

Current Comments®

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The Scientist® Newspaper: Seven Years on the Human and Professional Sides of Science

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We launched *The Scientist*® seven years ago on October 20, 1986. The first newspaper dedicated to serving the scientific community, it was dedicated to the needs of research scientists and administrators as well as others involved in the life of science. And as described below, *The Scientist* also provides bench scientists with practical help in managing their professional lives. Unlike the thousands of journals and magazines devoted to publishing original research papers or popularizing science for the general public, *The Scientist* promised to report on the business of science: "to keep watch over the things going on outside the lab that affect its conduct."¹

To meet this challenge, *The Scientist* proposed to cover political debates concerning science policy; financial topics affecting the economics of science, including research funding; and tough science-based ethical issues.¹ The newspaper would also closely watch the regulation of science and call attention to relevant research and career information from government reports and other publications not available to the general public.² In addition, it would publish frank "how-to" articles describing the more pragmatic side of a science professional's career—information not readily available elsewhere.

News and Features

For the past seven years, *The Scientist* has regularly published 32 pages of news, features, and advertisements on a biweekly schedule. The first issue contained news reports on federal appropriations for the National Institutes of Health (NIH) budgets, the impact of tax reform on science,

and efforts to refashion scientific research practices in China.³ A recent issue carried front-page stories on potential conflicts of interest among scientists whose work is simultaneously supported by universities and private corporations.⁴ The issue also covered funding problems faced by American scientists and the effect of the great flood of 1993 on midwestern research institutions.

In nearly every issue, *The Scientist* has featured stories on women and other minority groups in science. The role of women in science, in fact, has been the subject of two special issues—one in 1990⁵ and another in July of this year.⁶ Other recurring themes are science education and science awards, including forecasts of the Nobel Prize winners.

While news articles account for nearly a third of each issue's pages, the regular features give the paper its voice. These columns include "Opinion," a forum for working scientists to express their thoughts and exchange views with colleagues; "Research," in-depth reviews of current scientific investigations and commentaries by authors of "Hot Papers"—articles published and highly cited within the last two years; "Profession," practical career advice, such as how to apply for a grant and how to get funds for travel to conferences, as well as information about people on the move; "Tools and Technology," topical articles showing the relationship between scientists and their tools as well as reviews of new technology that makes their jobs easier; and a classified section that includes "Career Opportunities" and "Equipment Marketplace."

According to reader survey cards, "Hot Papers" is one of the most popular fea-

tures. Readers of *The Scientist*⁶ follow it, says Executive Editor Tom Ewing, "in part to see what is getting other researchers' attention and also to validate their own opinions on what is currently important. In addition, 'Hot Papers' allows them to see what researchers are doing in other disciplines." The salary surveys that appear periodically in "Profession" are also closely watched. These reports provide more than just numbers, however; they include interviews with surveyers to provide readers with a feeling of the dynamics of salary changes.

Another popular section is "Opinion." "It presents thought-provoking issues that are shaping the way science is done," comments Barbara Spector, managing editor. In particular, she remembers one recent point-counterpoint piece on promoting oneself. One of these articles stated that self-promotion, in good taste, is important for younger researchers so that they may increase name recognition and opportunities for conference invitations. But another article decried such practices as mere hype. The key point of the debate: Should researchers just be quietly excellent and recognized on their merits alone, or should they actively make others aware of their accomplishments?

Readers of *The Scientist*

The Scientist's readers are a sophisticated group of professionals who take their jobs and responsibilities seriously. The average reader, according to Spector, is "someone looking to improve and advance his or her career, who is contemplating the next professional step and wants to maximize his or her career potential—to move up, or over, from academia to industry and vice versa."

