

mind•full: a brainsnack for future leaders with ethical appetites

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technology & human rights

Advances in science and technology provide opportunities to promote human rights and to prevent situations where rights are violated. For example, some human rights groups are using the Internet to report abuses and build public opinion; satellite imagery can be used to detect signs of genocide and refugee movements; and with the help of forensic science along with scientific methods for documentation and analysis, victims of atrocities can be identified, the scope of violations determined, and perpetrators brought to justice. However, many of these technological advances can be used to infringe on human rights. Though unlikely, satellite images may be used by terrorist groups to plan attacks; new genetic technologies have serious human rights implications; and increased use of computerized databases with personal information have implications for the right to privacy.

The concept of human rights has been evolving over several hundred years. Today, international, regional, and national laws, agreements, and declarations have been adopted to protect and promote human rights. With the help of new technologies, awareness of human rights abuses has increased, and public sensitivity to abuses has grown. At the same time, there has been an increase in the number of countries committing torture, ill-treatment, and other forms of human rights violations, according to the human rights group Amnesty International.

The question of who controls and makes decisions about the use of new scientific and technological discoveries is central to understanding their human rights implications and requires looking into the responsibility of scientists, policy makers, and the public.

The mission of Student Pugwash USA is to promote the socially responsible application of science and technology in the 21st century. As a student organization, Student Pugwash USA encourages young people to examine the ethical, social, and global implications of science and technology, and to make these concerns a guiding focus of their academic and professional endeavors.

The **mind•full** series encourages readers to explore crucial ethical dilemmas associated with the application of science and technology.

STUDENT



PUGWASH

U S A

go figure!

There is a growing number of groups working to promote human rights. Human Rights Internet, an organization that has tracked human rights non-governmental organizations (NGOs) for over 20 years, currently communicates with more than 5,000 organizations and individuals around the world who work to advance human rights.

New technology can serve as important tools in the work of these groups. However, access to the Internet and advanced technologies is very unevenly distributed. The growth of the World Wide Web has been very important for human rights groups in developed countries, the media, and international organizations. However, according to the UN's International Telecommunications Union, only about 190 million people have access to the Internet (this is only about 3.2 percent of the world's population). The cost of access to the Internet in many parts of the world is prohibitively high.

who pays the cost?

USA

\$???

There is no one central figure for the amount the US government spends on human rights. Several different agencies are engaged in related work, but centralized statistics are unavailable.

and at what price?

UN

\$53.1 million

Amount sought for 2000 by the Office of the United Nations High Commissioner for Human Rights in voluntary contributions from governments, non-governmental organizations, foundations, and other private donors.

\$21.7 million

UNHCR 2000 budget allocated from the UN's regular budget.

\$2.7 million

UNHCR 2000 budget for improving its information technology system and Web site, expanding its public information outreach, and building its capacity to mobilize resources.

Amnesty International

\$27.8 million

International Secretariat expenses, March 1998 - March 1999.

\$0.99 million

International Secretariat's information technology expenses, March 1998 - March 1999.

Sources: "World Facts and Figures," Amnesty International News Release, ORG 10/03/99, 16 June 1999, available January 21, 2000 on the Web: www.amnesty.org/news/1999/O1000399.htm (figures adjusted to US dollars based on an exchange rate of \$1 = 1.644 pounds sterling). Charles Brown, Director, External Affairs, Bureau for Democracy, Human Rights and Labor, US State Department, in a telephone interview December 15, 1999. *Annual Appeal 2000: Overview of Activities and Financial Requirements*, Office of the United Nations High Commissioner for Human Rights, available January 2000 at <http://www.unhcr.ch/html/menu2/9/fundrais/fundr.htm>. *Challenges to the Network—Internet for Development*, International Telecommunications Union, available on the Web October 1999: www.itu.ch.

in control or out of it ?

Although the concept of international human rights has been evolving for several hundred years, it was after World War II that the system of human rights that we have today came of age. In the aftermath of the war, the Holocaust, and the Nuremberg Tribunal prosecuting war criminals, the Universal Declaration of Human Rights was adopted by the UN General Assembly in 1948. The declaration is not legally binding but has obtained an important status and has become the primary document declaring "a common standard of achievement for all peoples and all nations." Two other documents join with the declaration to form an important part of the UN human rights instruments. These are the International Covenant on Economic, Social, and Cultural Rights and the International Covenant on Civil and Political Rights, both adopted in 1966. In addition, there are many other UN human rights instruments addressing a broad range of concerns. In 1993, the UN established the position of the High Commissioner for Human Rights. Regional human rights systems also have emerged, and provisions to protect human rights can be found in almost all national constitutions.

