Professional Ethics Report

AAAS
ADVANCING SCIENCE, SERVING SOCIETY

Publication of the American Association for the Advancement of Science, Scientific Freedom, Responsibility & Law Program in collaboration with the Committee on Scientific Freedom & Responsibility, Professional Society Ethics Group

VOLUME XX NUMBER 4 Fall 2006

POLLS TRACK PUBLIC SUPPORT FOR EMBRYONIC STEM CELL RESEARCH

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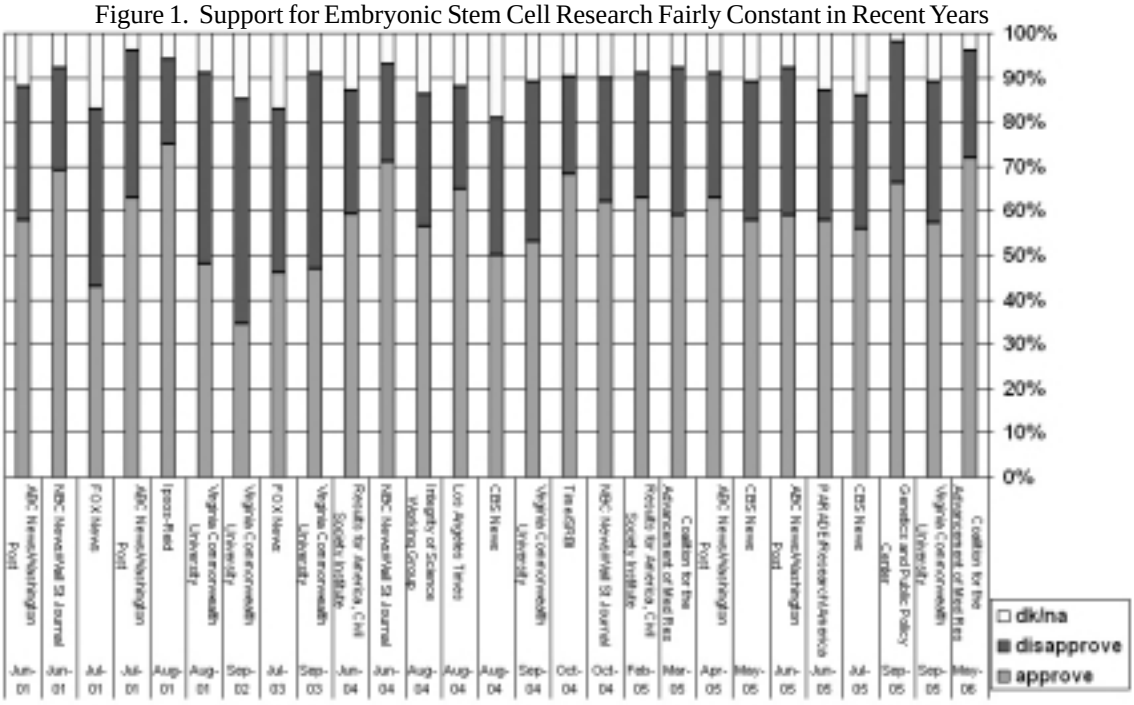
Since President George W. Bush declared a ban on federal funding for human embryonic stem cell research (SCR) on 9 August 2001, numerous polls have sought to gauge whether the majority of the American public supports or opposes such research. Pollsters have predominantly asked whether participants approve or disapprove of stem cell research, and whether federal funding should or should not be allocated for this research.[1] Some polls have asked additional questions to gather more information regarding public opinion about the ethics of stem cell research, while others have focused on state-funded stem cell research initiatives.

This essay summarizes poll data pertaining to national attitudes toward SCR since August 2001.[2] In addition to this broad view, results from two specific polls, one conducted by Virginia Commonwealth University's Center for Public Policy and the other by the Pew Research Center for the People & the Press, are presented. Taken together, these data reveal that the majority of the American public supports SCR, and that this majority has remained consistent since 2003. In addition, positive correlations exist between support for SCR and the degree to which poll respondents feel well informed about scientific issues. Not surprisingly, religious affiliation is a factor in respondents' attitudes toward embryonic SCR; however, data presented here indicate that most religious groups studied support such research.

American Attitudes – A Broad View[3]

Figure 1 represents a broad view of public opinion polls over time, from the summer of 2001 to May 2006.[4] Those respondents who declined to answer (no answer, na), or who responded "I don't know" (dk), were tallied together. For all polls appearing in Figure 1, the only question under consideration asked respondents whether they support/favor/approve or oppose/disapprove of

Figure 1. Support for Embryonic Stem Cell Research Fairly Constant in Recent Years



Public Opinion Polls

(**Flanagan** continued from page 1)

SCR (please see reference 3 for specific criteria employed for this analysis). Overall, these composite data show that support for stem cell research has not changed dramatically over time, with the exception of a discernible trough formed by four polls conducted between August 2001 and September 2003. Approval for stem cell research fell below 50% in 5 out of 27 polls considered, or 18.5% of the time points represented. However, these 5 polls were all conducted between July 2001 (Fox News) and September 2003 (Virginia Commonwealth University). For the remaining time points, from June 2004 through May 2006, the average percent approval is 61%. The composite data also illustrate that variability in approval rates has lessened over time: the last poll in which approval fell below 50% was conducted in September 2003 (by Virginia Commonwealth University), with approval rates remaining at or above 50% since that time. Over the same time course, a slight decrease in the percentage of dk/na responses is apparent, although the average hovers around the 10% mark. It may be that respondents have become increasingly aware of SCR due to increased politicization of the subject over this time period, and hence have become more likely to report their opinions in terms of approval or disapproval.

