Professional Ethics Report
Current Issue — PER Main Page — SFREL Main Page

Volume XI, Number 1, Winter 1998

Publication of the AAAS Scientific Freedom, Responsibility and Law Program, in collaboration with the Committee on Scientific Freedom and Responsibility
Professional Society Ethics Group
Editor: Mark S. Frankel
Deputy Editor: Alexander Fowler
Managing Editor: Sanyin Siang
ISSN: 1045-8808
URL: http://www.aaas.org/spp/sfrl/sfrl.htm

Using Random Assignment in Social Science Settings

By Lynette Feder

Recently the Florida legislature mandated that judges, upon convicting for misdemeanor domestic violence, must order the individual into domestic violence counseling. Importantly, what is happening in Florida is not an isolated case. Many jurisdictions nationwide have recently begun mandating counseling for domestic violence offenders (Chen, Bersani, Myers & Denton, 1989).

This trend is troubling. As Klein notes, "Batterers treatment was adopted not because there was any evidence it worked, but because police, prosecutors, and judges refused, in effect, to proceed against batterers unless there was some place to put them after arrest, prosecution and sentencing" (Klein, 1997:1). The possibility that these interventions may not only be ineffective in reducing violence, but may provide a disservice to victims, must be considered as well. They may be harmful in that continuing to mandate counseling for convicted abusers necessarily means that scarce resources will be diverted away from alternative programs for battered spouses and their children. And, even more problematic, is the possibility that ineffective treatment may be more dangerous for the victim than no treatment at all. Specifically, recent research indicates that the most influential predictor of an abused spouse's return to her husband is his participation in counseling (Gondolf, 1987). However, if treatment is essentially ineffective in decreasing recidivism then we may inadvertently be providing these victims with a false sense of security which, in the end, may lead to a higher likelihood of future injury (Harrell, 1991; Hamberger & Hastings, 1993).

While there exists, no doubt, a plethora of studies pointing to these programs' effectiveness in reducing recidivism, they are riddled with methodological shortcomings making it unwise to reach firm conclusions on the efficacy of court-mandated counseling. All of this speaks to the need to evaluate rigorously this intervention's impact. But before I could conduct this research, I needed to find a study site. A friend suggested a highly regarded domestic court judge in a heavily populated county just south of me. In our first meeting, the judge told me that the big question among all the domestic court judges is whether counseling works. I provided him with a quick overview of the literature on this question, noting that without a rigorous study we could not really answer the question. I explained the need for a classical experimental design complete with random assignment. Though at first hesitant about implementing random assignment, he understood and accepted this method once I noted the methodological shortcomings with each alternative he proposed.

Eventually, I responded to a Request for Proposals (RFP) from the National Institute of Justice (NIJ). The study, as described in the grant application, used a classical experiment whereby convicted misdemeanor domestic violence offenders would be randomly assigned to either a one-year probation (control condition) or a one-year probation and 6 months court-mandated domestic violence counseling (experimental condition). By this time, a new domestic violence court judge was appointed as the second judge on the domestic court bench. He, too, supported the research study and understood the need for random assignment.

While writing the grant application, we began building partnerships in the community supportive of this research. Included in this partnership with the domestic violence court judges were probation, the sheriff's office, the largest

domestic violence shelter, and my university. As word of our proposed study spread, only the county prosecutor voiced opposition. His position was that random assignment was unethical. He felt that victims would be placed at greater risk to the extent that these men were not mandated into counseling. In the end, we decided that we could live with the prosecutor's decision to oppose the research, and so we proceeded.

We received the grant award on May 1, 1996 and began randomly assigning individuals convicted of misdemeanor domestic violence. The prosecutor's office called in the media to tell them about the experiment underway. When the newspapers finally called me, they had already heard quite a lot about the experiment. They asked whether I worried that the study placed victims at greater risk. One reporter even saw parallels to the experiments conducted in Nazi Germany. In each case, I tried to explain that we were doing this on behalf of victims; we could not continue to assume that counseling was beneficial. In the end, the reporters wrote articles which, in a non-sensationalized manner, reported what we were doing in the courthouse. The editorial board of the most widely read paper in South Florida went even further and obtained a copy of my grant application. Subsequently, they came out in full support of our research.

But while the press was quieted, other problems loomed. Outside of the court, on more than one occasion, I received less than a cordial reception from assorted individuals connected with community agencies. And within the courthouse, the visible opposition to the project led many who had previously supported the research to take a step back from our project. While they did not actively oppose the research, their lack of support (which they had previously committed to and upon which we were relying) strained our resources. Nevertheless, we continued to move forward with our research. The prosecutor's office continued to object to each individual convicted of misdemeanor domestic violence and assigned by the judge into the control (no treatment) condition. They told us that they would wait until we had completed our sampling before they would move forward and file an appeal challenging the domestic court judges' decision to not place these individuals into counseling.

