NEWS

New Co-Editor

The Executive Committee of the Forum on Physics & Society has approved the appointment of Jeffrey Marque, Senior Staff Physicist at Beckman Coulter Corporation in Palo Alto, California, as a co-editor (with Alvin Saperstein) of the P&S Newsletter. Jeff served as the news editor for about two years, starting about five years ago but then left that post "...to spend more time with my family...". After a bit of coaxing in late 2002, Jeff agreed once again to be our news editor. And after even more coaxing, he agreed to be Alvin Saperstein's co-editor starting in 2003. Jeff's remarks describe the pathway to his decision, "After I left the P&S editing staff a few years ago, Al Saperstein and his colleagues continued to put out a fabulous publication, issue after issue, for the P&S community. It was the consistently high quality of Al's work, as well as the ever growing importance of issues at the interface of physics and society, that made me decide to take the plunge and join Al's ranks. In addition to the obvious challenge of just getting all the editing work done, there is the challenge of maintaining the very high quality of the publication. Another potential source of challenge for P&S editors in the immediate future is the controversy generated by some of the Bush Administration's policies and decisions regarding National Missile Defense, global warming, nuclear-fueled electricity production, fuel efficiency in cars, etc. Providing balanced coverage of these and other issues will require diligence."

"I apparently accepted the co-editorship of P&S during a time when relatively momentous issues involving physics and society (e.g., self-censorship of science journals!) are coming to the fore. What I'm struggling with is a series of questions concerning the proper role of an editor and of our newsletter: What are the proper constraints that we place on ourselves regarding the publication of pieces concerning subjects that are inherently political? Under what circumstances, if any, do we advocate a particular viewpoint concerning a controversial topic? How are our policies and decisions constrained by our being part of APS?

Back in the MacArthy years, many people in positions similar to ours had to make difficult decisions. Those decisions sometimes involved not only the appropriateness of expressing a particular viewpoint but also significant personal/professional risk. Back then, the war on Communism was used to justify all manner of policies and actions by the government. Now, we seem to have entered an era in which the war on Terrorism is leading in similar directions. How do we, as editors, react to such developments? Do we steadfastly publish "both sides" to every issue, or do we sometimes take a definite stand? I need guidance here! I welcome the views of all my P&S colleagues." (JM)

Publish vs. Perish

A statement concerning national security, entitled *Statement on Scientific Publication and Security*, was signed by over 30 editors of scientific journals and released on February 15, 2003. The statement, the full text of which can be found at http://www.fas.org/sgp/news/2003/02/sci021503.html and which is scheduled for publication in Science, Nature, and PNAS, concerns editors' voluntary witholding from publication of articles that, in the editors' views, could aid terrorists seeking to develop biological weapons of mass destruction.

The *Statement* consists of a Preamble and four subsequent statements. The preamble opens with a declaration of the importance of refereed scientific works to the welfare of mankind. It then goes on to describe how the events of September 11, 2001, and the subsequent anthrax attacks, caused some scientists and politicians to be concerned about new scientific information getting into the wrong hands. A one-day workshop at the National Academy of Sciences, held on January 9, 2003, specifically addressed the issue of how certain new biological scientific findings might need to be withheld from publication. The next day, a group of editors, scientist authors, and government officials met to discuss implementation possibilities.

Four subsequent statements within the *Statement on Scientific Publication and Security* are outcomes of the January 9 and 10 meetings. The first statement reiterates the importance of peer-reviewed scientific publication and, specifically, of the need to publish in sufficient detail to allow reproduction of scientific investigations by readers of journals. The second statement mentions the conflicting needs to publish biological science that can benefit anti-terrorism defense and to not publish science that can be subject to "potential abuse". The authors then declare their commitment to "dealing responsibly and effectively with safety and security issues that may be raised by papers submitted for publication..."

The third statement urges scientists and editors to consider the design of processes to effectively deal with these conflicting needs, and it mentions the fact that certain journals have already devised such processes that can be used as models by other journals. The fourth statement states that, in the event that an editor concludes that "the potential harm of publication [of a particular paper] outweighs the potential societal benefits" that the paper should be modified or else not published at all. The fourth statement concludes that journals and scientific societies "can play an important role in encouraging investigators to communicate results of research in ways that maximize public benefits and minimize risks of misuse."

