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MICRO AND MACRO ETHICS FOR AN ANTHROPOGENIC EARTH

By Brad Allenby

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The title states two major assumptions, and suggests a third. First, it makes a differentiation between "microethics," or ethics at the individual level, and "macroethics," or ethics at a group or professional level (1, 2). Second, it recognizes that a principal result of the Industrial Revolution and concomitant demographic, economic, technological and social changes, is a planet where the dynamics of most major natural systems are increasingly shaped by human activity (3). Indeed, as *Nature* put it in a 2003 editorial, "Welcome to the Anthropocene" – welcome to the Age of Man (4). Third, that this article is being written at all suggests a final point —that there is a gap between our current ethical systems and the world we have created, that it is a major gap, and that addressing it requires the serious and integrated efforts of the technical, scientific, and philosophic communities.

It is useful to consider engineering examples to set the stage somewhat, because engineering professions have long had explicit codes of ethics directed at the behavior of individual engineers (1, 5). Initially, consider the Portuguese ship engineer who built the first caravel, a light sailing ship of the 14th century that was particularly adept at sailing into the wind, and accordingly was a basic design enabling European global expansion (6). If caravels sank because of bad design, few would have qualms about assigning ethical responsibility to the engineer – certainly we can assume the royal patron would. However, the caravel is not only a good design, but a critical technology for subsequent European colonization and the resultant Eurocentric global culture; here, it strikes most people as inappropriate to assign responsibility for the subsequent colonization process, with all of its social and environmental dimensions, to the individual engineer. There are simply too many unpredictable intervening decisions, and stochastic events. A more recent example of this micro/macro gap is provided by the Internet. It is a complex system which is clearly entirely human in origin, for every piece of it, from routers, to transmission infrastructure, to personal computers used to access it, is of human design and and manufacture. On the other hand, the Net itself has been designed by no single individual or institution; indeed, there are not even any good maps of the Internet, for it continually redesigns itself. It is a self-organizing system (7). So while society would be quite right to hold a design team that made a new router responsible for the safety and performance of that piece of equipment, it would be dubious indeed to charge the design team with responsibility for the social and environmental effects of the Internet as a system. These effects are far beyond the capability of any engineer or design team to predict or foresee; indeed, it is quite apparent that for the most part they are not perceived or understood very well by society as a whole (8).Microethical systems – ethics at the level of the individual as a member of a particular culture or profession – are not free of disagreement and complexity, but at least they are well tilled ground. Macroethics, however, cannot be constructed simply by raising microethics to the level of a professional society. Rather, as the two examples above suggest, they are much more: they are the beginning of creating an ethics appropriate for the large and tightly coupled economic, social, environmental and technological systems that characterize the Anthropocene, systems such as the Everglades; the climate system; technological systems such as nanotechnology, biotechnology, information and communications technology, and cognitive sciences (9); and urban systems and their sometimes global hinterlands. In short, macroethics is the study of ethical systems appropriate to complex adaptive systems, in particular those global integrated human/natural systems that are characteristic of the anthropogenic Earth. This is the "macroethical gap," for how to formulate ethical structures adequate for such challenges has yet to be effectively addressed. Addressing macroethics does not, of course, negate the value or importance of microethical systems, whether personal or professional. Even in an anthropogenic world many ethical issues continue to arise in the realm of individual decisions. But such a world also exhibits emergent behaviors at high levels of the system, and there the prevailing models break down for a number of reasons, many of which arise from the fundamental unpredictability of emergent behavior, and related questions of "control" (if one controls a system, one may be held responsible for its behavior; if one does not or, indeed, cannot, imposition of ethical responsibility is problematic).