The final defendants were taken into the sample on September 30 - five months after we had begun the research. In November, we still had not received word from the appellate court. We (incorrectly) assumed that the prosecutor's office was not going forward on the appeal and that we would be able to complete the research project.

We secured *pro bono* counsel in the event that the appeal moved forward. I began contacting many of the professional social science associations and organizations asking for their help. Our position was simple. Contrary to the prosecutor's claim, we argued that it was unethical to mandate an intervention that had not been rigorously tested such that we understood the possible positive and negative consequences of the treatment. Though many associations were supportive of our research, only one – the American Society of Criminology – stepped forward and agreed to serve as a friend of the court.

No doubt, we felt that we had our ducks in line. That is why we were so surprised when we found out on December 5, 1997 that the prosecutor had filed his appeal back in October, that it had been heard and decided in November, and that the circuit court, acting in its appellate capacity, had ruled in favor of the prosecutor's position reversing the trial court's use of random assignment. Since we were not a party of record, all of this occurred without our being notified, so we had no opportunity to respond before the court.

Presently, the judges are seeking clarification on whose responsibility it is to call these individuals in for resentencing. There is no doubt that this question will shortly be answered and that these men will be resentenced and placed into treatment. We will have studied them for a minimum of six months and a maximum of eleven months in the community. While we had originally designed a one year follow-up period, we will still be able to answer the question as to whether there are differences in recidivism upon completing mandatory domestic violence counseling. If there are significant differences between the two groups, however, we will not be able to say whether these differences persist over time.

Recently, over a long holiday weekend, a man who had been convicted of misdemeanor domestic violence in this county brutally murdered his wife while his children and neighbors looked on horrified. Since the man had not been in our sample, he was placed into treatment. While this incident does not prove that treatment is ineffective, it does speak loudly to the need to find out what works and with whom. Yet, sadly, though this homicide made front page headlines,

the press did not connect this specific case to the need for the research that we were completing.

This grant has provided me with a very steep learning curve. Much of this knowledge goes beyond what I was taught in my graduate research and statistic courses, but it is just as intrinsic to the success of a large research project. There have been other wonderful unforeseen benefits arising from this grant as well. It has been my great pleasure to work with two fine judges – Judges Geoffrey Cohen and Alfred Horowitz – who, as elected officials, had everything to lose from implementing this research and nothing personally to gain. They supported this project at great risk to their tenure as judges because they believe that victims deserve to know whether court-mandated counseling helps reduce repeat violence.

Finally, this grant has taken me beyond the confines of my university community. In speaking with persons nationally, I have met many individuals who understand that social science research needs to hold itself to a higher standard. We would not accept the medical community forcing individuals to take a particular drug without it first being rigorously tested. All seem to understand that a medical intervention can have unintended consequences as well as benefits. Yet, in the social sciences, we think nothing of mandating an intervention whose effects have not been rigorously tested and are, therefore, unknown.

Bibliography

Chen, Huey-tsyh, Bersani, Carl, Myers, Steven & Denton, Robert. (1989) Evaluating the effectiveness of a court sponsored treatment program. *Journal of Family Violence*, 4(4), pp. 309-322.

Gondolf, Edward. (1987) Evaluating programs for men who batter: Problems and prospects. *Journal of Family Violence*, 2(1), pp. 95-108.

Hamberger, L. Kevin & Hastings, James. (1993) Court-mandated treatment of men who assault their partner. In Z. Hilton (Ed.), *Legal Responses to Wife Assault: Current Trends and Evaluation*, (pp. 188-229). Newbury Park, CA: Sage Publications.

Harrell, Adele. (1991) *Evaluation of Court-Ordered Treatment for Domestic Violence Offenders: Final Report*. Washington, DC: Institute for Social Analysis.

Klein, Andrew. (1997) *National Bulletin on Domestic Violence Prevention*, 3(3), pp. 1-3.