The typical reader is a life scientist with a doctorate. While most work in academia, a significant minority work in industry. Some of the more publicly visible scientists who are readers include: Bruce Ames, University of California, Berkeley, known for the Ames test for detecting mutagens and carcinogens; Carl Djerassi, Stanford University, inventor of the oral contraceptive and codeveloper of corticosteroids; chemist Marye Anne Fox, University of

Texas, Austin, voted "Best of a New Generation" by *Esquire* magazine in 1984; and Bassam Z. Shakashiri, University of Wisconsin, Madison, creator of the science education program, "Once Upon a Christmas Cheery/In the Lab of Shakashiri."

A regular "advertorial" feature in the newspaper includes a series on "The Leaders of Science—The Readers of *The Scientist*." In addition to those mentioned above, it has featured Candace B. Pert, visiting professor, Center for Molecular and Behavioral Neurosciences, Rutgers University, Newark. She reads *The Scientist* because "it helps bridge the gap between life at the bench and the clinic with the world of politics, the NIH, the boardroom, and the university."⁷ Another is Carlo M. Croce, director of the Jefferson Cancer Institute, Thomas Jefferson University, Philadelphia, and one of the 100 most-cited scientists of the 1980s.⁸ Phillip A. Sharp, winner of the 1993 Nobel Prize, was also on this list.

Other scientists in this series have included geneticist Ruth Sager, Dana Farber Cancer Institute, Boston, who reads *The Scientist* because it "provides access to useful information in an informal and sprightly fashion that makes for enjoyable reading, while conveying some of the excitement of current science."⁹ Robert C. Young, president of Philadelphia's Fox Chase Cancer Center, says the paper "looks at emerging science and the scientists who produce it in a way that conventional scientific journals just do not."¹⁰

Other leading scientists featured in this series include: Alfred S. McLaren, retired US Navy submarine captain, president of Science Service Inc., and publisher of *Science News*; Mary Wooley, CEO of Research!America; Edward H. Shortliffe, pioneer in biomedical informatics, Stanford University; Nobel laureate chemist Roald Hoffmann, Cornell University; Herbert Pardes, vice president for health sciences, Columbia University, and president of the Science Council, National Alliance for Research on Schizophrenia and Depression; Edward O. Wilson, Harvard University; and US Representative George E. Brown, Jr., chairman of the House Science, Space and Technology Committee, who says *The Sci-*

Figure 1: How to access *The Scientist*[®] on the Internet.

The Scientist[®] is now available online.

Via FTP:

type: ftp ds.internic.net
at name prompt, type: anonymous
at password, type: username@internet address
at prompt, type: cd pub/the-scientist
If you know the issue date
type: get the-scientist-yymmdd
For directory listing, type: dir
then, to select issue, type: the-scientist-yymmdd
to end, type: quit

Via GOPHER:

On InterNIC (AT&T) Gopher Server:
If you don't have Gopher software on your PC, you can use AT&T's Gopher. To do this, at prompt
type: telnet ds.internic.net
at login, type: Gopher
at Terminal Type is "unknown"; enter a new value
or press RETURN:
type terminal type if you know it, or type: vt100
from successive menus, choose:
4. InterNIC Directory and Database Services
(AT&T)/
4. InterNIC Database Services (Public Databases)/
5. The Scientist - Newsletter
If you have Gopher software on your PC, at prompt,
type: gopher Internic.net 70
from successive menus, choose:
4. InterNIC Directory and Database Services
(AT&T)/
4. InterNIC Database Services (Public Databases)/
5. The Scientist - Newsletter

Via WAIS:

type: telnet ds.internic.net
at login, type: wais
at search prompt, type: db the-scientist
at search prompt, type:
query_(term/s to be searched)
to view a retrieved item, type:
view_(item number to be viewed)
to search within the issue retrieved, type:
find_(term/s to be searched) to search forward or,
nfind_(term/s to be searched) to search backward
in an issue.
to end, type: quit
[The help menu can be accessed at any time by
typing ? or help?]