Here it is hard to avoid at least some observations on free will, despite the difficulty of that subject (as Jalalu'ddin Rumi, the 12th century Persian poet, observed, "there is a disputation [that will continue] till mankind are raised from the dead between the

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Necessitarians and the partisans of Free Will." (10). Free will matters in part because in many cultures - including the dominant Eurocentric globalized culture - ethical responsibility accompanies decisions made where free will is felt to exist, but not where actions do not arise from free will. Thus, ethical responsibility is generally not attributed where actions are taken under duress, or by individuals who are incapable for some reason, such as mental illness, of exercising free will. This, however, poses a severe problem when moving from the (already difficult) context of individual action to actions intended to affect complex adaptive systems; one cannot simply "scale up" the traditional dialogs. For example, the two touchstones generally used for judging the ethical posture of an action are by a) intent, or b) actual consequences (or some combination of the two). But such traditional approaches arguably assume a simple system structure, where enough can be known at the time a decision is taken to be able to impute moral responsibility for the results of that decision. If, instead, the systems are inherently unknowable – as complex adaptive systems by definition are beyond at least a trivial point - then one can neither have an honest intention as to what one hopes to achieve (because the complexity of the system response means intent is essentially irrelevant, since whatever the individual wants is unlikely to occur), nor can one be judged by the consequences, which are beyond the individual's ability to determine, and become apparent only over significant timeframes.

This observation, based on the characteristics of complex adaptive systems, has two significant implications. First, although the locus of free will remains the individual, the exercise of free will becomes a function of the state of the system within which the individual is located. Free will becomes a question of context, not just an inherent characteristic of a human being. As an important corollary, this means that the interconnectivity and internal dynamics of complex systems become additional constraints on the exercise of individual free will. Complex interlinking technology systems such as the Internet, or major urban systems, or regional resource regimes such as the Everglades or the marshes in Iraq, limit option spaces within which free will can be exercised. Thus, free will, which has always been regarded as adhering to the individual, in fact becomes a complex property of systems state. Individual free will, as assumed in professional ethics guidelines, or for that matter the criminal law, represents the subset of free will situations where the complex system dimension is minimal or absent.

Perhaps more importantly, these characteristics of free will in complex systems mean that ethical implications adhere less to specific choices regarding actions, and more to an on-going choice of process by which individuals and the institutions of which they are a part choose to interact with the relevant system. Macroethics thus differs from microethics in requiring a greater concern with processes, as opposed to single actions. Each has its role, but it is a fatally flawed category mistake not to recognize their differences.

For example, if one is given the responsibility to design the Everglades – and, in doing so, to try to balance among other things human development, agricultural and mining interests, and environmental interests such as avian biodiversity – the results of many individual decisions are difficult to determine except as the response of the overall system becomes clear. Therefore, an individual action is not ethically meaningful when taken, but only as it becomes reified in the system with which the individual is interacting. Thus, the choice of the process by which the individual becomes engaged in a dialog with the system – and remains engaged at least until the effects of action are manifested in system state and behavior - is what becomes ethically critical. For example, an engineer may choose any one of a number of particular actions – channelizing a stream, planting a marsh to reduce phosphorous concentrations in agricultural runoff – but because the potential outcomes of each action become clear only as the system adjusts, the engineer is behaving unethically if she or he doesn't monitor the results of the chosen action, and modify them accordingly. In other words, it is the choice not to adopt a process that fits the system that is unethical, for to so chose is to deliberately undermine the ability to exercise free will in the context of the complex adaptive system. Free will and ethical responsibility in complex systems such as the Everglades thus becomes less of a point function, and more of a networked function spread over multiple spatial and temporal scales. Just as quantum mechanics did not obsolete Newtonian physics, but relegated it to a limited space (e.g., interaction of macro bodies), the traditional concept of free will is thus not obsolete, but is a bounded part of a much more complex, systems-based phenomenon.

So how can we begin moving towards a macroethical capability to complement the microethical systems we now have? To begin with, it seems necessary to reject the common approach of projecting individual ethical responsibility to the scale of these systems. It is simply untenable to make individual scientists or engineers responsible for the behavior of systems to which they may have contributed, but which in many cases are self-organizing and demonstrate behaviors

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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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which are unpredictable, become apparent only over significant time periods, are characterized by a multitude of events and decisions between the individual decision and eventual social and cultural responses, and exhibit tenuous connections, if any, between specific individual design decisions and overall system responses. Actually, pushed to its limit, such an ethical posture is simply a mechanism to attempt to freeze scientific and technological evolution.