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The *Professional Ethics Report* is published quarterly by the Scientific Freedom, Responsibility and Law Program in collaboration with the Committee on Scientific Freedom and Responsibility and the Professional Society Ethics Group, American Association for the Advancement of Science, 1200 New York Avenue, NW, Washington, DC 20005, (202) 326-6236; Fax (202) 289-4950; E-mail: ewilliam@aaas.org; WWW *http://www.aaas.org/spp/dspp/sfrl/sfrl.htm.* Back issues of *Professional Ethics Report* are now on-line at *http://www.aaas.org/spp/dspp/sfrl/per/per.htm*

ISSN: 1045-8808

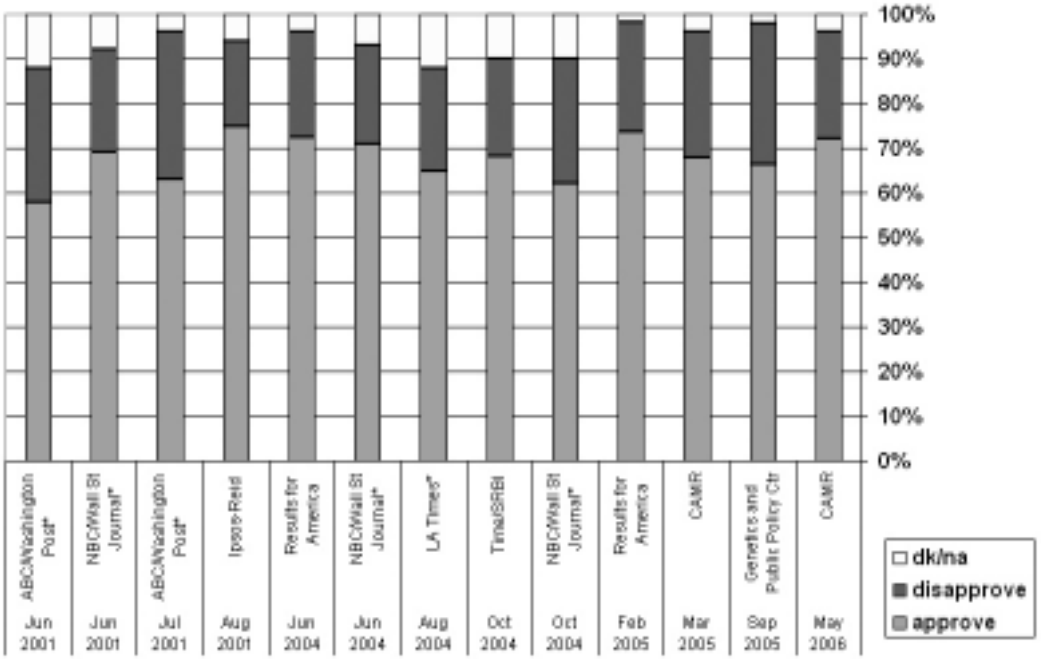
When undertaking an analysis of any polling data, the issue of question wording is of great importance.[5] Upon closer examination, the polls compiled in Figure 1 can be subdivided into two groups: those polls in which the support/oppose question was preceded by a multiple-sentence background statement ('descriptive'), and those in which the question was asked in the absence of any additional information ('simple').[6] Those polls that provided additional information about SCR yielded higher percentages of support among respondents, with an average of 68.2% compared to an average percent approval of 53.5% for 'simple' questions (Figure 2). It should be noted that in 6 out of 13 descriptive polls (denoted with asterisks in Figure 2), respondents were presented with statements both in favor and opposition to SCR, then asked with which statement they agreed. However, in the remaining 7 descriptive polls, the additional statements did not contain balanced favorable and opposing statements. In these latter cases, background information included words and phrases to convey practical benefits of SCR (e.g., curing of Alzheimer's or Parkinson's Disease or diabetes) and to define the source of embryos used ("discarded," "donated"). From these data, it may be concluded that public opinion regarding embryonic SCR is slanted toward approval by words and phrases that place the question in a utilitarian context. [SEE Figure #2, bottom right]

Trends over Time: Religion, Interest and Information

Virginia Commonwealth University's Center for Public Policy has conducted the annual VCU Life Sciences Survey since 2001. The survey has asked many questions pertaining to controversial research areas, including human cloning, genetic testing, and embryonic stem cell research. In addition, the VCU survey has queried respondents about their interest in scientific developments, as well as the degree to which they are informed about such developments.

Data from polls conducted from 2001 through 2005 are currently available.[7] In each case, VCU surveyed randomly-selected American adults and asked the same question pertaining to stem cell research: "On the whole, how much do

Figure 2. Polls with Additional Information about Embryonic Stem Cell Research Show Higher Levels of Public Support than Other Polls.



Note: Polls denoted with asterisks provided balanced background statements; remaining polls provided utilitarian words and phrases.

Letters to the Editor: The editors welcome comments from our readers. We reserve the right to edit and abridge letter as space permits. Please address all correspondence to the deputy editor.