IN THE NEWS

Germany Confronts Misconduct In Science

Late last year, a panel created by the Deutsche Forschungsgemeinschaft (DFG), Germany's main grant agency, proposed guidelines to the general organization for handling scientific impropriety. The guidelines aim to foster ethical conduct and to deal efficiently with allegations of scientific fraud while protecting "whistleblowers" and the innocently accused. The panel convened in response to Germany's first major case of scientific fraud. In May 1997, two of the country's leading researchers, Marion Brach and Friedhelm Herrmann, were accused of falsifying results for publication. Brach admitted to the allegations while Herrmann, her co-author on the papers, denied any knowledge of the manipulated data. Few German universities have existing guidelines for dealing with such situations. Accusations of scientific fraud were usually handled in an *ad hoc* manner. The panel proposed that institutions clearly define the different types of misconduct and appoint independent counselors to whom both the accusing and the accused parties can turn. It also suggested that the DFG appoint an independent "ombudsman" to consider cases and that the practice of honorary authorship be banned. In addition, primary research data used as a basis for publication should be preserved for at least 10 years and quantitative measures should not take precedence over qualitative assessments in decisions on grants and employment. The panel also recommended that grants be denied to institutions that do not adopt the proposals. The guidelines were formulated after several months of deliberation. From the onset, the panel was unanimously opposed to a national oversight committee analogous to the US Office of Research Integrity,

preferring instead a system where matters are resolved within each institution. The panel has also sparked several controversies. Objections to the role of the DFG panel in investigating research misconduct arose based on interference with the "freedom to research" guaranteed by Germany's constitution. Furthermore, debate has already ensued on whether the DFG has the legal authority to deny grants to institutions based on a failure to adopt its guidelines. However, several institutions are already implementing the proposals. In December 1997, the Max Planck Society, which operates 73 basic research institutes in Germany, approved internal regulations on a standard procedure for handling cases of suspected scientific misconduct and in January of this year, the University of Konstanz became the first German university to appoint an ombusdman for science. [*See this issue's Ethics, Law and Public Policy for a broader article on the need for International standards in research integrity—Ed.*]

"Explosive Alliances" Between Academia and DOE

In a January 1998 report titled *Explosive Alliances*, the Natural Resources Defense Council (NRDC) advises universities involved in a US Department of Energy (DOE) program to re-evaluate their participation. The Academic Strategic Alliances Program (ASAP) creates and funds centers at universities to research computer simulations in support of DOE's Accelerated Strategic Computing Initiative, a key player in the Stockpile Stewardship and Management Program (SSMP). In the program, participating universities are granted access to the world's fastest supercomputers, primarily used by the SSMP for improving US nuclear weapons and design expertise, and allocated as much as 10 percent of the computers' capacities. In return, each university is responsible for investigating a specific type of computer simulation, with the dual purpose of improving civilian technology and creating a "virtual nuclear testing ground." For example, Caltech's center will focus on the effect of shock waves induced by high explosives on various materials in different phases. The research will benefit civilian practices that employ high explosives. Simultaneously, it will also provide lab scientists in the SSMP with a tool to simulate high explosive detonation and ignition. The NRDC report criticizes the program on four grounds. First, the application of computer simulations to nuclear weapons research violates the spirit of the Comprehensive Test Ban Treaty (CTBT). The treaty, signed by President Clinton in 1996, and pending ratification by the Senate, forbids all nuclear test explosions. Through "virtual testing grounds," the SSMP can comply with the provisions of the treaty while maintaining the "technological dynamism of the arms race." Second, the DOE has expressed to the universities its need for a future generation of nuclear weapons specialists. The program will allow the DOE to identify and steer recruits to its nuclear weapons laboratories. Subsequently, top students in the centers can later "be induced to devote a significant fraction of their professional careers to the design and maintenance of weapons of mass destruction." Furthermore, there is the issue of participation of foreign students in ASAP. The program denies foreign nationals (students, postdoctoral associates, and professors) accounts on the ASCI computers or access to the computer software. This results in the exclusion of foreign students from participation in the academic programs and thus, undermines the "long-standing academic traditions of openness and non-discrimination." The NRDC report also takes issue with informed consent. Because of the dual-purpose nature of the program, many graduate students and faculty members who are participating in the project may not be aware that their research will be used to help develop new nuclear weapons. The five participating schools, California Institute of Technology (Caltech), Stanford, University of Chicago, University of Illinois at Urbana-Champaign, and the University of Utah will each receive a grant worth $20 million over a period of five years. ASAP is expanding with a new call for proposals from more universities. A copy of the NRDC report is available on the WWW at http://www.nrdc.org/nrdcpro/expl/ eainx.html. The ASAP homepage is located at http://www.llnl.gov/asci-alliances/asap/goals.html.

Xenotransplantation Stirs Controversy

Despite strong objections from the scientific community, the Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), and the National Institutes of Health (NIH) decided in a January 1998 hearing to allow xenotransplantation clinical trials to proceed (See *PER* IX (4), Fall 1996 and *PER* X (1), Winter 1997). Xenotransplantation, the implantation of animal organs, tissues or cells into humans, is not a new concept in the medical arena. Medicine has witnessed the introduction of baboon bone marrow into a patient with advanced AIDS, seen the injection of pig neural cells into the brains of patients with Parkinson's disease, and experimented with the use of pig pancreatic islet cells for patients with pancreatic failure. However, due to health and ethical considerations, members of the scientific and public health communities are wary about the continuance of clinical research in xenotransplantation. The nature of the concerns ranges from public health precautions to ethical considerations.

