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Intellectual Property and Traditional Ecological Knowledge: Institutionally Globalized Biopiracy?

By Stephen A. Hansen

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Traditional ecological knowledge (TEK) is the information that people in a given community, based on experience and adapted to local culture and environment, have developed over time, and that continues to develop. This knowledge is used to sustain the community and its culture and to maintain the biological resources necessary for the continued survival of the community.

Traditional ecological knowledge includes mental inventories of local biological resources, animal breeds, and local plant, crop and tree species. It may include such information as trees and plants that grow well together, and indicator plants, such as plants that show the soil salinity or that are known to flower at the beginning of the rains. It includes practices and technologies, such as seed treatment and storage methods and tools used for planting and harvesting. TEK also encompasses belief systems that play a fundamental role in a people's livelihood and in maintaining their health and the environment, and that may be instrumental in protecting natural areas for religious reasons or maintaining a vital watershed. TEK is dynamic in nature and may include experimentation in the integration of new plant or tree species into existing farming systems or a traditional healer's tests of new plant medicines.

The World Intellectual Property Organization (WIPO), in an effort to develop a working concept of traditional knowledge, emphasizes that the use of the term "traditional" to describe this knowledge does not imply that this knowledge is old or untechnical in nature, but "tradition-based." It is "traditional" because it is created in a manner that reflects the traditions of the communities, therefore not relating to the nature of the knowledge itself, but to the way in which that knowledge is created, preserved and disseminated.[1] Traditional knowledge is collective in nature and considered the property of the entire community. It does not belong to any single individual within the community, and is transmitted through specific cultural and traditional information exchange mechanisms. Traditional knowledge is often maintained and transmitted orally through elders or specialists (breeders, healers, etc.), and often to only a select few people within a community.

The knowledge of and uses of specific plants for medicinal purposes is an important component of traditional knowledge systems. Once, this knowledge was a major source of materials and information for the development of pharmaceuticals. But in the 20th century, new sources for antibiotics derived from soil cultures and advances in molecular pharmacology led to a decline in the importance of ethnobotany in drug discovery programs.[2] However, new discoveries of potent chemotherapeutic agents in plants such as Taxol,[3] as well as a bourgeoning herbal remedies market, have revived industry interest in traditional medicinal knowledge and practices. As interest in traditional medicine is being rekindled, indigenous knowledge of the cultivation and application of botanical resources is becoming exploited on a grand scale.

The exploitation of traditional knowledge exists on several levels (national, regional, international) and involves intellectual property rights, an increasingly consolidated and powerful "life sciences" industry, and conflicting global agreements. Bioprospecting, or the search for useful compounds in biological materials, has been a growing phenomenon with serious implications for the protection of indigenous knowledge and natural resources. There is currently great interest within communities in the developing world in asserting more control over conservation, equitable benefit-sharing, and capacity-building programs, as well as maintaining habitats, diverse seed stocks, etc. This would require, among other things, defining ownership of the resources, establishing prior knowledge of uses, and determining equity for each stakeholder. These are vital concerns of the indigenous communities that use and manage these resources.

Since 1948, international human rights standards have recognized the importance of protecting intellectual property. Yet, to date, intellectual property rights are not adequately extended to the holders of traditional knowledge. The requirements for intellectual property protections under current intellectual property regimes remain largely inconsistent with the nature of traditional knowledge. As a result, this knowledge is neglected, considered part of the public domain with no protections or benefits for the knowledge holders, or expropriated for the financial gains of others, an act often

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referred to as biopiracy.

Domestic Issues

Indigenous populations face many challenges under the U.S. intellectual property system in protecting their knowledge. U.S. patent guidelines often fail to recognize traditional knowledge as prior art, as most indigenous knowledge and technology is shared orally, and therefore not documented. Even when such knowledge might be eligible for patent protection, it often does not meet the narrow definitions of novelty and non-obvious requirements of the U.S. Patent and Trademark Office (USPTO) patent guidelines.

In both the U.S. and Europe, the novelty of a patent application is evaluated by determining whether the invention was known or used by others, and a patent will not be granted when there is evidence of such "prior art." But there are important differences in how the U.S. and European patent offices recognize prior art. European guidelines for prior art are broad and are better able to recognize and address traditional knowledge as prior art in the consideration of a patent application. The scope for consideration of prior art includes everything made available to the public by the means of a written or oral description, by use, or by any other way, before the date of filing of the European patent application.

