



'The Flight from Science and Reason':

New York Academy of Sciences Conference Airs Issues

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In reaction to increasing antirational and antiscientific rhetoric in academia, the New York Academy of Sciences assembled a diverse group of scientists and scholars to examine the origins and explore the ways in which this phenomenon could be properly combatted. The conference, titled "The Flight from Science and Reason," took place May 31 to June 2, 1995, in New York City. This was one of a series of meetings routinely convened by the academy focusing on pertinent issues involving science.

The aim was to "consider the contemporary flight from reason and its associated antiscience, its denial of even the hope of objectivism, and its relativist rejection of Enlightenment ideals." The discussion included an impressive range of subjects.

The consensus of the presenters was that science-bashers come from all walks of academia. The usual culprits of anti-intellectualism, namely radical feminism (including notions of female science and male science), radical environmentalism (an unwillingness to look at opposing evidence), and social constructivism (knowledge is considered a product of the social, political, and historical pressures of the times rather than of objective truth), are joined by New Ageism and psychoanalysis in what is considered to be an

attempt to debase rationality. Setting the tone for the meeting, Paul Gross, coauthor of *Higher Superstition* and conference chair, said the irrationalists' attacks on science threaten the effective maintenance of "liberal values." He characterized these attacks as "vulgarizations" and later described them as "half-truths and quarter-truths told as total truths."

A running theme was that of the motives behind the postmodernist (antiscience and antireason) claims. James E. Alcock, a Fellow of the Committee for the Scientific Investigation of Claims of the Paranormal, and a psychologist from York University, in Toronto, contrasted what he calls "the scientific-humanist belief system" and the "transcendental belief system." He said the former must be taught to people for an appropriately high degree of scientific literacy to be achieved.

Others pointed to the politically induced motives behind antirational rhetoric. CSICOP Chairman Paul Kurtz considered that the latest upsurge in antiscientific sentiments, along with the rise in religious fundamentalism, could very well translate into new antirational political trends. To further cultivate a rational democracy, he recommended conveying to the public an appreciation for the sci-

entific outlook and methods of science.

Noretta Koertge, from Indiana University, Bloomington, provided a description of the constructionist approach, in which reality is seen as a result of social consensus. Koertge pointed out that some constructivists deem that some findings by science—even if true—are too socially or politically dangerous to publish, or even to study in the first place.

Various speakers discussed the possibility that behind much of antiscience and antirationalism there is an ultra-egalitarian willingness to endow validity to each and every belief, for the mere fact that it is believed with such fervor. Wendy Kaminer, author of *I'm Dysfunctional, You're Dysfunctional*, illustrated how the intensity of a belief is frequently taken as evidence of its truth. These proclivities are instrumental in forming what she called "perfectly closed belief systems."

Mario Bunge, noted philosopher from McGill University, Montreal, suggested an antidote to antiscience—teaching that ignorance can be overcome by research. Bunge, a CSICOP Fellow, considers postmodernism a form of intellectual dishonesty. He and others forcefully maintain that postmodernists have not earned the academic freedom they are currently enjoying. He regards their musings as shal-

low and inherently antiacademic, in that they do not recognize the duty of scientists to question in a rational manner. Gerald Holton, a physicist at Harvard University, vigorously reprimanded university professors at large for displaying what he termed a *negligent acquiescence* in the face of post-modernist attacks on science.

Antirationalists typically point the finger at instances of scientific fraud to underscore their allegation that science is just as fallible as any other human endeavor. Their mission is to show that science is not without bias. Criticisms like these, Paul Gross remarked, are trivial, and not original. David L. Goodstein, from the California Institute of Technology, who was responsible for preparing Caltech's guidelines on scientific fraud, stressed that fraud is an anomaly in science. Further methodological considerations were touched upon later by Rutgers University anthropologist Robin Fox, who stressed that it is method, not subject matter, that ultimately defines science. This method, he argued, is itself the antidote to its misuses. When social relativists and postmodernists point to instances in which scientific knowledge has been put to detrimental uses, or in which it has been biased, "they miss the point," Fox states; those critiques should instead be addressed at the misuses of science. Conference lecturers were unanimous in saying that the validity of science goes beyond these objections. Social relativism, Fox said, is tantamount to a confession of intellectual powerlessness.

Historical considerations, on which many pseudointellectual claims are based, were also explored. Mary Lefkowitz, scholar at Wellesley College, exposed the constructionist influence in Greek and Latin history. For some time now, she said, some constructivists have contended that the great ideas in Greek philosophy and

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Paul Gross and Norman Levitt field questions at the New York Academy of Sciences Conference, 'The Flight from Science and Reason.'

even works of literature were stolen from the Egyptians. Lefkowitz persuasively showed how these pseudohistorical claims have no basis in any reliable historical research. One example is a claim found in George M. James's *Stolen Legacy*, a classic among Afrocentric writers. James claims that Aristotle stole books from the Library of Alexandria. Lefkowitz correctly points out that the library was not around until after the Greek philosopher died. "Ancientness itself," in many cases, "is by default taken to be evidence for the claim's veracity," she said. Lefkowitz concluded, not surprisingly, that all too often the contents of pseudohistory are more an indication of what best suits the proponents' cultural agenda.

Bernard Ortíz de Montellano, from the department of anthropology at Wayne State University, Detroit, called for a better education not only of students, but also of elementary school teachers. It is elementary school teachers, he said, who often see themselves pressured to give in to political and cultural motives meant to veer the school curriculum in certain directions. He said those teachers often do not have the necessary tools to fight off such pressure.