Heading the list is the fear of xenosis, or disease transfer from another species into humans, and its potential infection of the general human population. This fear was amplified with the discovery of viruses in pig organs that belonged to the same family as HIV. Consequently, there is the question of whether patients should be required to sign contracts that bar them from dropping out of a study prematurely? Further controversy stem from the ethical implications of using organs from genetically-altered organisms and the concern for animal exploitation in research. In a commentary published prior to the hearing, Fritz H. Bach, a xenotransplantation researcher, and Harvey Fineberg, a health policy expert, called for a moratorium on all human xenotransplantation clinical trials, and offered a strategy for balancing the ethical, medical, scientific, and societal aspects of xenotransplantation. They argued that such clinical decisions should not be based on the technical feasibility of the procedures, but should instead follow a wide-ranging debate on whether society wishes to undertake such research and if so, under what circumstances. The FDA, CDC, and NIH panel concluded with an intent to impose rigorous standards for maintaining disease free donor animals, create a national registry of organ recipients, and establish a tissue bank of samples along with a national policy advisory committee, analogous to NIH's National Bioethics Advisory Committee. Furthermore, it encouraged international cooperation between the US studies and similar efforts, such as those of the Interim Regulatory Authority in the United Kingdom. Guidelines are being finalized and can be expected for publication this summer.

Children Protected By New Amendments

The Department of Education (ED) amended its regulations (*Federal Register* 62: 63219-63222, November 26, 1997) on research concerning human subjects. The new regulations, effective last December, contain provisions concerning child research subjects participating in ED funded studies. Specifically, they will exempt children from certain kinds of research, follow a new standard of informed consent, and attempt to minimize risks to child subjects. The rationale behind the amendments lies in the large number of studies involving children and the Department's interest in child welfare. Thus, although children are often subjects of research that benefit other children as a whole, it is necessary to ensure that this good does not come at a cost to the individual subject. Under the new regulations, research proposals involving children will be approved on the basis that they "pose no greater than minimal risk to children" and that they adequately "solicit the consent of the children and their parents or guardians." In the case that a proposed study presents a "greater than minimal risk," approval is contingent on whether the study provides direct benefit to the subjects, yields generalized knowledge that contributes to a better understanding of their disorder, or helps to solve a serious problem affecting the health of children. These regulations will make the ED's policy regarding the protection of children as research subjects consistent with those of the Department of Health and Human Services and the Federal Policy for the Protection of Children. For a copy of the amendments, consult the WWW at http://www.ed.gov/legislation/FedRegister/finrule/1997-4/112697a.html

---

IN THE SOCIETIES

New Code of Ethics Approved by ASBMB

On January 1998, the Council of the American Society for Biochemistry and Molecular Biology approved a new Code of Ethics. Developed by the Society's Public Affairs Advisory Committee, the preamble of the code states that "Members of the ASBMB are engaged in the quest for knowledge in biochemical and molecular biological sciences with the ultimate goal of advancing human welfare. Underlying this quest is the fundamental principle of trust. The ASBMB encourages its member to engage in the responsible practice of research required for such trust…." The code outlines a series of obligations to the public, to other investigators, and to trainees. The code is available at the ASBMB Web site: http://www.arvo.org/asbmb/ethics.htm.

ETHICS, LAW & PUBLIC POLICY

Research Integrity: Do We Need International Standards?

At the February 1998 AAAS meeting in Philadelphia, a panel addressed (among other things) how the future landscape

will look in the area of scientific misconduct.1 One of the speakers, Sybil Francis, described the status of the attempt, through the White House Office of Science and Technology Policy (OSTP), to establish a government-wide definition of scientific misconduct.

The Challenge of Establishing Government-Wide Policies

It is a difficult challenge. Reports over the last year or so have suggested that strong differences of opinion remain between the Public Health Service (PHS) and the National Science Foundation (NSF) on the subject, particularly whether to retain or scuttle the so-called "serious deviation" clause.2 It is not clear where the other federal agencies stand on the matter.