Ninety-three countries have signed and six have ratified a 1998 treaty to establish an international criminal court (ICC) with jurisdiction over cases of genocide, war crimes, and crimes against humanity. As opposed to previous *ad hoc* tribunals, such as those for Rwanda and the Former Yugoslavia, the ICC will be permanent, allowing for more swift justice. The treaty will enter into force when it has been ratified by 60 countries. The treaty is supported by a large majority of the world's countries and many human rights groups. However, the court might be weakened because of opposition to its establishment from the United States, China, India, and others. The United States is not backing the tribunal, citing fears that US military personnel abroad may become targets of politically motivated prosecutions. New technologies can assist in obtaining important evidence to be used at war crimes tribunals. For example, developments in forensic science and DNA-testing allow for easier identification of victims of atrocities and can help present evidence that will bring perpetrators to justice. After the Kosovo conflict, advanced technology has been used to establish a "three-dimensional crime scene" thus providing evidence for the trial of war crimes. A high-tech camera linked to satellites photographically mapped the extent of human rights abuses.

learn the lingo

convention—Agreement concluded between states; synonym of treaty. It is legally binding on the states which ratify it.

covenant—Synonym of treaty, convention; agreement between states.

declaration—A document whose signatories express their agreement with a set of objectives and principles. It is not legally binding but carries moral weight.

ratification—Approval of a treaty, convention, or other document by a country's competent bodies, thereby securing that country's commitment to it.

treaty*—an international agreement concluded between states in written form and governed by international law. . .

Source: "Human Rights Vocabulary," available January 24 on the Web: [www.un.org/Pubs/CyberSchoolBus/human rights/resources/vocabulary.htm](http://www.un.org/Pubs/CyberSchoolBus/human%20rights/resources/vocabulary.htm). * Vienna Convention on the Law of Treaties, 1969, quoted in "An Overview of Terms: Treaties, Conventions, Protocols, Agreements, Declarations, Proclamations, Charters, and Resolutions of the General Assembly," in Irving Sarnoff, editor, *International Instruments of the United Nations*, United Nations, 1997.

Today, increased availability of information on human rights violations, networking, and other capabilities are made possible by the Internet and databases. Reports of violations in one part of the world instantly can be distributed via the World Wide Web, mobilizing human rights groups on the other side of the globe. Groups also are using the Internet to garner national as well as international support and documentation for their causes. The Zapatistas in the Mexican state of Chiapas are one example. However, repressive governments ranging from China to Saudi Arabia keep tight controls on Internet access and communication. Using these technologies in any way that might be interpreted as criticizing some governments can have severe repercussions. To protect sensitive data from coming into the wrong hands, human rights groups often encrypt their e-mail and computer files. However, some governments are reluctant to allow this kind of encryption. The United States, citing that encryption may be used by criminals and terrorists, had until very recently strict restrictions on export of encryption technology. These restrictions have now been eased, but in many parts of the world merely using encryption makes one a target for government investigation and persecution.

Based on its own reports and documentation, Amnesty International estimates that in the countries it monitors, the percentage of countries committing torture or ill-treatment grew from 55 percent to 66 percent between 1988 and 1998. The percentage of countries responsible for death from torture increased from 22 to 27 percent. For extrajudicial executions, the percentage increased from 17 to 25 percent over the last decade. Reports of documented disappearances increased from 9 percent to 20 percent over the same time period.

kosovo refugees

The Science and Human Rights Program of the American Association for the Advancement of Science, together with other human rights groups, has been mapping refugee flows from Kosovo during the recent conflict. The purpose is to provide solid information about the flow of refugees out of Kosovo. This could help investigators to link patterns in the refugee flow to patterns of NATO bombing, Yugoslav strategic plans for "cleansing" Kosovo, and Yugoslav and irregular troop deployments. With this evidence, investigators can try to answer the question under debate: whether refugees fled their homes because of the NATO bombings and fighting between the Kosovo Liberation Army and Yugoslav forces or because they were persecuted by Yugoslav police or armed forces. The data includes interviews with refugees, population surveys, and records of border crossings. The information in different databases will be combined with statistical and geographic information to give a picture of the refugee flows from March to May 1999.

eyes in the sky

High resolution satellites able to detect objects on the ground as small as one meter are now available on the open market from a US company, Space Imaging. Previously this kind of imagery only could be obtained by military intelligence but it now can be used by non-governmental actors such as human rights groups and journalists. If interpreted correctly, these images can help detect signs of human rights violations. For example, the movement of large amounts of earth by bulldozers in an area where the risk of human rights violations is deemed great may indicate that a mass grave is being dug. Satellite imagery also can help detect large-scale burning, which might indicate atrocities and violations.

