

# Center for Ethics in Science and Technology

## ETHICS CENTER UPDATE

SUMMER 2008

### Message from the Co-Directors

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This "Summer" newsletter is later than we had intended, in part because we have been busy with scheduling and presenting the new Exploring Ethics series at the Fleet Science Center. Those of you who haven't had a chance to attend one of these events might appreciate a brief summary of the success of this program. Since our last newsletter, we have presented four programs on the first Wednesday of the months July, August, September, and October. The topics of these programs included *Technology on the Border* (July 2), *Surveillance and Sensors* (August 6), *Stronger, Higher, Faster: Do the wins justify the means?* (September 3), and *Politics in Science* (October 1). The speakers and turnout for these events have been excellent, and the evaluations have been generous, typically averaging 4.5 or better on a 5-point scale. In addition, each of these programs has been complemented by a commentary published with [voiceofsandiego.com](http://voiceofsandiego.com), and a segment on the KPBS program *These Days*.

An important part of the success of these programs is audience participation. Our goal is a dialogue that includes not just our expert panelists, but members of the community. Please plan to join us for upcoming events and don't hesitate to suggest topics that you

would like to see as part of our programs. The choices we're now making for future programs are based largely on suggestions from those who attend our events.

In addition to our continuing plans for the Exploring Ethics series, two upcoming events are particularly noteworthy. The first is that we will again sponsor an ethics award for senior division participants in the April 2009 Greater San Diego Science and Engineering Fair (<http://gsdsef.org>). We were very pleased with the quality of submissions in the first year of this program and look forward to this year's contributions.

The second upcoming event is the first San Diego Science Festival (<http://sdsciencefestival.com>), scheduled for March 1 – April 5, 2009. The Ethics Center will participate in this event in several ways. One of the Co-Directors will be one of the "Nifty Fifty" (<http://sdsciencefestival.com/htmls/2009festival/nifty.htm>), members of the San Diego science community who have offered to speak in local high schools. In addition, two of the Exploring Ethics events will be scheduled during the Science Festival month: March 4 and April 1. Watch for further announcements as we finalize

scheduling for these two programs.

In this newsletter, we are delighted to dedicate our "Ethics in San Diego" page to an interview with Reverend Mark Trotter. Mark has been an invaluable participant from the earliest stages in defining the Ethics Center and its role in San Diego. To the extent that the Center has had some success, we have relied greatly on Mark's advice.

Finally, we are continuing the practice of including a final page with selected news stories in science that have noteworthy ethical challenges. In previous issues, these stories were collected and written by Torrey Velasquez, who has now left her position as an Ethics Center intern to enter law school at the University of Pennsylvania. Although we were sorry to see her go, we are delighted to have generous contributions from another Ethics Center intern, Theresa Bishop, and an Ethics Center fellow, Tate Hurvitz. In his "spare" time, Tate is a full-time professor at Grossmont College.

We hope you'll find this newsletter of interest and look forward to seeing you at our upcoming events.

Lawrence M Hinman and  
Michael Kalichman  
Co-Directors

The Ethics Center and its activities have enjoyed generous support from:

Legler Benbough Foundation ~ The Parker Foundation  
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**EXPLORING ETHICS: *the science and ethics forum***

**Exploring Ethics** is an ongoing series of free, public events scheduled for the first Wednesday of each month, 5:30-7 pm, jointly sponsored by the Ethics Center and the Reuben H. Fleet Science Center. To be sure that we will have space for you, please RSVP in advance at <http://ethicscenter.net> and arrive by no later than 5:15 pm. Also, please note that program titles and schedules are subject to change depending on speaker availability and new developments in science and ethics.

**RECENT EVENTS**

**July 2, 2008 *Technology on the Border: If technology is the answer, what's the question?***

One of the more contentious issues of our time is the security of international borders. One proposed means to increase border security is through new developments in science and technology. The goal of this forum was to better understand the nature of this technology and to help us articulate the problems that we are attempting to solve. The panelists included: René Zenteno, UCSD Center for U.S.-Mexican Studies, Chris Aldridge, NLECTC-Border Research and Technology Center, and Andrea Guerrero, ACLU of San Diego and Imperial Counties.