It is premature to despair, however. It took a full decade for the relevant agencies to agree on government-wide standards for the protection of human subjects. A panel of representatives from affected agencies began work, under OSTP auspices, early in 1982, in response to 1981 recommendations of a Presidential Commission.3 Recommendation 1 of the Commission's report urged the President "through appropriate action" to require that all federal departments and agencies adopt a common core of regulations, derived from those of HHS. Optimistically, the Commission suggested that 180 days should be ample time "to resolve any remaining questions about the HHS core regulations."4 Although an interagency committee was established early in 1982 by the President's Science Advisor, it was not until June 1991 that the "common rule" was finally adopted by 17 departments and agencies that conduct or support research with human subjects.5

With that as background, it is not surprising that the federal agencies are finding it difficult to agree on a common definition of scientific misconduct. Assuming they accomplish the goal in the foreseeable future, will that be good enough? Probably not.

International Guidelines Will Be Needed

It is no longer news that science has become a collaborative enterprise or that scientific papers have more authors than in the past. An article published in 1995 reported that 37 life science papers published the previous year had "three digit authorship," compared to virtually none in the 1980s.6 Most of the papers with hundreds of authors are reporting on multicenter clinical trials. Reports of other kinds of research also have been increasingly multi-authored. Articles with only one or two authors have decreased in frequency while those with three or four authors have increased; and fewer than 5% of the papers published in the *New England Journal of Medicine* have only a single author.7

The rise in multiple authorship reflects the importance of publications for academic advancement as well as the multidisciplinary and collaborative character of modern research. The pressure for a common rule on the protection of human subjects was generated in part by the fact that increasingly, research teams are supported by more than one agency. In like manner, research has become increasingly multinational, and papers describing research results may appear in journals published in a number of different countries.

One way to ensure that co-authors are treated fairly is to establish a common, international set of standards for research integrity and uniform procedures for violations of those standards. It is no longer possible for a country to assert that "it can't happen here." Incidents of fabrication, falsification, and plagiarism, several on a broad scale, have been reported recently in Great Britain, Germany, Poland, Sweden, Brazil, China, and the Netherlands, refuting those who may have hoped or believed that the problem was peculiarly American.8 Committees to establish procedures for dealing with such problems have been organized in Great Britain, Denmark, Germany, and Poland.9 A British group of journal editors, convening to discuss responses to research fraud, ruefully calls itself the Committee on Publication Ethics ("COPE").

Thus far, the approaches are as varied as the incidents that provoked them. In Germany, a panel has recommended that research grants be denied to institutions that fail to adopt adequate procedures for assuring scientific integrity. In addition, the panel recommended that research data be maintained for ten years following publication and that authorship standards be tightened.10 Denmark, by contrast, has established a national "committee on scientific dishonesty," to investigate allegations of scientific misconduct in all Danish research, whether or not supported by government funds.11 The British Medical Research Council issued a document in 1995 describing how to investigate

possible scientific misconduct and what sanctions to impose.12 More recently, British foundations have taken an approach much like that of the U.S., requiring the research institutions that receive their funds to establish standards for the conduct of research, procedures for handling allegations of misconduct, and protection for whistleblowers.13

The procedures for handling allegations of misconduct and the sanctions to be imposed may be less important, in terms of international consistency, than standards for the proper conduct of research and articulation of unacceptable behaviors. International cooperation might also help to resolve the problem of scientists, having committed misconduct, relocating to other countries where prospective employers may be unaware of their behavior.14 Whether the various countries of the world will have better luck establishing a common definition than have the U.S. government agencies remains to be seen. When international standards are being developed, of course, the U.S. should participate.

A good model for such collaborative efforts are the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals," developed by an international group of journal editors.15 Originally convened in 1978 to reach agreement on matters of format, the group has expanded in both membership and scope. Over 500 journals now subscribe to the Uniform Requirements, which address matters of authorship, conflicts of interest, duplicate publication, confidentiality in peer review, and publication of corrections, retractions and "expressions of concern" in addition to matters of style and format.16

Journal editors, however, are not well positioned to investigate scientific misconduct or to impose sanctions. Those who must deal with such matters are funding agencies and research institutions. Certainly, the challenge of developing international guidelines is daunting. But the prospect of holding researchers on collaborative projects to different standards, depending on the location of their laboratories or the source of their support, is disquieting.

Barbara Mishkin

Endnotes

1 "ORI, A Decade of Progress or Merely Years of Controversy?," symposium held at the annual meeting of the AAAS (February 13, 1998) in Philadelphia.

2 J. Kaiser, "Storm Brewing Over Misconduct Definition," *Science* 275:467 (1997). The PHS and NSF definitions of scientific misconduct include: "fabrication, falsification, plagiarism, or other practices that seriously deviate from those that are commonly accepted within the scientific community for proposing, conducting and reporting research. It does not include honest error or honest differences in interpretations or judgments of data." 42 C.F.R. § 50.102 (PHS); 45 C.F.R. § 689.1(a)(1) (NSF). The NSF definition also includes retaliation against whistleblowers and violation of regulations uniquely applicable to the conduct of research.