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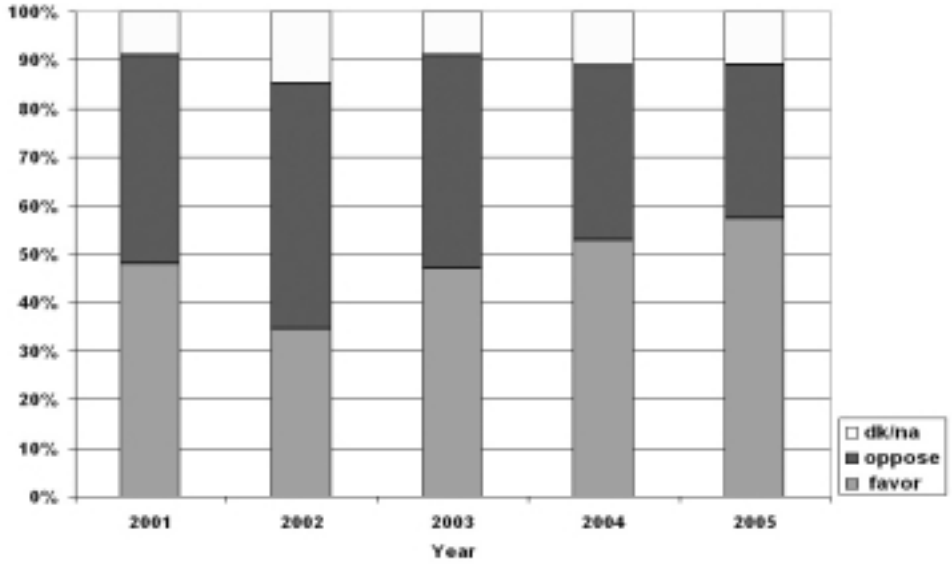
you favor or oppose medical research that uses stem cells from human embryos – do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose this?" This consistency of question wording allows for direct comparisons over time. Figure 3 depicts responses to the stem cell question for each survey year available. As was apparent in Figure 1, the annual VCU data on the stem cell research question reveal a decrease in support between 2001 and 2002, in this case from 48% to 35%. At the same time, uncertainty (or refusal to answer) increased from 9% to 15%, while opposition also increased from 43% to 51%. From 2002 to 2005, however, a trend of increasing support becomes apparent, coupled with a decrease in opposition and a return to 2001 levels of uncertainty. [SEE Figure #3, top right]

For the years 2002 and 2003, VCU used an "interest and information index"[8] to determine how interested and/or informed respondents believed they were at survey time. In 2002, respondents with a higher index were as likely to favor embryonic SCR as to oppose it (45% v. 43%, respectively), while those with a lower index were nearly twice as likely to oppose embryonic SCR (29% in favor v. 55% opposed). In 2003, respondents with a higher interest and information index were 1.6 times more likely to favor embryonic SCR, while those with a lower index were 1.3 times more likely to oppose. The index was not used in the 2004 VCU survey; rather, each question gauging interest or information was tabulated separately. When asked, "How well informed are you about medical discoveries," respondents who thought they were well informed were 1.8 times more likely to favor embryonic SCR, while those who felt less informed were 1.3 times more likely to oppose. These data indicate a positive correlation between feeling well informed and embryonic SCR attitudes, such that those respondents who felt well informed were more likely to favor embryonic stem cell research. In addition, support for such research increased over the time course studied. (It is important to note that respondents self-reported the degree to which they were informed in each of these cases; hence, the results may not be an accurate reflection of the knowledge base actually possessed.)

Figure 3. Data from Virginia Commonwealth University Show Increasing Support for Embryonic Stem Cell Research between 2002 and 2005.

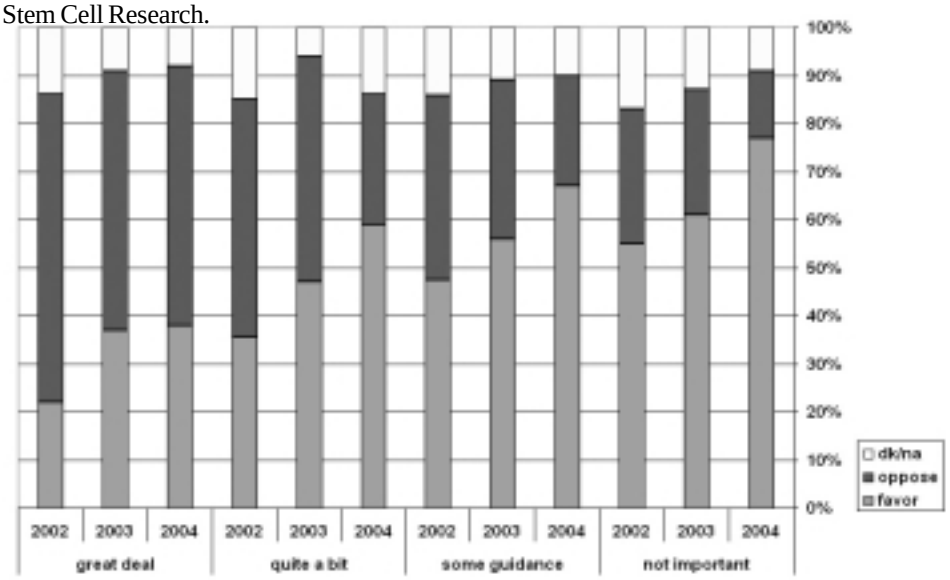


For the years 2002, 2003 and 2004, VCU compiled responses to the stem cell question by subgroup, based on respondents' answers to other questions from the survey. Respondents were asked whether they considered religion to be an important part of their lives. Those who answered "yes" were asked an additional question: "Would you say your religious beliefs provide some guidance in your day-to-day living, quitea bit of guidance, or a great deal of guidance in your day-to-day living?" In addition to "some guidance," "quite a bit," and "a great deal," "not important" responses were recorded. For all three survey years, a linear relationship existed between degree of religious guidance and opposition to embryonic stem cell research: as degree of religious guidance increased, support for embryonic SCR decreased. [SEE Figure #4, bottom right]

Among Opponents, Religious Affiliation Matters

The Pew Research Center (PRC) has conducted four polls that included a question pertaining to stem cell research (March 2002, August 2004, December

Figure 4. Extent of Religious Guidance Plays a Large Role in Attitudes Toward Embryonic Stem Cell Research.