This does not mean that the individual does not have an important responsibility, however. In line with the process ethics discussion above, it seems quite reasonable to charge the individual scientist or engineer with a fundamental responsibility to ensure that mechanisms are established by which scientific and technical communities, and society at large, can dialog with complex adaptive systems, such as NBIC convergence, the Everglades, the climate cycle, the carbon or nitrogen cycles, or Phoenix or New York City (11). The nature of such a dialog, which must be highly multidisciplinary and multicultural, is itself a reason why individuals cannot carry such a burden in a substantive sense, for no single individual has the requisite knowledge, and very few have the ability to suspend their own ontologies, as such a dialog requires. Individuals of all kinds, from engineers to scientists to environmentalists, can, however, certainly be charged with ethical responsibility for supporting the procedural process. The dialog itself will have to rest with an institutional host – one that combines technical knowledge with a broad, transparent and open process, and that is sensitive to its own agendas and ontologies, and can be explict about them without imposing them on the dialog. Moreover, such dialogs should be, and should be seen to be, relatively safe from capture by a particular religious or political agenda, a problem that some have noted with regard to stem cell research in the United States, for example.

Thus, while one might not hold the individual engineer responsible for the Internet, or the individual scientist with responsibility for nanotechnology, one could charge them with the ethical responsibility to push their professional organizations – such as the AAAS, the IEEE, the National Academy of Engineering, or perhaps in some circumstances an academic institution or a National Laboratory – to create an institutional framework within which an on-going macroethical capability is established. In so doing, we begin to move towards a framework that remains based on individual free will and ethical responsibility, but that reflects the increasing complexity of the problems, options, and constraints that characterize the anthropogenic earth.

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IN THE NEWS

ANIMAL RIGHTS ACTIVISM IN THE 21ST CENTURY

Two loosely-organized groups, the Animal Liberation Front (ALF) and the Environmental Liberation Front (ELF), that perpetrate acts of violence and harassment in an attempt to forward their environmental and animal rights agendas were the subject of a May 18, 2005 hearing conducted by the Senate Committee on Environment and Public Works.

Chairman James Inhofe (R-OK) opened the hearing by noting that these groups, which do not maintain a central organization and whose illegal activities are conducted by autonomous individuals or "cells," have been designated the number one domestic terrorist threat by the FBI. That title was not so warmly embraced by Inhofe's colleagues on the other side of the aisle, and the hearing grew heated at times.

Senators James Jeffords (I-VT), Frank Lautenberg (D-NJ), and Barack Obama (D-IL) objected to designating ALF/ELF as *terrorists*, with Senator Lautenberg claiming these criminal acts were merely the product of "crazy" individuals. They argued that these acts should be placed in context, maintaining that hate crimes, right wing militias, abortion clinic bombers, and potential attacks against nuclear and chemical facilities should be given a higher priority by law enforcement than ALF/ELF.

John Lewis and Carson Carroll, Deputy Assistant Directors of the FBI and the Bureau of Alcohol, Tobacco, Firearms and Explosives, respectively, disagreed. They testified that the threats from right wing militias and hate crimes are less serious than those posed by ALF/ELF in terms of coordination, planning, and geographic range. Further, ALF/ELF are sophisticated users of the Internet, conveying information, encouraging recruits, and posting pictures of the laboratories they have damaged on their web site, constantly changing servers to avoid tracking by law enforcement.

Both witnesses claimed that the problem is getting worse, with Carroll testifying about the increasing use of explosives and

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incendiary devices, ranging from crudely made to highly technical and electronically ignited. Lewis testified that it is only a matter of luck that no one has been killed by an ALF/ELF attack. Furthermore, the violent rhetoric used by ALF/ELF and their supporters also has grown. Lewis cited a remark by one ALF supporter that if people who kill animals can be stopped only by violence, than it is morally justifiable.

Dr. David Skorton, president of the University of Iowa, described the impact that these activists have had. In an attack at his university in November 2004, eighteen individuals claiming responsibility on behalf of ALF destroyed and poured acid on equipment and papers, and released over 300 animals. "Not only was research disrupted," Dr. Skorton stated, "but the academic activities and careers of faculty, undergraduate and graduate students and post-doctoral trainees were impaired, in some cases adding months to the conduct of federally funded, peer-reviewed research."