FOR FURTHER HELP CONTACT:
garfield@aurora.cis.upenn.edu

entist[®] provides "more than just a barrage of technical facts and figures...[it also] offers astute perspectives on trends and concerns in science today that might affect policy in the future."¹¹

Circulation—In Print, and on the NSFnet and the Internet

By the end of 1993, the circulation of *The Scientist* will exceed 50,000 copies dis-

tributed primarily in the US. This includes both paid and controlled circulation. The controlled circulation includes the memberships of several dozen professional societies of molecular biologists, clinical researchers, biochemists, microbiologists, pharmaceutical researchers, and information scientists and librarians.

In addition to its printed distribution, thousands of scientists worldwide now access *The Scientist* through NSFnet and the Internet, an international electronic bulletin board service. It is difficult to estimate how many people read *The Scientist* in this format because Internet tracks only the number of files downloaded by FTP or accessed via online searches. An information officer can download the latest issue and then make it available to an entire country, company, university, or institute via its local area network. In the UK, *The Scientist* can be accessed via the JANET system serving 60 universities.

The Scientist has been available on the NSFnet free of charge since November 1992. All 1992 and 1993 issues are now available over the Internet via FTP, WAIS, and Gopher on the InterNIC (AT&T) server. New issues are added every two weeks on alternate Mondays, coinciding with the cover date of the printed edition. Back issues are currently being added regularly—eventually, all seven years of *The Scientist* will be available online. Figure 1 provides instructions for accessing *The Scientist* on Internet. For more information, you can reach me through my e-mail address, garfield@aurora.cis.upenn.edu, or via CompuServe at 70550,130.

For the past year, we have been actively pursuing the goal of making *The Scientist* available for distribution on CD-ROM. A single CD-ROM disk would contain the full text of 175 back issues and would be fully searchable by key word, company or university, scientist, etc.

New Features for 1994

A CD-ROM version of *The Scientist* is not the only innovation planned for the paper in the year ahead. The paper's content will be enhanced by the addition of several

new features. For example, one planned feature is best described as "Scientists in the Media," which will digest articles featuring researchers that appear in newspapers and news magazines in the US and perhaps abroad. We also plan to provide a unique approach to listing—and reviewing—the thousands of science books published each year.

Most readers of *Current Contents*® (CC®) are already familiar with *Citation Classics*®, commentaries by authors of papers and other publications that have stood the test of time and have been highly cited over many years. Beginning next year, *The Scientist*® plans to provide similar commentaries and recollections on classic works in the "Research" section of the paper. These will complement the "Hot Papers" feature, which focuses on high impact articles less than two years old.

New Address

Many CC readers may not be aware that *The Scientist* is no longer published by ISI®. However, for the past five years *The Scientist* has rented space in ISI's Philadelphia headquarters. On January 1, 1994, *The Scientist* will move to the campus-like setting of the University City Science Center (UCSC), a consortium of 28 academic and scientific institutions in the Philadelphia region. UCSC also is the world's oldest urban research park and business incubator, occupying 17 acres in West Philadelphia, adjacent to the University of Pennsylvania

and Drexel University. Since 1968, UCSC has launched more than 200 start-up companies and organizations. It currently houses 120 science and technology oriented organizations. As *The Scientist* enters its eighth year of publication, we're proud to join these institutions.

The Scientist as Ombudsman

As publisher of *The Scientist*, I originally envisioned this newspaper as satisfying the need to better show the human side of science. But it has become more than that. It is a reflection of the conscience of science. While the paper actively promotes science, it is also critical of it when necessary, as in discussions of animal research. In fact, one of *The Scientist's* most important aspirations is not only to inform the scientific community but also to serve as ombudsman.

The Scientist was launched in less difficult economic times, but even now I join with my colleagues throughout the world in encouraging science professionals to pursue the business of science in the interests of society. There can never be enough good science—well executed and informed. We have witnessed some misuse of science and technology over the decades. But we have every reason to believe that science is a positive force in our lives and those of future generations.

My thanks to Abigail W. Polek for her help in the preparation of this essay. © ISI 1993

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