3 President's Commission for the Study of Ethical Problems in Medicine an Biomedical and Behavioral Research, *Protecting Human Subjects: First Biennial Report on the Adequacy and Uniformity of Federal Rules and Their Implementation* (1981) at 67-68.

4 *Id*. at 71.

5 Office of Science and Technology Policy, Executive Office of the President, "Federal Policy for the Protection of Human Subjects" 56 *Fed. Reg*. 28002 (June 18, 1991).

6 A. Regalado, "Multiauthor Papers on the Rise," *Science* 268: 25 (April 1995).

7 D. Rennie, V. Yank, and L. Emanuel, "When Authorship Fails: A Proposal to Make Contributors Accountable," *Journal of the American Medical Association* 278: 579-585 (1997); D. W. Shapiro, N. S. Wenger, M. F. Shapiro, "The Contributions of Authors to Multiauthored Biomedical Research Papers," *Journal of the American Medical Association* 271: 438-442 (1994).

8 E. Marshall, "Medline Searches Turn Up Cases of Suspected Plagiarism," *Science* 279: 473-474 (1998) (Poland); R.

Koenig, "Panel Calls Falsification in German Case 'Unprecedented,'" *Science* 277:.894 (1997); "Learning from Scientific Misconduct," (editorial), *Nature Medicine* 3: 1175(1997) (Germany); Office of Research Integrity, "Karolinska Institute Disclaims Articles," *ORI Newsletter* 6: 7 (1997) (Sweden); R. B. Neto, "Brazilian Researcher Protests Against Plagiarism Fine," *Nature* 380: 371 (1996); L. Xiguang, X. Lei, "Chinese Researchers Debate Rash of Plagiarism Cases," *Science* 274: 337 (1996); M. Enserink, "Fraud and Ethics Charges Hit Stroke Drug Trial," *Science* 274: 2004-2005 (1996) (Netherlands); S. Abdulla, "U.K. Fraud Verdict Prompts Moves on Ethics," *Nature* 375: 529 (1995) (England).

9 E. Marshall, "Medline Searches Turn Up Cases of Suspected Plagiarism," *Science* 279: 473 (1998) (Poland); J. Kaiser, "British Editors Form Misconduct Panel," *Science* 277: 627 (1997); D. Dickson, "UK Charities Move to Keep Research Fraud at Bay," *Nature Medicine* 3: 597 (1997) (England); R. Koenig, "Panel Proposes Ways to Combat Fraud," *Science* 278: 2049-2050 (1997) (Germany); N. Williams, "Editors Seek Ways to Cope with Fraud," *Science* 278: 1221 (1997) (Denmark).

10 R. Koenig, "Panel Proposes Ways to Combat Fraud," *Science* 278: 2049-2050 (1997).

11 N. Williams, "Editors Seek Ways to Cope with Fraud" *Science* 278: 1221 (1997).

12 S. Abdulla, "UK Fraud Verdict Prompts Moves on Ethics," *Nature* 375: 529 (1995).

13 D. Dickson, "UK Charities Move to Keep Research Fraud at Bay," *Nature Medicine* 3: 597 (1997).

14 R. Dalton, "International Recruitment Highlights Need to Track Scientific Behavior," *Nature* 383: 107-108 (1996).

15 International Committee of Medical Journal Editors, "Uniform Requirements of Manuscripts Submitted to Biomedical Journals," *Journal of the American Medical Association* 277: 927-934 (1997).

16 *Id*.

RESOURCES

In Print

Whistleblowing and the Scientific Community, a special issue of *Science and Engineering Ethics*, Volume 4, No. 1, 1998; Issue editors, Stephanie J. Bird and Diane Hoffman-Kim; institutional rate per copy, $35; personal rate, $18. To order, contact Opragen Publications, PO Box 54, Guildford, Surrey GU1 2YF, UK; tel/fax +44 1483-560074; Web site order form; http://www.cableol.co.uk/opragen/.

This special issue examines the experience of whistleblowing, its societal context, and ways in which the scientific community, especially professional societies and academic institutions, can create an environment and procedures to respond to whistleblowing. The papers and comment pieces explore challenges posed to whistleblowers and to the scientific community to uphold the standards of the community without necessarily jeopardizing the career and life of the whistleblower. Also examined are ways in the scientific community can make whistleblowing a less contentious process and more productive in achieving the goals of science.