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U.S. patent law does not provide such a broad definition of prior art and only recognizes foreign prior art when it is reduced to a tangible and accessible form, such as a published document or an existing published patent application. In addition, it must also have existed in this form at least one year prior to a patent application to be considered prior art. Any other foreign knowledge or demonstrated uses outside the jurisdiction of the U.S. are excluded as evidence of prior art. Therefore, what is considered public domain outside the U.S., and therefore not patentable, is often considered patentable by the USPTO. This has allowed pharmaceutical and other industries to usurp the intellectual property embodied in traditional knowledge that has either been considered not patentable or in the public domain outside of the U.S.

There are numerous examples of patents granted by the USPTO for biological materials, especially plants, the sources of which are found outside the U.S. and are based on indigenous knowledge. Colorado State University received a U.S. patent on *quinoa*, a valuable food grain native to the Andes. A U.S. patent was awarded for *turmeric*, a common spice in India, widely known for it application for healing minor wounds. Patents were also awarded for the natural pesticide properties of another Indian biological resource, the *neem* tree, which is found growing in virtually every Indian village. In each of these cases, except for *neem*, the patents were successfully challenged based on demonstrating prior art, although the same evidence did not meet the USPTO's narrow definitions of prior art when the patent applications were initially examined.

Even when indigenous peoples are able to satisfy the requirements for a patent, they still face the prohibitive costs of registering, maintaining and defending patents against infringement. Currently, the cost of filing a patent claim in the U.S. can be up to $10,000, and court costs to take action against patent infringements can be astronomical. The end result is that holders of indigenous knowledge typically take no preemptive measures in any form to protect against the improper use or exploitation of their knowledge and are often reluctant to share this knowledge for the benefit of others in fear of biopiracy.

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.

Global Issues

Problems in recognizing and protecting the intellectual property rights of traditional knowledge holders extend well beyond the U.S. In fact, problems faced by developing countries in protecting their own biological resources and traditional knowledge systems stem from the globalization of U.S. standards for intellectual property protections.

Through the World Trade Organization (WTO) and WIPO, U.S. intellectual property standards are now being quickly implemented on an international level. The WTO's 1994 *Agreement on Trade Related Aspects of Intellectual Property* (TRIPS) creates additional challenges for protecting traditional knowledge. TRIPS requires member countries to grant patent protections in areas that were not previously covered under intellectual property protections, for example, genetic resources and plants (Article 27(3)(b)). If a member country does not wish to do so, it must implement an alternative, domestic form of intellectual property protection for these resources (*sui generis*).

The TRIPS agreement has triggered a world wide controversy, especially in developing countries, concerning the patenting of genetic resources. At the same time, there are other international processes and mechanisms in place that also address genetic resources and traditional knowledge relating to the use of biological resources, and that define terms for equitable benefit sharing of those resources. The 1992 *Convention on Biological Diversity* (CBD) requires member states to respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities. It also requires the promotion of a wider application of traditional knowledge, but with the approval and

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involvement of the knowledge holders, for the purpose of sharing any benefits arising from such knowledge.

Many countries are signatories to both TRIPS and the CBD. But by implementing the TRIPS agreement, protections offered under Article 8(j) of the CBD for protecting local community rights to biological resources and intellectual property are undermined, as the communal nature of and cultural laws governing traditional knowledge are not recognized in TRIPS. Implementation of TRIPS makes mandatory the granting of patents to individuals on the use of biological resources. Such proprietary rights prevent the free exchange of knowledge, products of that knowledge, and their use and production, all of which are fundamental aspects of traditional knowledge systems and economies.[4] The resulting conflict is that, while one of the main goals of the CBD is to counter the practice of biopiracy, TRIPS continues to facilitate this practice globally.[5]

Theoretically, *sui generis* intellectual property systems, as called under the TRIPS agreement, allow countries to develop and implement national laws and mechanisms to recognize and protect traditional knowledge and biological resources, while still participating in the global intellectual property regime. Many proposed and partially implemented models for *sui generis* systems recognize undocumented (oral) and/or traditional uses as sufficient evidence of prior art to preclude patenting of that knowledge in their countries. However, the U.S. does not recognize traditional uses outside of its own jurisdiction, nor any undocumented knowledge. These restrictions pose a major challenge to countries interested in implementing *sui generis* protection systems, while also trying to protecting their resources outside of their own jurisdictions.