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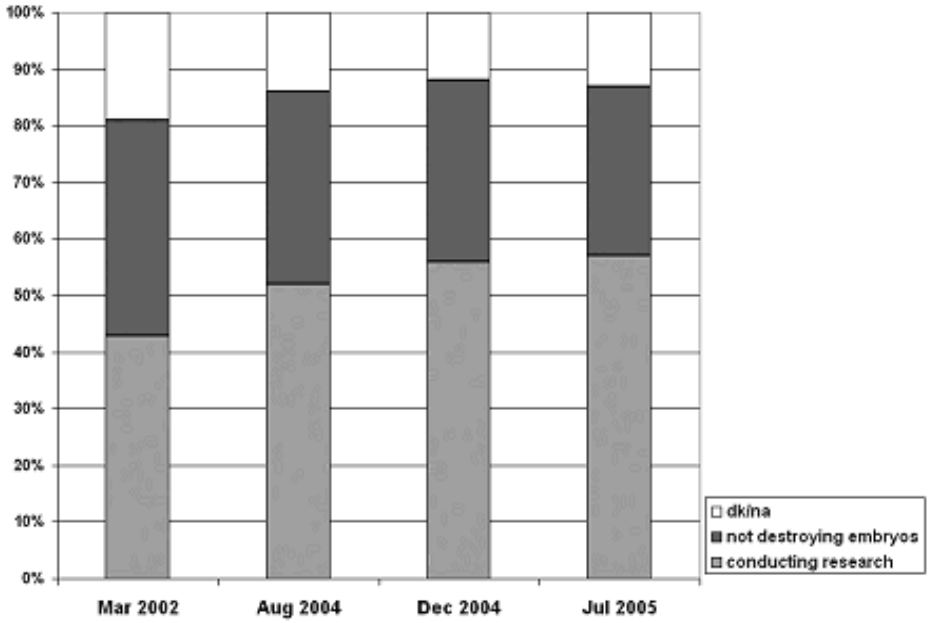
2004 and July 2005). In each, adults were asked, "All in all, which is more important: conducting stem cell research that might result in new medical cures, or not destroying the potential life of human embryos involved in this research?"The wording of this question differs from the simplified support/oppose framework used in polls summarized in Figure 1, in that it asked respondents to choose between "research cures" or "not destroying the potential life of human embryos." ("Don't know/Refused" responses were also tabulated for this question.) Figure 5 depicts responses to the stem cell question as asked by PRC, and illustrates that importance of conducting embryonic SCR increased from March 2002 (43%) through December 2004 (56%), and remained constant through July 2005 (57%). [SEE Figure #5, top right]

Figure 5. Americans Place Greater Importance on Conducting Embryonic Stem Cell Research than on Preserving Embryos.

Pew Research Center.



Results from the July 2005 PRC poll included subgroup analysis based on respondents' reported religious affiliation. Respondents who placed greater importance on conducting embryonic SCR outnumbered those placing greater importance on preserving embryos by nearly 2:1. Analysis of religious affiliation revealed some interesting deviations from this figure. White Catholics as well as "High Commitment" White Non-Evangelical Protestants closely mirrored poll totals, with each placing greater importance on embryonic SCR by 2:1. White Catholics who identified as "High Commitment," along with Black Protestants, were approximately evenly split in their responses (1:1), while White Non-Evangelicals placed greater importance on research by a margin of 3:1. Only White Evangelical Protestants placed greater importance on not destroying embryos by appreciable margins (1.6:1), with those identifying as "High Commitment" doing so by a margin of 2:1. The greatest fold difference between embryonic SCR support and opposition occurred among those identified as Secular, who placed greater importance on stem cell research by 6:1.

Conclusion

On 19 July 2006, President Bush used his veto power for the first time during his presidency to prevent a more permissive stem cell research bill from becoming law,[9] saying "it crosses a moral boundary that our decent society needs to respect."[10] Taken together, the data presented here indicate that a majority of the American public disagrees with the President.

Indeed, a USA Today/Gallup poll conducted 21-23 July 2006 revealed that 58% of adult Americans disapproved of President Bush's decision to veto this bill, while 36% approved of the decision, and 6% had no opinion.[11] These figures closely mirror other polls that measure public approval for embryonic stem cell research. [12] The Gallup poll also asked whether respondents thought Bush's veto decision was based on personal moral beliefs or an attempt to gain political advantage. Sixty-one percent of respondents felt it was the former, while 32% believed it was the latter. These statistics raise the possibility that, in disapproving of his decision to veto, the majority of the American public was likewise dissatisfied with his perceived motivation for doing so. Of course, the poll did not pose this question directly. Hopefully, future polls will forge an understanding of the public's attitude toward the use of religious guidance in the making of national policy decisions.