**August 6, 2008 *Surveillance and Sensors: Who's watching whom?***



Advancements in camera, video, and sensor technology have led a variety of public and private organizations to track our movements and activities. Anonymous technicians are documenting our identity, constructing our profiles, logging our Internet use, monitoring our preferences, peeping in on our purchases and locating our precise whereabouts, relationships, and behavior. As the technology proliferates, our privacy and behavior are being subjected to view and control without our knowledge. In Britain, for example, there is now 1 camera for every 13 citizens. The panelists included: Kevin Keenan, ACLU of San Diego and Imperial Counties, Mohan Trivedi, UC San Diego Computer Vision and Robotics Research Laboratory, and Marcus Nieto, California Research Bureau.

**September 3, 2008 *Stronger, Higher, Faster: Do the wins justify the means?***

The 2008 Olympics and competitive athletics in general increasingly confront us with questions about new means of enhancing human performance. As pharmacology, physiology, and technology continue to advance, we will be more and more challenged to re-define what it means to be human. The panelists for this timely discussion included: Don Catlin, Founder and Head, UCLA Olympic Laboratory, Theodore Friedmann, Chair, Gene Doping Panel, World Anti-Doping Agency, and Mark Zeigler, Staff Writer, Sports, *Union-Tribune*.



**October 1, 2008 *Politics in Science: Who decides what gets done and what it means?***



One of the questions in the public eye with this year's Presidential election is the relationship between government and science. If science is supported by the government, is it reasonable to expect that the government should have a role in deciding what science should receive support? And since the government clearly does have a role in funding science, should it also be allowed a role in how and if the resulting science will be reported or used? The panelists for this program included: Naomi Oreskes, UC San Diego, Gerald Markowitz, City University of New York, and Stanley Maloy, San Diego State University.

**UPCOMING EVENTS**

Please join us for the upcoming **Exploring Ethics** programs at the Fleet Science Center.

- November 5, 2008     *Electronic Health Records: The Good, the Bad, and the Future*
- December 3, 2008     *Retrospective: Science and ethics news stories of 2008*
- January 7, 2009     *Race and Science*

ETHICS IN SAN DIEGO

**REVEREND MARK TROTTER, Retired United Methodist Minister**

Reverend Trotter served as Senior Minister, First United Methodist Church, San Diego, from 1976-2000. He was elected delegate six times to the General Conference of the United Methodist Church. He has served on several national denominational committees and boards, including chairing the Committee to Study a United Methodist Understanding of Baptism. He currently serves on the editorial board of the Book of Worship, as well as the Committee For A

National Plan For Hispanic Ministry, and a member of the Dialogue on Unity.

Reverend Trotter is the author of several books. In 2000, he was invited to be Preacher in Residence at St. Paul's Episcopal Cathedral in San Diego. He serves on the Parker Foundation Board of Directors and the Sharp Hospital Board of Directors. He is Past Chairman of the Board of Trustees of San Diego Hospice and past-president of San Diego Rotary.



Reverend Mark Trotter

**Interview**

**How and why did you become involved in the Ethics Center?**

I was invited to join the Advisory Council shortly after the Center was organized in 2004. I think I was approached because I represent two segments of people who could be useful in planning a Center like this: I have ties to the local religious community, and I have ties to the private foundation community. I agreed to join because I was fascinated by the prospect that a region like San Diego that is so focused on scientific research would have a community-based center for scientific ethics. This spoke to my own concerns as a layman about how scientific discoveries can affect our quality of life.

**How would you describe the public reaction to the Center so far?**

From the beginning, those who have attended our events have been generous in evaluating our impact. But until recently, most of those people were invited to participate, so this sampling of community reaction was limited. Over the past year, since we began the monthly "Exploring Ethics" events at the Fleet Center and opened them up to the general public, the growing response has been very encouraging. But there is still a vast ignorance of the Center and its work, and I think we are ready to attack that as our next major objective.

**What do you think is the Center's most important achievement to date?**

In the beginning, we opened up public discussion of the controversy over stem cell research, and that had a very big impact. The same thing happened later on with the Terri Schiavo case. The Center is uniquely positioned to seize such opportunities and bring the best-informed people in the country to San Diego. We're able to respond to events in the public eye. We can organize forums in cooperation with our sponsoring universities and research institutes, and as we keep adding names to our mailing list of interested people, we are now positioned to be more responsive to current events and to extend our reach.