[Editor's note: The idea of self-censorship in peacetime by civilians is exemplified by Leo Szilard's conceiving of nuclear chain reactions in 1933, in London. After a few years of attempting to find the funds and venue to research his idea, he wrote to Rutherford in 1936, "...the feeling that I must not publish anything which might spread information of this kind – however limited – indiscriminately has so far prevented me from publishing anything on this subject." For further details, see Genius in the Shadows by William Lanouette.]

Controversy: Log vs Linear Plots

The news section of Science magazine, Volumn 299, January 10, 2003 contains an article (page 181) about alleged data reporting distortion concerning smallpox eradication by Donald A. Henderson, now a senior adviser to the Bush Administration. For close to a year, Yale University mathematician Edward Kaplan has reanalyzed small pox incidence data that were originally published in 1971 by William Foege (now a consultant to the Bill and Melinda Gates Foundation) and in 1975 by Foege and Henderson. Foege and Henderson claimed in their papers that an eradication strategy called ring immunization is very effective and, in fact, essential for eradication. Kaplan has argued that the original data show that ring immunization is far less effective than mass immunization, and that only by means of graphical sleights-of-hand could Foege & Henderson make it appear that ring immunization is effective.

In ring immunization, smallpox victims are isolated, followed by the immunization of everyone with whom the victims came in contact. In mass immunization, everybody is

immunized. A graph published in the 1971 and 1975 papers purports to show a precipitous decline of smallpox cases following commencement of ring immunization. Kaplan claims that the following tricks only make it appear that a sharp decline occurred as a result of ring immunization: 1) The use of a semi-log plot (of #cases vs. time and of % unvaccinated vs. time), which had the effects of masking the extent of immunization and of exaggerating the decline in smallpox incidence, and 2) the reporting of ratio of reported to "expected" cases based on years, before 1968, when vaccination coverage was much lower. Kaplan re-plotted the original data using a linear-linear plot of the number of actual cases, and it appears that the decrease in the number of cases falls in lockstep with the decrease in the unvaccinated fraction of the population. In Kaplan's graph, the effect of the introduction of ring-immunization, in 1968, appears unnoticeable.

Interestingly, Henderson is reported in the article to have said, regarding his semi-log plot, "I've always had difficulty with that graph myself." as well as, regarding Kaplan, "Kaplan doesn't understand what he's talking about."

According to Kaplan, others in the Bush Adminstration are interested in his results from analysis of the smallpox eradication battle in India. He claims that those results support his claim that ring vaccination is not as effective as mass immunization.

Radiological Sciences and WMD

The first International Workshop on Radiological Sciences and Applications(IWRSA) will be held in Albuquerque, NM, USA, June 16-18, 2003. The theme of this workshop is "Issues and Challenges of Weapons of Mass Destruction (WMD)Proliferation". The meeting is an informal forum for scholarly discussion of important issues and to promote international cooperative projects in radiological sciences and technologies. The goals of the meeting are to identify the grand challenges and needs within the international community where radiological sciences and technologies can make a positive contribution, and to seek input from the participants on establishing an annual workshop for scholarly discussion of important international issues.

The workshop takes a multi-disciplinary approach that considers the technical and scientific problems as well as the policy, cultural, and socioeconomic issues. For additional information, please see the IWRSA web site at http://www.iwrsa.org.

Depleted Uranium Contaminates Bosnia-Herzegovina

SARAJEVO, Bosnia-Herzegovina, March 25, 2003 (ENS) - For the first time, a United Nations research team has confirmed that depleted uranium from weapons used in Bosnia and Herzegovina in 1994 and 1995 has contaminated local supplies of drinking water, and can still be found in dust particles suspended in the air. Depleted uranium is used in armour penetrating military ordinance because of its high density, and also in the manufacture of defensive armor plate.

For full text and graphics visit: http://ens-news.com/ens/mar2003/2003-03-25-04.asp