Concerns about national and international security implications of this availability have been raised. For example, the US Congress has forbidden high-resolution satellite imagery of Israel. Others argue that these types of images will increase transparency, decrease the surprise factor, and lead to a more secure world.

(anything but a) conclusion

The potential for science and technology to be used to promote human rights is tremendous. The Internet, new accessibility to satellite imagery, and developments in forensic science, for example, allow human rights advocates to be more influential and successful in their work. It is clear, however, that technology is a tool and does not in itself offer a solution. It is important that we understand and take advantage of new technologies and that we lead a discussion on their proper use. The question of who has access to these new technologies is also of central importance and has to be examined thoroughly.

How do **you** answer the **tough questions**



With today's access to almost instant information via, for example, 24-hour news channels and the Internet, we learn about human rights violations faster than ever before. Do you think people with access to this information have a greater responsibility to act against violations of human rights? What should the international community do when it learns of severe human rights violations in another country?

According to Article 27 of the Universal Declaration of Human Rights, "Everyone has the right freely to . . . share in scientific advancement and its benefits." Do you think this is an important human right? Who is responsible for promoting this right? Today, the benefits of progress in science and technology are very unevenly distributed. What role can scientists play in making sure that their inventions benefit as many people as possible?



With the recent investigations into alleged spying at Los Alamos National Laboratory and the trial of Wen Ho Lee, a US citizen, the US government placed severe restrictions on, for example, granting visas to foreign researchers and limiting access to national laboratories. Some restrictions were eased after several scientific organizations expressed concern that these restrictions might affect the quality of science and scientific freedom, and be applied discriminatorily. However, some are still in place. How do you think we should best balance the interest of scientific freedom with the need to assure national security? How do we best promote progress in science and technology while at the same time guard national security?

Governments around the world have made attempts to limit freedom of expression on the Internet, often citing national or domestic security concerns, or that communication is contrary to cultural or political beliefs held by the government in question. Where do you draw the line on what kind of speech is permissible on the Internet?



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- Advances in genetics have great potential to
- improve conditions for many people, if used in
- a responsible way. However, some new
- discoveries have the potential to violate
- human rights. How do you think possible
- attempts to clone human beings will affect
- human rights? If genetic testing leads to
- increased abortions of fetuses with genetic
- diseases and if we see less persons with these
- types of ailments, how do you think this will
- affect the rights of those who do suffer from
- genetic diseases?

.....

Article 12 of the Universal Declaration on the Human Genome and Human Rights states that "freedom of research, which is necessary for the progress of knowledge, is a part of freedom of thought" and continues to say that the application of research should seek relief of suffering for individuals and humankind. Do you agree that freedom of research is part of freedom of thought? What kind of limits, if any, should we put on freedom of research as compared to application of research?

Do you believe that scientists and others have a responsibility to make sure that the technology they are developing will not be used to violate the human rights of others?



Satellite imagery now commercially available can be used by journalists, human rights groups, and relief organizations to report on and alleviate human suffering. The same type of imagery potentially can be used by terrorists or "rogue" states to plan attacks. How likely do you think it is that such groups will use satellite imagery in this way? What kinds of limits, if any, should the government set on access to this type of imagery? Do you believe that high-resolution satellite imagery and other technological advances will lead to a more stable and secure world?

If you had nothing to hide, would you mind being monitored by the government if that could help solve crime or promote national security? At what point do you think that your right to privacy supercedes societal needs?



What do you think is the relationship between the environment and human rights? Are there times when you think environmental conditions should be considered a human rights violation? Who would you hold accountable? How great is our responsibility to use emerging technologies to detect environmental offenses that may violate human rights?