By filing one international patent application under WIPO's Patent Cooperation Treaty (PCT), patent applicants can simultaneously seek proprietary rights in over one hundred countries throughout the world. As a result, many developing countries, without knowledge of traditional knowledge resources in their own countries, or without a *sui generis* system in place to protect it, often approve patents that give proprietary control of their local knowledge and genetic resources to others.

Addressing these issues is a matter of considerable urgency for two reasons. First, traditional biological resources remain extremely important for the welfare of many communities. According to the World Health Organization, up to 80 percent of the world population still relies on medicinal plants for their primary health care. Second, TRIPS continues to strengthen the mechanisms for private ownership of the same resources that the CBD seeks to protect as community rights. In order to address these conflicts, to properly recognize and protect traditional knowledge, and to employ global mechanisms for equitable benefit sharing, changes to both the domestic and global intellectual property regimes are necessary to better protect and benefit the originators of that knowledge, as well serve the broader public interest.

[1] Elements Of A Sui Generis System For The Protection Of Traditional Knowledge, World Intellectual Property Organization, Intergovernmental Committee On Intellectual Property And Genetic Resources, Traditional Knowledge And Folklore Third Session Geneva, June 13 to 21, 2002, Document symbol: WIPO/GRTKF/IC/3/8.
[2] Paul Alan Cox, Essay On Science And Society: Will Tribal Knowledge Survive the Millennium*? Science* January 7, 2000; 287: 44-45.
[3] *Ibid.*
[4] *Intellectual Property Rights, TRIPS Agreement and the CBD*, Third World Network Statement to the 2nd meeting of the Panel of Experts on Access and Benefit Sharing Montreal, 19-22 March 2001. Available at: http://www.twnside.org.sg/title/benefit.htm
[5] *Ibid.*

IN THE NEWS

DNA PATENTS AWARDED TOO EASILY, CLAIMS NUFFIELD COUNCIL
According to Britain's Nuffield Council on Bioethics gene patents are granted too frequently, too easily, and with too little inspection. In its July 2002 report, the group asserts that thousands of recent patents awarded for DNA sequences are of "doubtful validity." To receive a patent, innovations must fulfill criteria common to patent law worldwide: novelty, inventiveness, and utility. The Nuffield report argues that many of the patents currently being issued do not meet these criteria. The authors of the report worry that existing patent regimes have become strongly influenced by pressure from patent applicants and their employers while losing sight of the interests of researchers and of the greater society.

In order to rectify the situation, the Nuffield group believes no new rules are necessary. The rigorous application of the existing criteria would reduce the number of DNA patents currently being issued.

Patent offices around the globe have begun restricting the range of patentable gene sequence innovations in response to similar criticism. The U.S. Patent and Trademark Office has tightened its interpretation of the utility criterion in recent years after receiving criticism for awarding patents with unproven or purely speculative uses. Additionally, European regulations now require that applicants demonstrate a commercial application of their innovation in order to qualify for patenting. Nevertheless, the Nuffield report contends that the patent system is still awarding DNA patents too readily, and urges that future patents given for DNA sequences be the exception rather than the rule.

The full report of the Nuffield Council on Bioethics is available at http://www.nuffieldbioethics.org/publications/pp_0000000014.asp. **AL*

EUROPEAN ETHICS GROUP WEIGHS IN ON STEM CELL PATENTS
On May 7, the European Group on Ethics in Science and New Technologies (EGE) presented its opinion entitled "Ethical Aspects of Patenting Inventions Involving Human Stem Cells" to the President of the European Commission (EC). The Group, charged under article 7 of the 1998 EU Directive 44 with evaluating all ethical aspects of biotechnology, issued recommendations that are at odds with

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current U.S. policy due to their strict definition of the criteria delineating discovery and invention.

In order to qualify for an EU patent, all processes or products must satisfactorily demonstrate the use of a significant inventive step, one that "must not be obvious to anyone familiar with the field concerned." It is this step that distinguishes between unprotected discoveries and patented inventions. The EGE finds that only human stem cell lines which have been modified by an inventive process to give them new characteristics or specific industrial or therapeutic applications fulfill this criterion. Thus, stem cell lines that have been isolated and cultured but remain unmodified would not be considered patentable.