The data presented here illustrate that solid majority support for embryonic SCR has been consistent since 2003, with support not falling below the 50% mark, and has in fact increased over the time period. Though a correlation is difficult to prove with certainty, the "trough" in support observed in Figure 1 might be explained by fervent support for President Bush post-9/11. In the time period surrounding the invasion of Iraq, American citizens understandably felt compelled to unite in support of the Bush administration's response to terrorist attacks. The observed increase in opposition to embryonic SCR may have resulted from broad public support of the president's policies, which extended from foreign policy into domestic issues.

References

[1] Pollingreport.com is an online directory of state and national polling data produced by the nonpartisan Polling Report, Inc. Several of the polls cited in this article appear under the "Stem Cell Research" subheading of the Science and Nature section (www.pollingreport.com/science.htm).
[2] A lucid tutorial on sampling standards ("How are polls conducted?" by Frank Newport, Lydia Saad and David Moore)appears in *Where America Stands* 1997, John Wiley & Sons, Inc.
[3] Poll data compiled for broad analysis were selected according to several criteria. First, only questions asking whether respondents

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support/favor/approve or oppose/disapprove of SCR were included. Second, all polls were conducted over the telephone by established polling firms; online polls were excluded. Third, all responses were compiled by random sampling of American adults (age 18 or older) and weighted to repre-sent national demographics, per industry standards; polls limited to a particular dem-ographic (e.g., women) were excluded. Margins of error ranged from plus or minus 2.5 to 4 percentage points, with a 95% confidence interval. Finally, questions per-taining to the permissibility of human cloning were omitted. In some cases, "strongly support/favor/approve" and "somewhat support/favor/approve" responses were combined, as was done for "strongly oppose/disapprove" and "somewhat oppose/disapprove" responses.

[4] In chronological order, polls cited are as follows: 20-24 June 2001, ABC News/Washington Post; 23-25 June 2001, NBC News/Wall Street Journal; 11-12 July 2001, Fox News; 26-30 July 2001, ABC News/Washington Post; 10-12 Aug 2001, Ipsos-Reid; 23 Aug-2 Sept 2001 and 4-16 Sept 2002, Virginia Commonwealth University (VCU); 15-16 July 2003, Fox News; 3-26 Sept 2003, VCU; 10-13 June 2004, Results for America, Civil Society Inst.; 25-28 June 2004, NBC News/Wall Street Journal; 16-23 Aug 2004, Integrity of Science Working Group; 21-24 Aug 2004, Los Angeles Times; Aug 2004, CBS News; 7-17 Sept 2004, VCU; 14-15 Oct 2004, Time/SRBI; 16-18 Oct 2004, NBC News/Wall Street Journal; 3-6 Feb 2005, Results for America, Civil Society Inst.; 18-21 Mar 2005,Coalition for the Advancement of Medical Research (CAMR); 21-24 Apr 2005, ABC News/Washington Post; 20-23 May 2005, CBS News; 2-5 Jun 2005, ABC News/Washington Post; 4-9 June 2005, PARADE/Research!America; 13-14 June 2005, CBS News; 9-19 Sept 2005, Genetics and Public Policy Center; 14-29 Sept 2005, VCU; 5 May 2006, CAMR.

[5] For example, a poll commissioned by the U.S. Conference of Catholic Bishops that used "destroying human embryos" in its question wording found more opposition to embryonic stem cell research than other polls (http://www.nccbuscc.org/comm/archives/2006/06-109.shtml).

[6] Exact wording of questions used in CBS News polls could not be determined, and were therefore excluded from this analysis. In addition, three polls (Results for America 2004 and 2005, and CAMR 2005) yielded both simple and descriptive data sets, which were assigned into respective groups for analysis.

[7] Links to VCU Life Sciences Survey data from 2001 to 2005 are available at http://www.vcu.edu/lifesci/centers/cen_lse_ surveys .html.

Results from the 2006 survey became available as PER went to press (http://www.news.vcu.edu/news.aspx?v=detail&nid=1893).

[8] The interest and information index combined responses from four questions to gauge how interested and informed respondents were about both scientific and medical discoveries (see page 20 of the 2002 VCU Life Sciences Survey report for exact question wording).

[9] President Bush's veto message to the House of Representatives may be found in the White House Office of the Press Secretary's release at http://www.whitehouse.gov/news/releases/2006/07/20060719-5.html.

[10] Bush vetoes embryonic stem-cell bill, September 25, 2006, CNN.com

[11] Poll results may be found at http://www.usatoday.com/news/polls/tables/live/2006-07-24-poll.htm#stemcell.

[12] Slight Majority of Public Disapproves of Bush Stem Cell Veto, Matthew C. Nisbet, http://scienceblogs.com/framing-science/2006/07/slight_majority_of_public_disa.php. See also Nisbet, Matthew C. "Public opinion about stem cell research and human cloning," *Public Opinion Quarterly* 68(1):131-154, for insightful analysis of poll data pertaining to stem cell research.

IN THE NEWS

INTERNET BILL OF RIGHTS

In its inaugural meeting, the Internet Governance Forum (IGF) proposed the creation of an "Internet Bill of Rights" that would attempt to ensure the civil rights of Internet users around the world.