On-Line

The Professional Engineering Practice Liaison Program, College of Engineering, University of Washington, has a new Web site on *The Applied Ethics in Professional Practice Case of the Month Club* to "present real situations taken from professional practice in order to stimulate greater emphasis on ethical issues…." See http://www.engr.washington.edu/epp/Pepl/Ethics/. A new applied ethics case taken from actual professional practice experience is presented bi-monthly in a narrative format. Several suggested solutions commonly found in professional practice to the ethics situation are also presented. Contact Ronald Bucknam, Director, Professional Engineering Practice Liaison Program, 168 Wilcox Hall, University of Washington, P.O. Box 352700, Seattle, WA, 98195-2700;

Fax (206) 685-3836; E-mail rbuckman@u.washington.edu.

* * * * * * * * * *

The AAAS Scientific Freedom, Responsibility and Law Program has created a new Internet archive for a symposium on "The Human Genome Project: What's the public got to do with it?" Convened at the 1997 Annual Meeting of the American Association for the Advancement of Science in Seattle, Washington, the symposium included nine distinguished speakers who presented substantive approaches and strategies for stimulating structured public dialogue on the Human Genome Project. The Web site provides electronic access to all of the presentations, which can be listened to as audio files. In addition, the site includes the transcript of a lively and informative dialogue that was conducted through the Internet prior to the symposium, as well as links to other materials. The U.S. Department of Energy provided partial funding for the symposium and the Internet archive. See http://www.aaas.org/spp/sfrl/hgp.htm.

ANNOUNCEMENTS

Now welcoming submissions for Volume 5, the *Journal of Women and Minorities in Science and Engineering* publishes original, peer-reviewed papers that report innovative ideas and programs, scientific studies, and formulation of concepts related to the education, recruitment, and retention of underrepresented groups in science and engineering. Issues related to women and minorities in science and engineering are consolidated to address the entire professional and educational environment. Subjects for papers submitted can include: empirical studies of current qualitative or quantitative research; historical investigations of how minority status impacts science and engineering; original theoretical or conceptual analyses of science from feminist, racial, and ethnic perspectives reviews of literature to help develop new ideas and directions for future research; explorations of feminist teaching methods, minority student/white teacher interactions; cultural phenomena that affect the classroom climate. To receive guidelines for manuscript preparation or to submit a curriculum vita if you are interested in reviewing papers for the journal, contact: Editorial Assistant, Journal of Women and Minorities in Science and Engineering, Center for Interdisciplinary Studies, Virginia Polytechnic Institute and State University, Blacksburg, VA, 24061-0227; (540) 231-6296; Fax (540) 231-7013; E-mail jrlwmse@vt.edu; WWW http://www.cis.vt.edu/sage/journal.

* * * * * * * * * *

On April 23-24, 1998, the Whitehead Institute for Biomedical Research and the American Society of Law, Medicine & Ethics are sponsoring **The Human Genome Project: Science, Law, and Social Change in the 21st Century** in Cambridge, MA. The conference will explore the impact of new genetic technologies and the challenges ahead, including: the information revolution in genetics; privacy and genetic discrimination and their effects on individuals and society; altering genes in individuals and populations; and society's response to the genomics revolution. Contact Gus Cervini, (617) 258-0633; E-mail cervini@wi.mit.edu; WWW http://www.wi.mit.edu/bio/genetics_policy.html.

* * * * * * * * * *

The Division of Medical Ethics at Harvard Medical School encourages and teaching on ethical issues in medicine. The Fellowship in Medical Ethics is open to physicians, nurses, lawyers, and others in academic fields related to medicine who have a serious academic interest in medical ethics and wish to further their knowledge of the philosophical, social, historical, and political aspects of contemporary medical ethics. During the Fellowship year, fellows attend a weekly seminar designed to explore a wide range of issues in medical ethics, as well as monthly Division Faculty Seminars and various public programs sponsored by the Division. Fellows are expected to conduct original research in medical ethics as well as to develop their teaching and clinical skills in ethics and related disciplines. Fellows must have external salary support from a training program grant or a sponsoring institution; the Fellowship will provide support for other academic and research needs. Applicants should submit a curriculum vitae and a brief statement (not more than 1,000 words) describing their interest in ethics and research plans for the fellowship. Applicants should also indicate the nature of their salary support and provide two letters of reference. For the 1998-99 Fellowship year, the deadline for submission of application materials is **April 30, 1998**. Contact Walter Robinson, MD, MPH, Fellowship Director, Division of Medical Ethics, Harvard Medical School, 641 Huntington Avenue, Boston, MA, 02115; (617) 432-3041; Fax (617) 355-6109; E-mail robinson_w@a1.tch.harvard.edu.