This aspect of the report conflicts with U.S. policy on stem cell patents. The Wisconsin Alumni Research Foundation (WARF) has already been granted a U.S. patent covering both the technique used and the resulting embryonic stem cell lines derived by University of Wisconsin researcher James Thomson, despite the fact that the cells themselves were not modified in ways the EGE would deem significant.

Despite its stern stance in this regard, the EGE is otherwise lenient in its consideration of which stem cell types deserve patent protection. The EGE recommends that all stem cell inventions, whether they be of embryonic, fetal, or adult origin, deserve equal protection under patent law. However, it stresses the importance of proceeding with caution when working with stem cells of embryonic origin because of ethical concerns that may arise if cloning technology is used to create such cells. As a result, the EGE proposes that any processes using such technology for those purposes be excluded from patent protection for the time being, and urges the EC to engage in a public debate on the issue.

Throughout the report, the Group takes care to "secure the right balance between the inventors' interests and the society's interest," highlighting the contradictory role patents may play — as they serve to encourage scientific progress that may lead to better healthcare, they may also impair access to that same healthcare through fees charged by the patent holder. In order to address this concern, the EGE advises that recourse to compulsory licensing should be encouraged when access to diagnosis and treatment is blocked by the misuse of patent rights. In addition, to facilitate further research, the Group calls for the creation of an EU Registry of unmodified human stem cell lines of all origins.

To learn more about the EGE or to read its opinion on "Ethical Aspects of Patenting Inventions Involving Human Stem Cells," visit http://europa.eu.int/comm/european_group_ethics on the World Wide Web. **AL*

HOUSE OF COMMONS CRITICIZES "DESIGNER BABY" DECISION

A UK Department of Health executive body has fallen under heavy criticism after last year's controversial ruling allowing the attempted creation of what opponents deem a "designer baby."

Last December, the Human Fertilisation and Embryology Authority (HFEA), the chief regulator of Britain's *in vitro* fertilization (IVF) clinics, permitted a Leeds family to attempt to create a genetically-selected baby in order to help treat their first child, who suffers from the debilitating blood condition thalassemia. The parents hoped stem cells taken from the umbilical cord of the new baby would provide a cure for the genetic disorder.

The HFEA set a precedent in this case by deciding to allow tissue typing to be usedin conjunction with preimplantation genetic diagnosis (PGD). In tandem, the two technologies permit couples to select embryos both free of the disease tested for and compatible for familial tissue donation.

The process has already been used successfully in America when a tissue type-matched son was genetically-selected to treat a sister suffering from Fanconi anemia. Cells transferred from the healthy boy's umbilical cord have given the sister a 90 percent chance of survival.

However, the Leeds family case is the first of its kind to be allowed in Great Britain and it has drawn criticism from a number of sources. Recently, the HFEA was rebuked for its actions by the House of Commons Science and Technology Committee, which declared that the decision "went beyond the scope of its own public consultation" and warned that "democracy is not served by unelected quangos taking decision on behalf of Parliament."

To date, the family has been unsuccessful in its attempt to yield a healthy, tissue-matched embryo. In the meantime, advocacy groups such as the Comment on Reproductive Ethics (Core) are seeking judicial review in the High Court to overturn the HFEA decision. A spokesperson for the group declared: "The presumption Parliament had in some wiling way delegated this power to the HFEA has been strongly rejected by the Science and Technology Report." **AL*

IINSTITUTE OF MEDICINE PUBLISHES REPORT ON RESEARCH INTEGRITY

The Institute of Medicine published a report in July on "Integrity in Scientific Research: Creating an Environment That Promotes Responsible Conduct." The U.S. Department of Health and Human Services has been considering whether to reissue guidelines to universities on integrity education in the responsible conduct of science. Last year its proposal to require federally-financed research institutions to establish programs for integrity was suspended in response to criticism by the research community and a Member of Congress. The Department has been waiting for this report as a part of its plan to revisit the issue.

The report recommends a minimal role for the federal government in research integrity education. Instead, it urges individual institutions to take on full responsibility for developing a variety of educational activities. Acknowledging that many universities have already taken such initiatives, the report stresses the

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importance of developing criteria and measures for evaluating these efforts. It also recommends that accrediting bodies for higher education work with universities and colleges to develop self-assessment tools for research integrity education similar to what has been done for other educational programs.