Feminist (or gynocentric) epistemology constitutes much of the anti-scientific entourage of ideas, according to Koertge. She said that in many cases students find that they are more able to survive professionally in academia by adopting radical feminist viewpoints. She said senior advisors and others in positions of power often encourage them to take the radical feminist position, something she said she has seen firsthand. Koertge said it is everybody's job to fight this "nonsense"; it should not be up to just females, in the case of radical feminism, or blacks, in the case of Afrocentric studies, or homosexuals, in the case of gay and lesbian studies.

Christina Hoff Sommers, author of *Who Stole Feminism?*, discussed Carol Gilligan's 1982 book *In a Different Voice: Psychological Theory and Women's Development*, which concerns the alleged different ways in which women deal with moral dilemmas. Gilligan contends that women have purportedly superior styles of cognition. Hoff-Sommers, from Clark University, Worcester, Massachusetts, exposed the book's methodological problems and faulty conclusions. She says legitimate research does not bear out the book's claims. She dubbed the book "a landmark in advocacy research."

The antiscientific attitudes of post-modernists stem in great part from their mistrust of medicine and what they consider to be an immense amount of hubris in physicians. Gerald Weissmann, from the Department of Medicine at the New York University Medical Center, extolled the virtues of medicine and gave specific examples of ways in which medicine has contributed to humanity.

The area of militant environmentalism is another hub of antiscientific sentiments. Often, as Stanley Rothman, of Smith College, illustrated, the statistics stated in support of environmental claims are biased to reflect the interests of the environmentalists. He singled out the Environmental Defense Fund as an agency that, in his opinion, is not relied upon much by scientists. Martin W. Lewis, from the department of geography at Duke University, likewise said radical environmentalists

quantum mechanics has shown that there is no such thing as an external world, and that we ourselves make our own reality. They said such claims are totally inappropriate.

Norman Levitt, from Rutgers University, and coauthor of *Higher Superstition*, said quantum mechanical descriptions about the behavior of particles deal mainly within the scope of probability. The sometimes convolutedness of probabilistic computations may often give enigmatic results and, what is even worse, may appear mystical to the untrained. The results may sometimes seem mystical, but Levitt emphasized that with the appropriate background in probability theory, they are the product of straightforward calculations. "Many claims" [of the post-modernist-esoteric kind], he said, "come from those who do not have an appropriate training in mathematics." He said, "This mathematical naiveté is

by Anne Carson, of Emory University, Atlanta, a known critic of science. Herschbach regretted that he did not get to meet Carson. He said an actual dialogue between them would have been excellent for the show, and an even better opportunity for the audience to watch the proponents of both opposing views debating.

Psychoanalysis, developed by Sigmund Freud, was explored as an irrational contribution to modern thinking and health care. Because psychoanalysis has been fashionable for so long in academic circles, it is easy to consider it as a part of the establishment. Despite the impression among some academics and medical specialists that it is long dead, and hence they do not have to concern themselves with it, psychoanalytic theorizing is alive and well. Psychologist Frederick Crews said Freudianism is more prevalent in teaching than all other speculations we might term antirational. Crews, a University of California, Berkeley, professor said many of the psychoanalytic concepts were borrowed from Friedrich Nietzsche. He said that Freud's originality was minimal, and that Freud's few original points are either gratuitous or plainly erroneous and not supported by evidence. [See Martin Gardner's column in this issue.] Crews depicted psychoanalysis as a "morale booster." He pointed to the evangelistic character of Freud's discourse and added that psychoanalytic theory lacks rigor, tolerates self-contradiction, and is based on pure cogitation.

Dissenting comments from the audience were at times heard. Several science critics, voicing their discontent, said their views were not properly portrayed by the speakers. Audience members frequently complained of what they considered to be the unfair omission of the "other side" in the formation of discussion panels. Paul Gross repeatedly addressed this objection by stating that the rationalists are the besieged group. Moreover, he insisted, the antiscientists hold their own conferences without ever inviting the opposing side. □

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often distort evidence. For radical environmentalists, Lewis said, "[Postmodernist] catastrophic claims are as valid as more scientifically based claims . . . but even more so because they're morally grounded." Lewis considers that this taking of a moral high ground only makes radical environmentalists more reticent to accept any evidence contradicting their beliefs.

The panel discussing quantum mechanics said it is incessantly pointed to by antirationalists yearning to have a basis for their particular brand of relativism. Given the supposedly mystical and reportedly subjectivistic implications of quantum mechanics, post-modernists are wont to point out that in light of quantum phenomena, science itself defeated its pretensions of objectivity and materialism. They claim that objectivity is difficult, if not impossible, to maintain now that

the main factor behind ungrounded assertions about theories in physics, for instance, chaos theory, relativity, and quantum mechanics. The physicists at the conference speaking on this point held that these physical theories, to the contrary, offer compelling support for objectivity.

In an evocatively titled presentation "Imaginary Gardens with Real Toads," Harvard chemistry professor Dudley Herschbach launched into an exploration of the many instances in which science dwells on the fanciful. The winner of the 1986 Nobel Prize in chemistry related his experiences being part of a PBS television show whose purpose was to present a stimulating portrait of science, exalting its aesthetic and inspiring attributes. The producers of the show, "The Nobel Legacy," chose to intersperse the broadcast with adversary "soundbites"