* * * * * * * * * *

On May 30-June 1, 1998, the Canadian Society for the Study of Practical Ethics is sponsoring its annual conference on **Public Accountability and Practical Ethics** at the University of Ottawa. The conference will include a series of symposia on "Ethics in the Public Service," a poster session, and a case study session. Contact Bruce Morito, Department of Philosophy, University of Guelph, Guelph, ON, N1G 2W1; (519) 824-4120, x3231; Fax (519) 837-8634; E-mail bmorito@uguelph.ca.

* * * * * * * * * *

The **Office of Research Integrity** (ORI) is seeking proposals from institutions, professional associations, and scientific societies that wish to collaborate with ORI in developing a conference or workshop that addresses either dealing with scientific misconduct or the promotion of research integrity. The proposed meetings would be held between September 1998 and December 1999. ORI intends to hold 6 or more regional conferences or workshops during this period in strategic locations around the country. Proposals for local conferences will also be considered. The meetings would be jointly developed, presented, and supported by ORI and collaborating organizations. Among the topics that might be considered for a scientific misconduct workshop are incidence, prevention, detection, definition, reporting allegations/misconduct findings, investigating, sanctions, restitution, rehabilitation, whistleblowers, respondents, institutions, professional organizations, scientific societies, editors, and funding agencies. The deadline for proposals for fall 1998 has already passed, however, proposals for calendar year 1999 should be submitted by **May 31, 1998.** To receive the proposal instructions and form, contact Alicia Dustira, Deputy Director, Division of Policy and Education, ORI, (301) 433-5300; E-mail adustira@osophs.dhhs.gov.

* * * * * * * * * *

For a special issue of the *American Behavioral Scientist*, **papers are needed on the study of bioethical issues**. Topics may include, but are not limited to, decisions about the beginning and end of life and about the allocation of scarce medical resources. Both theoretical and empirical contributions are welcome, as are papers addressing public policy issues. Papers should be 20-30 pages in length. The deadline for the completed paper is Oct. 1, 1998. Please send a detailed abstract or prospectus (1-2 pages) by June 1, 1998 to Dr. Aliza Kolker, Dept. of Sociology and Anthropology, George Mason University, Fairfax, VA, 22030; (703) 993-1444/1440; Fax (703) 993-1446.

* * * * * * * * * *

Abstracts are being accepted for a conference on **Enhancing Patient Safety and Reducing Errors in Health Care** to be held at the Annenberg Center for Health Sciences, Rancho Mirage, California, November 8-10, 1998. The multi-disciplinary conference is being convened by the American Association for the Advancement of Science, the Annenberg Center for Health Sciences, the Joint Commission on Accreditation of Healthcare Organizations, the National Patient Safety Foundation, and the U.S. Department of Veterans Affairs. Proposals may address safety issues wherever health care is provided, including acute and chronic health care institutions, HMOs, and outpatient surgical providers. Proposals are welcome from investigators representing a broad spectrum of professional disciplines, including risk assessment, social science, medical informatics and other computer-related disciplines, pharmacy, nursing, and medicine. Proposals must include: (1) a summary of the presentation, with bibliography, less than 1,000 words, and (2) a résumé or biographical sketch, less than 100 words. We encourage submissions by e-mail; if faxed or mailed, please submit 6 copies. Successful applicants will receive travel expenses, room and board, and a waiver of registration fees. Deadline: **July 1, 1998**. Direct proposals or inquiries to: Deborah Runkle, AAAS, 1200 New York Avenue, NW, Washington, DC, 20005; (202).326.6794; Fax (202).289.4950; E-mail safety@aaas.org.

* * * * * * * * * *

The first **NABC Bioethics Institute** will be hosted by North Carolina State University in Raleigh, NC, May 23-28, 1998. A faculty development workshop, the Institute is designed to assist faculty in the life sciences - especially the agricultural and environmental sciences - to integrate discussions of ethical issues into existing science courses. Institute sessions are devoted to ethical theory, pedagogy, and policy. Particular attention is paid to ethical issues in agricultural biotechnology and, for example, to: environmental ethics, duties to the hungry, rights to water and soil,

and animal welfare and rights. Each participant receives a stipend of $250, plus books, case studies, classroom exercises, and bibliographies. Participants not from NCSU receive, in addition, a $650 travel and living allowance. Applicants must be tenured or tenure-track life science faculty members. Teams of applicants from a single institution are encouraged. The Institute is funded in part by a major grant from the National Agricultural Biotechnology Council and is modeled on the Iowa State University Bioethics Institute. For more details, contact Professor Gary Comstock, 421 Catt, ISU, Ames, IA, 50011-1306, (515) 294-0054, comstock@iastate.edu.