In the changing lab environment, labs have evolved from small, intimate facilities, to larger, more competitive settings. Fred Grinnell, a researcher at the University of Texas Southwestern Medical Center at Dallas, said that "in past years, scientists probably did educate students more frequently about research ethics during one-on-one, informal interactions in the laboratory (Brainard, Jeffrey. "Institute of Medicine Urges Colleges to Improve Research Integrity" The Chronicle of Higher Education. July 18, 2002). Those one-on-one interactions have become less frequent, creating a need for more institutionalized programs on research integrity with these interactions. **LK*

SINGAPORE BAC ISSUES RECOMMENDATIONS FOR STEM CELL RESEARCH

In an effort to address the ethical issues of human stem cell research, Singapore's Bioethics Advisory Committee (BAC) issued 11 key recommendations in June 2002 to establish a framework for the licensing and regulation of research using such cells. The recommendations prefigure the adoption of legislation that would set up local bioethical guidelines to regulate all human stem cell research.

The BAC advised that research on human embryonic stem cells should be permitted "only when there is very strong scientificmerit in and potential medical benefit from such research," in which case existing cell lines derived from embryos fewer than 14 days old should be used. Selection of the 14-day limit was made based on the lack of embryonic differentiation at the 14-day mark. The use of cells taken from surplus in vitro fertilization embryos fewer than 14 days old would be permitted as a second option, and the creation of embryos specifically for research would be allowed only when no acceptable alternative existed and on a "highly selective, case-by case basis, with specific approval from the proposed statutory body."

However, while the BAC sanctioned therapeutic cloning in particular cases, it called for an outright ban on reproductive cloning for the purpose of creating human stem cells. Scientists participating in reproductive cloning would be subject to penalty by law, although the penalties for offenders were not identified. Additionally, the BAC recommended that informed consent be sought from all cell and tissue donors and that the commodification of donated materials be prohibited. While the committee stated that those found buying or selling donated materials would face harsh legal penalties, they did recommend that researchers should be permitted to gain commercially from the products of their research, as well as treatments and therapies developed from donated materials.

In issuing the recommendations, the BAC sought to introduce principles that would allow scientific advancement to occur in a morally responsible environment. A legislative and regulatory framework on the local level was needed to ensure appropriate scientific conduct. If the recommendations are implemented, researchers looking to engage in human stem cell research in Singapore will be required to undergo a rigorous process to obtain the necessary license to carry out their work. In addition, they will be required to follow strict guidelines, and their research will be subject to examination by authorities.

Appointed by the Cabinet in December 2000 to examine the ethical, legal and social issues arising from biomedical research and development in Singapore, the BAC established the Human Stem Cell February 2001 to deal specifically with issues arising from human stem cell research. Their full report on the *Ethical, Legal and Social Issues in Human Stem Cell Research, Reproductive and Therapeutic Cloning* can be found at http://www.bioethics-singapore.org. **DG*

Suggestions for the Future of Genomic and Genetic Ethics Research

The National Human Genome Research Institute (NHGRI) convened a workshop in July entitled "Exploring the Ethical Boundaries on Genomic and Genetic Research." The purpose of the workshop was to assist the NHGRI in mapping possible future directions for ethics research related to genomic and genetic research. Participants included, among others, scientists, policy makers, patient advocacy group representatives, bioethicists, attorneys, and physicians. The meeting included a series of presentations on the science and policy of reproductive genetic testing, cloning and stem cells, germline gene transfer, and genetic enhancement.

Among some of the questions or issues posed were: whether some types of enhancement might be species-changing or result in speciation; what boundaries might be set in limiting patient choices regarding enhancements; whether there should be a formal set of standards for off-label use of medications; how do attitudes towards in vitro fertilization and pre-implantation genetic diagnosis effect attitudes towards cloning research; issues surrounding formation of a database of results from gene therapy; the risks of viewing aging as a "disease" to be "cured" through genetic therapies; what is valued regarding assisted reproductive technologies (a look at the broader values underpinning the practices and applications); and issues of access to genetic therapies. The NHGRI will take these matters into account in developing its portfolio of future research activities. **BG*

ETHICS, LAW AND PUBLIC POLICY

PRESIDENT'S COUNCIL ON BIOETHICS RELEASES REPORT
by Kevin Alleman

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On 11 July, the Council released its anticipated report on human cloning, "Human Cloning and Human Dignity: An Ethical Inquiry." The report unanimously recommends legally prohibiting reproductive human cloning, or what members designate "cloning-to-produce-children"

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because, they argue, it is unsafe, morally unacceptable, and allowing experimentation would be a violation of research protocol.