Proponents of the Bill want to guarantee online the same rights preserved offline, especially freedom of speech and expression. "The rights we have enjoyed in the traditional age must move with us to the digital age," said Robin Gross, Executive Director of IP Justice.[1]

As the internet plays an increasingly important role in worldwide communication, government, business, and social networking, advocacy groups worry that the web will not be accessible to everyone. In a November 6 *New York Times* article, James Gashel, executive director of the National Federation of the Blind, said that using the Internet is still a challenge for those with disabilities. "Web sites are more useful than they used to be, but there are still more hurdles than you'd like to have to go through."[2]

In the United States, it is still unclear whether the Americans with Disabilities Act, passed in 1990, extends to the Internet. In California, a preliminary ruling against Target, Inc. found that the company's website, because it is an extension of its physical store, must comply with the ADA.[3]

Despite the legal drama unfolding in U.S. courts, critics question the need for an Internet Bill of Rights, arguing that such a document won't actually make a difference in countries with governments that already censor the internet. Others argue that Internet rights are already accounted for in the Universal Declaration of Human Rights, ratified by the United Nations in 1948.

The IGF was organized by the United Nations as an international discussion of the future of the Internet, specifically in the areas of openness, security, diversity, and access. Though the IGF has no authority to set Internet policy, organizers hope to generate important dialogue on Internet issues to inform decision-makers. This year's meeting, held last fall, included over 1500 delegates.

For more information about IGF, visit http://www.intgovforum.org/

[1]Waters, Darren. "Internet bill of rights proposed." *BBC News*. 1 November 2006. http://news.bbc.co.uk/2/hi/technology/6106452

[2] Tedeschi, Bob. "Do the rights of the disabled extend to the blind on the web?" *The New York Times*. 6 November 2006, online edition.

[3] *Ibid.*

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RESEARCHERS FORM GRASSROOTS ORGANIZATION TO PROMOTE SCIENTIFIC INTEGRITY IN THE POLITICAL PROCESS

In response to concerns about the manipulation and misuse of scientific information, a group of researchers launched Scientists and Engineers for America (SEFORA) in September 2006.

SEFORA, a nonpartisan 527 grassroots group, has more than a third of its Board

(**New**s continued on page 6)

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of Advisors comprised of Nobel Laureates. Made up of over 6,500 members, the organization's aim is to educate citizens on the need for separation between ideology and scientific research, and to support political candidates who share its science policy goals.

Along with the release of its mission statement and national agenda (both available online at www.sefora.org), the organization has produced a scientists' and engineers' "Bill of Rights," which it asks candidates and citizens to support. Included are demands to use sound, accurate scientific information in policy-making and to ensure whistleblower protections for federal researchers. The Bill also states that decisions regarding educational materials and committee appointments should be based on "scientific qualifications, not … ideology," and that there should be "no federal prohibition on publication of basic research results." (In the case of national security conflicts, "trained professionals" should make decisions about classification through a "transparent process.")

*AL

CIRCUMVENTING INTERNET CENSORSHIP

Researchers at the University of Toronto have created a program that allows Internet users to circumvent government censorship of the web, helping to preserve the Internet as a "forum of free speech and access to information."[1]

The program, called Psiphon, operates through "networks of trust" consisting of a provider in an uncensored country and users in censored countries. The provider acts as an access point, giving users in censored countries access to the Internet through an encrypted connection. Users in censored countries are given a web address and a secure login, and are able to browse freely.

Internet censorship is a rising issue, and several nations have been accused of suppressing freedom of speech and other civil liberties, as well as controlling political content within their online borders. "Governments have militarized their censorship efforts to an incredible extent, so we're trying to reverse some of that and restore that promise that the Internet once had for unfettered access and communication," said Ronald Deibert, director of the Citizen Lab, which developed Psiphon, in an *International Herald Tribune* article.[2] Organizations such as the OpenNet Initiative and Reporters without Borders have openly identified China, Iran, and Vietnam, along with other nations, as censoring free speech on the Internet.

Psiphon was developed in the Citizen Lab and the Munk Centre for International Studies at the University of Toronto. The project was funded by the Open Society Institute.

[1] http://psiphon.civisec.org/
[2] Mason, Christopher. "Web tool called psiphon has found a better way to circumvent government censors," *International Herald Tribune*. 28 November 2006. http://www.iht.com/articles/2006/11/28/business/censor.php

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CREATIONISM ON THE RISE IN EUROPE

Evidence that the creationist movement is gaining momentum in Europe can be seen in Germany, Italy, the UK, France, Russia, and most notably in Turkey. Two schools in Hesse, Germany, are actively teaching creationism. As recently as 2004, efforts to exclude evolution from classrooms occurred in both Italy and Serbia. Only after protests and criticism from scientists were evolution courses re-instated. The country where the debate is a major issue is Turkey. There, an organization called the Turkish Bilim ve Arastirma Vakfi (BAV) distributes creationist publications and invites prominent US creationists to speak.

Turkey's textbooks also have been influenced by a "creationist tone." In addition, scientists report anonymous threats, and fear that the BAV is winning the battle for public opinion, especially in areas where Islamic fundamentalism is deep-seated.

Although 70% of Europeans accept evolution versus only 40% of Americans in a 2005 study, Ulrich Kutschera, an evolutionary biologist at the University of Kassel in Germany and vice-president of the Association of German Biologists, is not content with these numbers. He argues that "the anti-evolutionary movement does undermine public understanding of science." The challenge for scientists is to ensure that the public is aware of the factual basis for evolution, while respecting the religious beliefs of different groups.