the right information

- *Annual Country Reports on Human Rights Practices*, US Department of State—this official US report details human rights abuses in countries around the world. Available on the Web: www.state.gov/www/global/human_rights/hrp_reports_mainhp.html.
- *Birth of the Universal Declaration on the Human Genome and Human Rights*— Division of the Ethics of Science and Technology, UNESCO, 1999.
- *Forensic Medicine and Ethics*—final report from a workshop on the application of forensic skills to the detection and documentation of human rights violations. Amnesty International, 1999. Available on Amnesty International's Web site: www.amnesty.org/ailib/aipub/1999/ACT/A7501299.htm.
- "Gathering War-Crimes Evidence—in 3D," Charles Truehart—*The Washington Post*, July 18, 1999.
- *Human Rights and Bioethics*—report of the UN Secretary-General on biotechnology and human rights, 1998. Available on the Web at: www.unhchr.ch/Huridocda/Huridocda.nsf/TestFrame/009fe998caa249248025673000533c45?Opendocument.
- *Human Rights and Scientific and Technological Development and The Impact of Technology on Human Rights*, C.G. Weeramantry (editor)—two parts of a United Nations University study about the impact of scientific and technological development on human rights and fundamental freedoms. United Nations University Press, 1990 and 1993.
- *Human Rights Watch World Report*—Available on the Web at www.hrw.org/hrw/worldreport99/.
- *Private Eyes*, Robert Wright—explores the implications of high-resolution satellites. *The New York Times Magazine*, September 5, 1999, pp. 50-55.
- *Public Eye*, Gary Stix—looks at the commercialization of the high-resolution satellite industry. *Scientific American*, August 1996. Available on the Web: www.sciam.com.0896issue/0896scicit01.html.
- *Refugee Flow Patterns in Kosovo, March-May 1999*—report on the study conducted by the American Association for the Advancement of Science, Institute for Policy and Legal Studies, the Human Rights Center of the University of California-Berkeley, Human Rights Watch, and the East-West Management Institute. Available on the Web at <http://hrdata.aaas.org/kosovo/about.html>.
- *Testimony on Human Rights and Encryption*, Dinah PoKempner—testimony of the general counsel for Human Rights Watch before the House Subcommittee on International Economic Policy and Trade, May 18, 1999. Available on the Web at: www.hrw.org/hrw/advocacy/internet/testim-518.htm.
- *We wish to inform you that tomorrow we will be killed with our families: stories from Rwanda*, Philip Gourevitch—horrible stories from the Rwanda genocide, bringing it close. A very important book. Farrar, Straus & Giroux, 1998.

on screen

- *Enemy of the State*—Will Smith plays a lawyer trying to avoid the NSA's satellites, 1998.
- *The Killing Fields*—Sam Waterston is a *New York Times* reporter forced to leave Cambodia after the Khmer Rouge take over. The film shows his struggle to find his Cambodian assistant who is trapped in the genocidal nightmare. Would the technologies we have today have made a difference? 1984.

top picks

- Science and Human Rights Program, American Association for the Advancement of Science (guide to using the Internet in human rights work, links to outside resources and inside programs and documents)—<http://shr.aaas.org>
- Human Rights Internet (great Internet directory of human rights sites, plus a documentation center)—www.hri.ca

humanrights.now**best of the rest**

- About.com (links, discussion groups, and articles on human rights)—www.humanrights.about.com
- Amnesty International—www.amnesty.org
- Bureau of Democracy, Human Rights, and Labor, US State Department (includes the State Department's *Annual Country Reports on Human Rights Practices* and speeches, statements, and congressional testimonies)— www.state.gov/www/global/human_rights/index.html
- Digital Freedom Network (contains human rights news summaries)—www.dfn.org
- Global Internet Liberty Campaign (good resource on encryption and freedom of expression on the Internet)—www.gilc.org
- Human Rights Watch (has special projects on freedom of expression on the Internet and academic freedom)—www.hrw.org
- Institute for War and Peace Reporting (this award-winning site has weekly updates from the war crimes tribunal in The Hague and great coverage of the Balkan and Caucasus by local journalists)—www.iwpr.net
- Lawyers' Committee for Human Rights—www.lchr.org
- Physicians for Human Rights (has a lot of interesting information on forensic science and human rights)—www.phrusa.org
- Public Eye, Federation of American Scientists (great introduction to remote sensing, aiming at making it usable for NGOs and private individuals, includes image gallery)—www.fas.org/eye/index.html
- Space Imaging (the site of the company that launched the Ikonos satellite, which offers satellite imagery with a one-meter resolution, available to order directly from this site)—www.spaceimaging.com
- United Nations High Commissioner for Human Rights (extensive links to UN human rights documents with good indexing)—www.unhchr.ch
- University of Minnesota Human Rights Library—www.umn.edu/humanrts/instru/ainstlsl.htm

check it out !**cyberspace**

This **mind•full** was written by Anna Moden, associate director of Student Pugwash USA. Special thanks to Patrick Ball from the Science and Human Rights Program at AAAS and David Shorr from the Lawyers' Committee for Human Rights for their comments. Any errors are the responsibility of Student Pugwash USA. ©2000 Student Pugwash USA.

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but wait, there's more!

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