On the issue of whether to allow scientists in good conscience to clone human embryos for biomedical research or "cloning-for-biomedical-research," members were deeply divided. The result was a bifurcation: a ten-member majority favoring a four-year moratorium — an arbitrary duration agreed upon as a consensus among members — to allow time for reflection and greater public deliberation, and a seven-member minority favoring cloning-for-biomedical-research but regulated by federal protections — balancing a proscription of cloning-to-produce-children with a prescription for maximizing the potential benefit of cloning-for-biomedical-research within sensible regulatory protections.

The Council's conclusions were the result of six months of intense deliberation, pondering intricate moral questions ranging from examining how human cloning would be perceived within the pluralistic value system of American democracy to exploring the depths and characteristics of human nature. For example, what, if anything, do we as human beings owe — e.g., bestowing respect, moral duties and rights—to the nascent stages of human life; and, what do we owe our fellow citizens who suffer from disease, bearing in mind that a potential cure can result from biomedical cloning research?

By the Council's February meeting, unanimity had been reached to prohibit cloning-to-produce-children, although members caught a glimpse of what was to come as they began to divide sharply over the moral status of the embryo and whether to permit its use in cloning-for-biomedical-research. As the deliberations evolved, a line was beginning to be drawn between members who argued that the embryo deserves special moral status that would preclude it from experimentation and destruction, and those who intuitively questioned conferring special status, fearing little moral recourse in favoring biomedical cloning. However, there was a group of members still somewhere in the middle of this ideological battle.

At the April meeting, those in the middle began to reveal their allegiances when Dr. Leon Kass, the Council chairman, offered four positions on cloning-for-biomedical-research: approve with no regrets, approve with humility, disapprove with regret, and outright prohibition. It was around this same time that the Senate prepared to move forward with comprehensive human cloning legislation. Senate Bill 1899, authored by Senators Sam Brownback (R-KS) and Mary Landrieu (D-LA), would place a categorical ban on all forms of human cloning. And Senate Bill 2439, authored by Senators Arlen Specter (R-PA) and Dianne Feinstein (D-CA), would prohibit reproductive cloning, but allow scientists to carry out research on stem cells extracted from cloned embryos, with criminal sanctions for the implantation of a cloned embryo in a woman's womb. The Council postponed its May meeting to wait and see what action the Senate would take; however, an impasse in the Senate prevented legislative action.

Chairman Leon Kass framed several policy positions for discussion at the June meeting relating to cloning-for-biomedical-research: (1) professional self-regulation with no legislative action; (2) ban on reproductive cloning with neither endorsement nor restriction of therapeutic cloning for biomedical research; (3) ban on reproductive cloning with regulation of the use of cloned human embryos for biomedical research; (4) broad regulation with no legislative prohibitions; (5) ban on all human cloning—both reproductive nd therapeutic; (6) ban on reproductive acloning with a moratorium on therapeutic cloning; and (7) moratorium on all human cloning—both reproductive and therapeutic.

To the dismay of some members who felt that delimiting policy options is tantamount to imposing one's views on others,members sided with either position 3, prohibiting reproductive cloning with regulation of the use of cloned human embryos for biomedical research, or position 6, which prohibits reproductive cloning with a moratorium on therapeutic cloning. After verbally wrestling over what is meant by a moratorium, some members from the middle who initially supported cloning for biomedical research, but had not taken sides, aligned with those in favor of a moratorium.

After Kass publicly read the Council's recommendations, some of the public interest groups present expressed disappointment. The American Diabetes Association expressed dissatisfaction with the moratorium, saying it was equivalent to a ban, and listed the ways in which biomedical cloning can potentially help people suffering from diabetes. A representative of the American Society of Human Genetics also disagreed with the moratorium, stressing that scientists know too little about the potential of stem cells and that banning cloning-for-biomedical-research would leave these questions unanswered. The Coalition for the Advancement of Medical Research (CAMR) presented to Council members a petition signed by over 2,000 teachers and scientists across the country, including Nobel Laureates, who are in disagreement with the moratorium, warning that these recommendations could have untoward ramifications on the next generation of young scientists who will be discouraged from pursuing research in the biomedical sciences.