More information can be found at:
http://www.nature.com/nature/journal/v444/n7118/full/444406a.html
http://www.sciencemag.org/cgi/content/full/292/5520/1286
http://news.bbc.co.uk/2/hi/europe/3635794.stm
http://news.bbc.co.uk/1/hi/world/europe/3642460.stm

*SC

IS IT TOO GOOD TO BE TRUE?

A committee examining events leading up to the publication of Dr. Woo Suk Hwang's two fraudulent stem cell research papers in the journal *Science* has released an evaluation of the journal's review process in these cases, and has recommended guidelines applicable to the broader science journalism community.

The committee found *Science* uses high standards of technical review for submitted research, but in the case involving Hwang's papers, anomalies in the human-subjects documents and author attribution should have served as a warning of possible misconduct. The original reviewers *Science* selected for the papers were found credible and their reviews adequate. Correspondence between the authors and *Science* did suggest some minor questions with IRBs, consent forms, and authorship attribution, but these questions were not considered sufficient grounds by the reviewers to prevent publication. The committee found that since the fraudulent papers made it to publication, even with these filters in place, the review procedures should be revised.

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The committee noted that the normative culture of trust between researchers and science journals must be adapted to recognize that the high stakes of modern science (money, politics, and reputation) create strong incentives for misconduct. A more cautious reception of controversial research papers and the accompanying images and data must be adopted.

Improving review standards may come at a high cost. Science journals face serious capacity challenges in light of the sheer number of paper submissions received. More intensive review may sacrifice timeliness in publication, increase financial burdens on publishers, and strain the relationship between researchers and publishers. The committee acknowledged these concerns and suggested what they believed are low impact procedural changes to reduce the risk of fraudulent work being published.

The committee had four main recommendations for *Science* and science journalism more generally. First, editors should try to distinguish "high impact papers," or papers that are "likely to receive public attention, influence public policy, [and] contribute to institutional or personal financial gain." Once distinguished, editors should perform "risk assessments" to see if a paper raises questions of accuracy and consider the implications should the research prove false. Committee members identified the topics of "climate change, human health, commercial biomedicine, and nanotechnology" as likely sources of high impact papers. Second, specifics about the individual contributions in multiple-author papers should be provided with paper submission and made available to the public. Next, reviewers should have access to original data, images, and necessary materials; "requests for materials, methods, or data necessary to verify the conclusions may be required prior to acceptance." Random audits with similar primary data review may help deter fraudulent submissions as well. Finally, it is important for comparable journals to share the same heightened review standards in order to protect the enterprise of science and the veracity of science communication.

The committee consisted of *Science*'s external editorial board members John Brauman, George Whitesides, and Linda Partridge; Executive Editor of *Nature*, Linda Miller; and stem cell researchers Doug Melton and John Gearhart.

The report is available online at http://www.sciencemag.org/sciext/hwang2005/

*EW

DUELING STEM CELL AMENDMENTS PROPOSED IN FLORIDA

Florida voters may face an interesting dilemma in 2008. Two different constitutional amendments, one supporting stem cell research and the other opposing it, have each received 10 percent of the 611,009 signatures necessary to be on the ballot.[1]

The Florida Supreme Court is currently reviewing both amendments. One proposed amendment, sponsored by the Citizens for Science and Ethics, bans state spending on research that requires the destruction of a live human embryo. The other, sponsored by the Floridians for Stem Cell Research and Cures, seeks to allocate $20 million annually for ten years to fund embryonic stem cell research.

It is unclear what would happen if both amendments were to pass. Both citizen initiatives must have all the signatures by January 2008, as well as the Supreme Court's approval, to be placed on the ballot.

[1] Kaczor, Bill. "Justices get 2nd stem cell amendment, this one barring spending," *The Miami Herald.* 30 November, 2006. http://www.miami.com/mld/miamiherald/news/state/16133981.htm

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IN THE SOCIETIES

A PICTURE WORTH A 1000 LIVES

Satellite Imagery for Conflict Prevention and Human Rights, An Event to Commemorate Human Rights Day, December 2006

Pictures taken from the high resolution digital cameras of orbiting satellites have been used as evidence in several high-profile human rights courts cases, revealing hidden mass graves and other indicators of human rights abuses. Outside of the courtroom, human rights groups are using satellite pictures to monitor and even inhibit human rights abuses in ways never before possible. The pictures and the different organizations using them in human rights campaigns were the topic of a recent event celebrating World Human Rights Day. The Science and Human Rights Program of the American Association for the Advancement of Science (AAAS), in partnership with the U.S. Holocaust Memorial Museum and Amnesty International, sponsored the meeting that focused on geospatial imaging (GI) techniques that can provide a wealth of detailed information but only for a precise geographic region. Speakers noted that there were technical impediments to GI projects, including cloud cover, the accuracy of coordinates, image resolution and satellite positioning—all challenges to acquiring a clear satellite image of a target area.

Despite these challenges, event speakers presented compelling accounts of their successes with coupling geospatial imaging and ongoing advocacy efforts. In 2005, the Zimbabwe government demolished thousands of homes in "opposition areas." Zimbabwe Lawyers for Human Rights and Amnesty International have brought these politically motivated demolitions to court and used GI before-and-after image pairs to demonstrate the damage. The case is currently on hold while the admissibility of the images are being challenged with arguments they have been doctored.

Other GI efforts include projects in Colombia, where GI is being used to further transitional justice by locating mass grave sites. This technology is also being used to collect evidence of illegal fishing, especially when poaching ships trespass into protected indigenous areas. Domestically, groups have used this technology to look into issues of racial and economic disparities by following reconstruction in New

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(**Societies** continued from page 7)

Orleans, and noting how and where reconstruction funds are being distributed.

