A Long-Disputed Paper Goes to Press

It came to be called the most famous unpublished paper in science. During the last three years, hundreds of scientists, a half-dozen lawyers, several journalists and two congressional subcommittees read the report on scientific misconduct written by National Institutes of Health (NIH) scientists Walter W. Stewart and Ned Feder. But the paper had never officially been published until it appeared in the Jan. 15 NATURE.

Now, the public may read not only the controversial article itself – which purports to describe hundreds of errors and misstatements in the publications of 35 biomedical researchers at Harvard University and at Emory University in Atlanta – but also a two-page rebuttal by one of the physicians whose research methods are criticized in the paper. In addition, the same issue of NATURE carries an editorial in which John Maddox, the editor of the British journal, states that he finally agreed to publish the study, in spite of what he calls its "disputable" methods and conclusions, partly because of the notoriety it already has acquired.

Maddox writes that he discussed the paper with a number of the researchers criticized in it, and they agreed it should be published " . . . so as to bring out into the open an issue of which Stewart and Feder have recently made much."

Indeed, Stewart and Feder – who usually do research in organic chemistry and neurophysiology at the National Institute of Diabetes and Digestive and Kidney Diseases – have, in the last year, given their paper public exposure. They appeared, by invitation, before the U.S. House Subcommittee on Civil and Constitutional Rights (last February) and the House science task force (last May) to testify about their struggle to publish. In the fall, they sent draft copies to all 1,800 members of the National Academy of Sciences, and also wrote a guest editorial in the Boston Globe describing their difficulties getting the paper published.

Stewart and Feder told each of these audiences that in this case, lawyers improperly had interfered with the usual scientific review process. They asserted that their paper would have been published in NATURE the first time it was submitted, in 1983, if lawyers representing two of the Harvard researchers had not sent letters to Maddox threatening lawsuits. Stewart and Feder also claimed that similar letters from the same lawyers led the editor of CELL, a journal of molecular biology, to reject the article in 1985, after spending 10 months considering it.

In his current editorial, Maddox argues that Stewart and Feder make this assertion "injudiciously" – that although the published version of the study is not defamatory, earlier drafts were unwarrantably damaging to the reputations of the Harvard and Emory researchers, according to NATURE's own lawyers. Stewart and Feder "have not understood that the unfettered right to publish scientific data does not equate with a right to denigrate others' characters," Maddox writes.

However, both Maddox and the two NIH researchers now say they are glad the debate can shift from the question of libel to the issues of scientific misconduct Stewart and Feder raise.

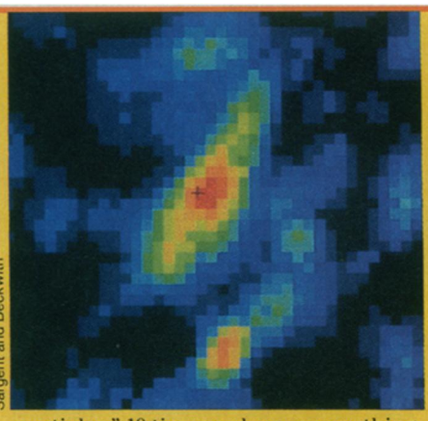
The study was designed to measure how well coauthors take responsibility for the accuracy of scientific publications. Stewart and Feder chose for their sample the 109 publications, including

Glimpses of alien comets and planets?

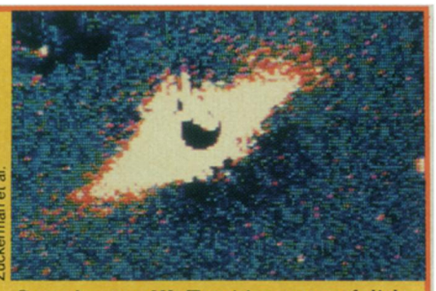
Looking for evidence of planetary systems other than our own, astronomers search nebulas that surround various stars for evidence that the material follows Keplerian orbits. Solid material – comets, planets, etc. – should move according to Kepler's laws; the gas that is more common in circumstellar nebulas generally does not. In Pasadena, Calif., at the recent meeting of the American Astronomical Society, scientists reported three such nebulas in the form of disks around the stars Beta Pictoris, HL Tauri and T Tauri.

Two groups presented new images of the Beta Pictoris disk. Francesco Paresce and Christopher Burrows of the Space Telescope Science Institute in Baltimore and the European Space Agency claim that their image is the first picture of the Beta Pictoris disk in visible light. Benjamin Zuckerman of the University of California at Los Angeles, whose group worked at a wavelength of 9,000 angstroms, on the edge of visible light (between infrared and red), held a similar claim.

Whoever was first, both groups find evidence for cometary material in the disk. Paresce refers to "pebble-sized particles," 10 times as large as anything found in interstellar space. Zuckerman speaks of a giant Oort cloud surrounding Beta Pictoris. Our solar system's Oort cloud consists of cometary material orbiting the sun far beyond the outermost planets. Occasionally an object separates from it and enters the inner solar system as a comet. Zuckerman, whose group includes Harland W. Epps of UCLA, Colin R. Masson of Caltech in Pasadena, Jonathan C. Gradie and Joan N. Hayashi of the University of Hawaii in Manoa and Robert Howell of the University of Wyoming in Laramie, calculates the mass of the cometary material encircling Beta Pictoris as equal to that of Jupiter.



Sargent and Beckwith



Zuckerman et al.

Cross locates HL Tauri in center of disk of matter shown in false-color image at left. Above, view of Beta Pictoris disk in 9,000-angstrom light.

In addition, David Weintraub of UCLA, Zuckerman, Masson and James Benson of the University of Wyoming did the observations of T Tauri, a binary star system, in which two stars orbit each other. This group finds material equal to a few times the mass of Jupiter orbiting the whole binary system.

Anneila I. Sargent of Caltech and Steven Beckwith of Cornell University did the observations of HL Tauri. They find Keplerian motion in a disk extending to 500 astronomical units (500 times the earth's distance from the sun, or about 50 billion miles) out from the star. This could contain gas plus comets with dust nearby. Sargent suggests that this is how a solar system might look before planets begin to coalesce.

– D. E. Thomsen