The Council's report, "Human Cloning and Human Dignity," can be found at: http://www.bioethics.gov/cloningreport/ .For additional information about Council members, transcripts of past meetings, and future meeting times and places, see the Council's web site: http://www.bioethics.gov/.

IN THE SOCIETIES

ASA DEFENDS COLLECTION OF RACIAL DATA

Despite growing concerns in the academic and civic arenas that the very notion of "race" propagates social division, the American Sociological Association (ASA) believes racial data remain a valid and necessary tool in social

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research, according to a statement released August 9. The ASA admits that the concept of race is a fluid social construct with no biological basis. Nonetheless, it does not follow that race is a useless concept in scientific research, according to Troy Duster, chair of the task force that drafted the race measurement statement.

"Traditional understandings of race are biologically meaningless, but we can't therefore say that the concept of race is of no consequence," Duster, professor of sociology at New York University and the University of California at Berkeley, explained. "The ASA statement explains how race has been a sorting mechanism for friendship, mating, and marriage; a basis for the distribution of social privileges and resources; and a reason to organize social movements to preserve or challenge the status quo." It is therefore valid, Duster stated, to encourage racial studies in the interest of "explaining how and why social definitions of race persist and change."

The statement declares that "racial profiling in law enforcement activities, "redlining" of predominantly minority neighborhoods in the mortgage and insurance industries, differential medical treatment, and tracking schools, exemplify social practices that should be studied." Furthermore, "refusing to acknowledge the fact of racial classification, feelings, and actions, and refusing to measure their consequences will not eliminate racial inequalities. At best, it will preserve the status quo."

The ASA created the 20-member committee in 2000, charging it to examine many public debates, one of which is a proposed California constitutional amendment that would ban the state from The ASA created the 20-member committee in 2000, charging it to examine many public debates, one of which is a proposed California constitutional amendment that would ban the state from compiling racial data. The initiative, which forbids state and local agencies (other than those related to health or criminal justice) from collecting data on race and ethnicity, will most likely appear on the California ballot in 2004.

The ASA task force also reviewed the findings of the Human Genome Project that race lacked biological relevance, the work of the U.S. Census in adding new racial categories, and scholarly arguments against the social construct of race. Other studies on data collection practices in France and Brazil revealed that ignoring race in government research actually increased racial disparities. After two years of assessment, the task force concluded that the "continuation of the collection and scholarly analysis of data [on race] serves both science and the public interest."

To read the press release and the statement itself, visit the ASA website at http://www.asanet.org/media/race.html. **AL*

RESOURCES

LEAST OF MY BROTHERS

The "Least of My Brothers," funded in part by an NIH grant, is a Web-based research ethics module developed by researchers from the Poynter Center for the Study of Ethics and American Institutions at Indiana University. Using the PHS [Public Health Service] Syphilis Study at Tuskegee as the model, the "Least of My Brothers" provides the user with an interactive look at a real-life American atrocity that compels users to evaluate the ethical dilemmas involved. Although the characters and dialogue are fictional, there are historical bases for the information comprising the various scenes.

Each of the three main "episodes" is broken down into "scenes," containing fictional dialogue, letters, and newspaper articles, for example. Some scenes contain an activity that asks the user to assess particular issues associated with the information provided in the scene, and message boards facilitate discussion among users. Links throughout the module contain information that complements the exercises. For example, a bar at the bottom of the screen links the user to the factual bases of the fictional scenes, information about the causes, stages, and treatments of syphilis, a timeline highlighting the social context of the episode's chronology, a list of codes of ethics (with links to more information on the Web), and an extensive list of sources.

For more information, visit http://poynter.indiana.edu/sas/lb/ where users can obtain a temporary password to review the module free of charge. **HL*

ANNOUNCEMENTS

Call for Papers — The **Journal of Information, Communication and Ethics in Society (ICES)**, to be launched at ETHICOMP 2002 (November 13-15, 2002), is inviting submissions. For more information, visit WWW http://www.troubador.co.uk/ices.

Conference — The **Center for Academic Integrity** is holding its Annual International Conference on October 4-6, 2002 at the University of Virginia. The theme is "Integrity: A Timeless Ethical Principle for the Contemporary Academy." For further information, call 919-660-3045 or visit WWW http://www.academicintegrity.org.