**How can the Ethics Center do a better job of outreach to the religious community, both clergy and laypeople, here in San Diego?**

In the early years, the religious community was invited to seminars and lectures, but overall, their response has been less than what the Center had hoped and what I had hoped. I think this is because clergy are primarily interested in ethical issues dealing with justice, for example, in the availability of technology to those who are most in need but who have the least access. If the Center would address those issues, I think clergy would be more interested in attending.

**Is there any topic you would like to see addressed at a future Ethics Center forum?**

We haven't explored the issue of gene manipulation, which has become a focus of the biotech industry here in San Diego. There are potentially tremendous benefits to human life in genetic engineering, but there are also possible harmful consequences. Ethics deals with consequences. Does science have an ethical responsibility to factor in the potential consequences of its experimentation?

**IN THE NEWS: ETHICS AND SCIENCE\******Beyond Fingerprinting: Is Biometrics the Best Bet for Fighting Identity Theft?***

*From:* Anil K. Jain and Sharath Pankanti, *Scientific American Magazine*, August 19, 2008

*Summary:* As technology advances, new measures are being taken to protect against identity theft and to precisely recognize individuals based on biometrics. Biometric identity systems allow a quick, accurate, and cost-effective measure to recognize distinguishing personal characteristics, such as a face, hand, voice, or iris. There are two basic features that systems require: traits must be unique for each individual and must not change significantly over time. Developers are working to ensure the biometric systems are secure and only recognize characteristics by the legitimate owners.

*Ethical Challenges:* Biometric identity systems face several barriers that need to be overcome. How should the level of accuracy be measured and to what extent? How accurate are commercial devices with cheaper fingerprinting sensors? How secure is face recognition technology when facial expressions change? How do these systems recognize imposters? Comparisons can lead to “false accept” or “false reject” errors in matching identities. How do we ensure that hackers do not tamper with the software and obtain valuable personal information, such as health records? Who owns the data and is it being used for unintended purposes? (TB\*)

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***Costly Health Care Mistakes***

*From:* Janet Raloff, *ScienceNews Magazine of the Society for the Science & the Public*, July 30, 2008

*Summary:* A recent study by William E. Encinosa and Fred J. Hellinger of the Federal Agency for Healthcare Research and Quality, reported that 10% of patient deaths within months of a surgery were due to medical errors such as anesthesia, accidental cuts, leaving a foreign body, treatment-associated infections, hemorrhage or wound-healing problems, or reactions to blood transfusions, which could have been prevented. In fact, medical errors cause about 98,000 deaths each year. Encinosa and Hellinger noted that medical errors from surgeries in the U.S. cost almost \$1.5 billion a year. Insurance companies cover these charges, but at a cost of insurance rates increasing.

*Ethical Challenges:* Since no one is perfect, to what extent should physicians be held liable for human errors? How is it best to reduce the rate of errors? Should we turn to medical advancements, such as robotics, to increase consistency, but sacrifice the role of human judgment? (TB\*)

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***Personal Trainer in a Pill***

*From:* Lauren Cahoon, *ScienceNOW Daily News*, July 31, 2008

*Summary:* In a study led by Ronald Evans of the Salk Institute for Biological Studies in San Diego, California, adult mice were given a compound that dramatically increased their endurance when combined with exercise. In a recent follow up to this study, scientist combined this compound with AICAR, which activates enzymes commonly produced by the body during exercise. The effect was that adult mice experienced near 50% increase in endurance without any exercise.

*Ethical Challenges:* On one hand, this may enable many who suffer from “sedentary diseases,” such as obesity and diabetes, to overcome the often daunting and sometimes prohibitive difficulty of “jump starting” a more active lifestyle. However, there is a potential for this to seem to give license to poor eating and exercise habits associated with heart disease, hypertension, and many other potentially life threatening ailments. Additionally, this is likely to be attractive to athletes eager for training and competitive advantages. Such use raises the kinds of concerns about health and fairness we have faced in recent history with steroid scandals in baseball, football, cycling, and various other Olympic sports. (TH\*)

\*Theresa Bishop, recent USD graduate and Ethics Center intern, and Tate Hurvitz, full-time professor at Grossmont College and Ethics Center Fellow, identified these stories, summarized the science, and suggested some ethical questions.

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**ABOUT THE ETHICS CENTER**

The Center for Ethics in Science & Technology is an independent center that has a close working relationship with UC San Diego, the University of San Diego, and San Diego State University.

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