During the question and answer session, audience members expressed concern about ensuring image authenticity, the feasibility of early warning systems, and the technological capacity of small human rights organizations to do this sort of research. Panelists admitted that any photo can be doctored; thus, GI should be used in conjunction with other evidence of human rights violations. Further, the ability of the opposition to see original image data for themselves can quickly disprove claims of image tampering. Panelists agreed that while the concept of a comprehensive geospatial human rights warning system is not possible, basic strategic awareness in areas at risk for escalation is very managable. Often military build-up, large fires, and population movement, etc., are detectable through GI. Partnerships between satellite data providers, image analysis experts, and human rights organizations can help overcome capacity and cost challenges associated with GI technology.

For more information, visit: http://shr.aaas.org/geotech/, http://www.ushmm.org/ , http://www.hrnk.org/,

[1] http://shr.aaas.org/geotech/

*EW

RESOURCES

BLACKWELL RELEASES BEST PRACTICE GUIDELINES ON PUBLICATION ETHICS

Blackwell Publishers recently released publication guidelines encouraging ethical behavior in academic publishing.[1] According to Blackwell's Publications Ethics Group (PEG), "Academic publishing…occurs in an environment of powerful intellectual, financial, and sometimes political interests that may collide or compete." The guidelines seek to "offer journal editors a framework for developing and implementing their own publication ethics policies and systems."[2] Issues such as authorship, research integrity, peer-review systems, conflicts of interest, and plagiarism are discussed. PEG also noted that the International Committee of Medical Journal Editors provides guidelines for authorship and acknowledgement that can be applied beyond the medical sector.

In cases where published work is found to have violated ethical standards, publishers are encouraged to publish a retraction, errata statement, or expression of concern identifying the error in the original publication. Where possible, such a statement must be linked electronically with the original document.

The authors caution that ethical standards will be maintained only if they are "actively promoted" and widely adopted as policy by academic publishers.

The full article can be found at http://www.blackwell-synergy.com/toc/ijcp/61/s152

[1] Graf, C., *et al.*, "Best Practice Guidelines on Publication Ethics: a Publisher's Perspective," *International Journal of Clinical Practice*. Vol. 61, pp. 1-26, January 2007.
[2] *Ibid*

*AJ and SC

Support From the Following Societies is Gratefully Acknowledged:

American Anthropological Association
American Political Science Association
American Psychological Association
Association for Psychological Science
American Society for Engineering Education
American Sociological Association

ANNOUNCEMENTS

Conference – The Association for Practical and Professional Ethics is holding its 16th Annual Meeting February 22-25, 2007 in Cincinnati, OH. Registration closes January 24, 2007. One featured workshop is for research ethics instructors - "Research Ethics and Instruction: Effective Education and Evaluation for the 21st Century." For registration and information, visit http://www.indiana.edu/~appe/annualmeeting.html

Call for Papers –The "Technological Enhancement of Humans? Perspectives of Researchers from Underrepresented Populations" Conference is issuing a call for papers. The conference will convene at Arizona StateUniversity in Tempe, AZ. Undergraduate and graduate researchers are invited to present perspectives on human enhancement not commonly included in the HE dialogue. Two categories of research of interest: 1) research in human enhancement-related fields strongly influenced by the perspectives of underrepresented populations; and 2) research on societal aspects of converging technologies and human enhancement, with specific concerns about underrepresented perspectives. Final deadline for abstract submission is January 24, 2007. For more information, call 1-800-327-4893 or email MGE@asu.edu

Conference – Indiana University's 14th Annual Workshop, Teaching Research Ethics, will be held May 15-18, 2007 in Bloomington, IN. Session topics will include an overview of ethical theory, trainee and authorship issues, conflicts of interest, using human subjects in clinical and non-clinical research, and responsible data management. To register, go to http://poynter.indiana.edu/tre; for more information, contact Glenda Murray at glmurray@indiana.edu or (812) 855-0262

Conference – May 24-26, 2007, the 7th Annual Dental Ethics and Law Congress will meet in Toronto, Canada. To register, visit www.ideals.ac, click on the Toronto image, and select "Register here."

Conference – UNESCO is sponsoring "Bioethics Today in the Mirror of Future Generations" conference on February 11-14, 2007, in Eilat, Israel. The program will include presentations on biodiversity, technological/material underdevelopment, and discrimination as they effect future generations. For registration and information, visit www.isas.co.il/bioethics2007

Seminar – PRIM&R will hold a training seminar entitled "IRB Fundamentals" in New Orleans, LA, February 5-7, 2007. The program is geared to the educational needs of Institutional Review Board (IRB) members, administrators, and staff. Registration details and agenda information are available at http://www.primr.org/education/2007_IRB_FUND/overview_FUND_0207.html . For questions, contact Mariellen Diemand at mdiemand@primr.org, or (617) 423-4112, ext. 210.

Call For Papers – 10th National Undergraduate Bioethics Conference, to be held March 23-25, 2007 at Michigan State University, is calling for papers. This year's theme is "International Bioethics: New Frontiers and Emerging Issues." The final deadline for abstract submission is January 12, 2007. For more information , visit http://www.asbh.org/meetings/nuc/index.html or email nubc@msu.edu

Conference – The International Congress on Ethics will be held in Ottawa, Canada on February 5-7, 2007. For more details and registration, visit www.ice-cie.ca .