Town meeting — The **National Academies** is hosting a town meeting on the recently released report of the Institute of Medicine on *Integrity in Scientific Research: Creating an Environment that Promotes Responsible Conduct* (see **In The News**.) The meeting will be held on October 10, 2002 at the National Academy of Sciences, 2101 Constitution Avenue, NW. For more information and registration, see WWW http://www.iom.edu/ori.

Grants – The **Research Program on Research Integrity** has issued its third announcement for applications to support research on research integrity. The deadline for the letter of intent is October 15, 2002, with due November 15, 2002 deadline. For more information, visit WWW http://ori.dhhs.gov/html/programs/research.asp.

Conference – The **Society for Ethics Across the Curriculum** is having its Fourth Annual Conference, October 24-27, 2002, at the Hyatt Regency Hotel,

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Professional Ethics Report

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Greenville, South Carolina. The theme will be "Science, Technology, and Ethics Across the Curriculum." Contact WWW http://www.rit.edu/ethics/seac

Conference – The second Research conference on Research Integrity, sponsored by **The Office of Research Integrity** and co-sponsored by the American Association for the Advancement of Science, the Association of American Medical Colleges, the National Science Foundation, and the National Institutes of Health, will take place November 16-18, 2002 at the Bolger Education Conference center in Potomac,Maryland. Contact WWW http://ori.hhs.gov/html/programs/RCRIConf2002.asp

Meeting and Conference – The **Applied Research Ethics National Association (ARENA)** is holding its annual meeting onNovember 17, 2002. The meeting immediately precedes the **Public Responsibility in Medicine** Annual IRB Conference, to be held November 18-19, 2002. The topic of the conference is "Protecting Human Subjects: What's Best? What Works? What's Worth Doing?" At the conference, the Certification Exam for IRB Professionals and IRB/RCR Educational Training Programs will be held, in addition to panels on protecting human subjects. Both events will be held in San Diego, CA. For further information, contact PRIM&R/ARENA: 132 Boylston Street, 4th floor, Boston, MA 02116; 617-423-4112; info@primr.org; www.primr.org

Call for Nominations — The **Friends Research Institute, Inc.** is accepting nominations for its Research Ethics Award. The award will recognize a person who has made significant, original contributions to the area of research ethics in the published literature or through other recognized means and demonstrated personal moral courage in this area. The amount of the award is $10,000. Nominations must include the nominating letter, two letters of recommendation and a resume, and be submitted via email by December 1, 2002 to mhipsley@friendsresearch.org.

Fellowship – **Princeton University Center for Human Values** invites application from all disciplines for the Laurance S. Rockefeller Visiting Fellowships for 2003-04. The fellowships will be awarded to scholars and teachers interested in devoting a year in residence at Princeton to write about ethics and human values. Applications are due December 4, 2002. For more information, visit WWW http://www.princeton.edu/values.Training Course – The **University of South Florida and the National Institutes of Health** are offering a course titled "Ethics in Research: An Intensive Training Course Focusing on Behavioral Health Sciences." This will take place December 9-12 at St. Pete Beach, Florida. Contact WWW www.fmhi.usf.edu/mhlp/ethics.html

Call for Papers — The **Department of Philosophy and Religious Studies of Lousiana State University** is hosting the Inaugural Symposium on Theoretical and Applied Ethics, to be held in Baton Rouge, Louisiana, February 27 - March 1, 2003. Papers in all areas of Ethics are invited and may be published in a special issue of the peer-reviewed *Global Virtue Ethics* Review or in a special collection of conference papers. Deadline for submission is January 10, 2003. Submit them electronically to James Stacey Taylor, Symposium on Theoretical and Applied Ethics, Department on Philosophy and Religious Studies, Coates Hall, Louisiana State University, Baton Rouge, LA 70803, jtayl25@lsu.edu.

Call for Papers — The **Institute for Applied and Professional Ethics at Ohio State University** announces its third student conference on Applied Ethics for April 26-27, 2003. All topics on applied ethics welcome. Authors must be undergraduate or graduate students in good academic standing. For more information, visit WWW http://www.ohio.edu/ethics. **LK*

Support From the Following Societies and Organizations is Gratefully Acknowledged:

American Anthropological Association
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