. His home is in an astronomical observatory, a location, he said, "that may be very close to the cosmos and well receptive to its incredible powers."

Jean-Paul Krivine of the French Union Rationnelle described New Age and pseudoscientific practices used in French companies. Many companies in

Anti-science Postmodernists *Rhetoric Over Evidence*

One of the liveliest sessions at the Second World Skeptics Congress was "Anti-Science and Postmodernists," and Jean Bricmont was its central figure. Bricmont, professor of physics at the University of Louvain, Belgium, is co-author with Alan Sokal of *Intellectual Impostures*. Sokal is the American physicist whose hoax paper satirizing the rhetorical excesses and scientific pretensions of extreme postmodern criticisms of science was published in the journal *Social Text* in 1996 without its editors realizing the article was a parody (see "Physicist Alan Sokal's Hilarious Hoax," *SI*, November/December 1996).

Last year Sokal and Bricmont expanded on their argument in their book. Published in Paris, it raised a storm of controversy, because many (but not all) of the philosophers and social critics who are the subject of its criticisms are French. And the French take their intellectuals very seriously. ("Americans don't have famous intellectuals as the French have," he said; the crowd moaned in reluctant agreement.) The book was published in English for the first time this summer in London (see page 58), and an American edition is due out soon.

Bricmont says Sokal's 1996 article was like a Trojan horse brought within the walls of cultural studies and science studies. "His article was full of nonsense."

Bricmont said criticism of science is healthy but too many of these "science studies" critics write without truly understanding science. They use scientific words and concepts they don't understand. "The editors did not understand Sokal's article," he said. "If they did understand it, they would have known it was bullshit. So how could their readers have understood? What were their readers to learn?"

Bricmont showed the audience excerpts from some of the postmodernist writings on science, calling one example "a max-

imum amount of confusion in a minimum number of words."

He said these critics insist they are not antiscientific and argue, "We are scientists just like you." Yet they profess that scientific theories are little different from socially constructed viewpoints, opinions no better than any others.

Yet, said Bricmont, it doesn't work to try to understand theories and make judgments on whether belief in them is rational or irrational "without regard to whether they're true or false."

"That doesn't work," he said. "You can't explain why people come to believe in anything without discussing the evidence for it. To explain the cause of belief, you have to consider maybe it is because it is true or rational, that evidence supports it. Without looking at the evidence, there is no way to understand" why scientists support one theory over another. "If you look at it purely sociologically, you don't always see."

The panel on anti-science and postmodernism concluded with a lively question session discussing all these issues. One audience member cautioned that this debate is not just academic. She told of similar antiscientific rhetoric that her daughter was forced to study in her classroom. "I am concerned about the damage being done to the average student."

Astrophysicist Evry Schatzman, a former president of the French Physical Association, was a member of the panel. In the discussion, he pointed out that in astronomy new astronomical instruments regularly come into operation, and they "make new discoveries almost every day." He echoed many scientists' antipathy toward the postmodernists' rhetoric and criticisms. "These philosophical speculations are so much away from the way we [astronomers] work, that we are not interested in them."

— K.F.

France are widely using nonrational and nonscientific methods such as graphology and numerology. Graphology, he said, is used by most recruiting departments in France.

In recent years the popular press has made frequent references to experiments conducted by a university group from Munich (H. Wagner, H.-D. Betz, and others) that professed to find a core of skilled individuals who supposedly have unexplained success in dowsing. These so-called "Scheunen experiments" have been funded by the German government. They have given the impression that physicists have shown that dowsing is a real phenomenon.

J.T. Enright of the Scripps Institution of Oceanography reported on a thorough reexamination he has car-

ried out of the experimental results. The results, he said, show the exact opposite of what the proponents are claiming. Showing a plot of the scattered data on a chart in which the dowsing proponents claim to see trends supporting dowsing abilities, Enright said: "It is hard to imagine a set of data that represents a more convincing disproof of dowsing. I challenge anyone here to show any difference between randomly generated data and the actual data."

Lest anyone think he or she is immune to the self-deception that goes into forming and holding to paranormal unsupported beliefs of every sort, psychologists Ray Hyman (University of Oregon) and James Alcock (York University) would relieve you of that misperception. In their world congress

workshop on critical thinking, they emphasized how hard it is for us to see through our own preconceptions.

"Teaching people to think critically in their individual lives is hard," said Alcock. "The world is more likely to give information that confirms our beliefs than not, because of the way we interpret information."

"So if we believe in something, people's experiences will confirm it."

"All of us—myself included—hold beliefs that are false. I'm sure I do. The problem is I don't know which ones."

"Unless we try to use a logical, scientific approach, we will just compound the errors our brains make."

Kendrick Frazier is Editor of the SKEPTICAL INQUIRER.

Alternative Medicine, Impact Threats, Abrupt Climate Change, and Efficient Energy

MATT NISBET

23 Countries at World Congress

These were the countries represented at the World Skeptics Congress in Heidelberg:

Austria	Ireland
Australia	Italy
Belgium	Japan
Bulgaria	Netherlands
Brazil	Norway
Canada	Russia
China	Slovak Republic
Czech Republic	Spain
Finland	Switzerland
France	United Kingdom
Germany	United States
Hungary	

World Skeptics Congress Convenes with Participants from Five Continents

Here is a brief review of several of the sessions at the World Skeptics Congress. More reports will appear in future issues.

At Heidelberg University, on the bank of the Neckar River, some 300 skeptics, scientists, experts, and academics from North America, Europe, Australia, Asia, and South America convened to discuss and critically evaluate the latest claims of the paranormal and pseudoscience and consider some crucial issues in real science.

Opening the World Skeptics Congress, Paul Kurtz, professor emer-

itus of philosophy at the State University of New York at Buffalo and founding chairman of the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP), declared: "Skeptics want to focus on inquiry, not doubt. We simply insist that there be sufficient evidence, rational coherence, or replicable experimental confirmation of claims and that hypotheses introduced undergo rigorous peer review and corroboration before they are accepted."

Leading medical researchers' comments on the perceived growth of alternative medicine in North America and Europe highlighted half-day plenary sessions on topics that included millennial doomsday predictions and a workshop on critical thinking.