Furthermore, the group posted the names, addresses, and phone numbers of faculty and their spouses, graduate students, and laboratory assistants on the Internet. Calling this "blatant intimidation," Dr. Skorton reported that these individuals are still being harassed, creating an environment of fear for his university's researchers that has permanently altered the campus.

*DR

JUDGE DECIDES DRUG COMPANY NOT REQUIRED TO GIVE EXPERIMENTAL DRUG

U.S. District Judge Kevin Castel ruled in favor of the biotechnology company Amgen Inc., June 6, in a case brought by two patients with Parkinson's disease who had been part of a clinical trial run by the company. The patients asked the court to require Amgen to continue supplying them with the discontinued experimental drug, glial cell line-derived neurotrophic factor, or GDNF.

The patients received GDNF through tubes to the brain as participants in a clinical trial of the drug. Through pumps implanted in the stomach connected to catheters leading to the brain, they, along with other trial subjects, claim to have experienced vast improvements in health and quality of life while on the drug. They reported a sharp decrease in symptoms of Parkinson's, including debilitating rigidity and tremors. While some doctors agreed with Amgen that GDNF was too risky to use, other doctors argued that trial subjects should continue to have access to the drug or that the trial should be redesigned and started again.

However, Amgen's attorney said the company was under no contract with the subjects and had the right to stop the trial at any point. Judge Castel agreed, citing the informed consent forms the patients signed before the trial recognizing Amgen's right to terminate it. Amgen did just that after analysis showed GDNF worked no better than a placebo, yet posed certain risks.

Even with the purported risks, trial subjects and Parkinson's victims and advocacy groups argued that the company had legal and moral responsibilities to continue giving the drug. Some physicians argued the safety risks were "overblown." A physician at New York University School of Medicine found significant improvement in patients with a moderate or advanced state of the disease. Although the FDA approved "compassionate use," which "allows experimental treatment with no other medical options" Amgen ultimately decided to end use of the drug entirely, a decision confirmed by the court, even as the judge acknowledged, "The decision in this case has real life consequences for two human beings."

*BK

PROTECTION OF FOSTER CHILDREN IN CLINICAL TRIALS

At a hearing held on May 18, 2005, the Human Resources Subcommittee of the House Committee on Ways and Means heard testimony on the rights of foster children participating in clinical trials. The hearing was in response to allegations that HIV-infected children given experimental AIDS drugs in the late 1980's and early 1990's did not have sufficient representation during the trials. Federal law requires that an advocate be appointed for a foster child when that child has a "greater than minimal risk" of complications from taking the drug.

Donald Young, Deputy Secretary of the Dept. of Health and Human Services, stated that the system works and that if problems arise they will be dealt with appropriately. Dr. Alan Fleischman, an ethicist and professor of pediatrics in New York, claimed that the necessary precautions were taken to protect the children. He added that the children benefited from these treatments and that at the time, the only way to treat these children was through trials. While there were certain risks associated with testing the drugs, the risk of going without treatment was much greater.

Roberta Harris was not as positive about how the children were treated. From the Social Services Dept. of Wisconsin, she stated that the law is unclear about who has the final say in whether or not these children can participate in risky clinical trials. She urged that the decision making process needs to be regulated more strictly and should ensure that someone represents the child's best interest.

For now it seems that no additional legislation will be proposed as a result of the hearing. However, the House Ways and Means subcommittee will continue to accept testimony over the next two weeks. Copies of the testimony are available at http://waysandmeans.house.gov/hearings.asp?formmode=detail&hearing=409

*JP

HHS ISSUES NEW RULES FOR INVESTIGATIONS INTO RESEARCH MISCONDUCT

On May 17, 2005, the Department of Health and Human Services (HHS) released its final version of rules for investigations into research misconduct by institutions receiving funding from the department. The final version addressed public comments in response to a draft sent out last year. The rules retain the existing model under which universities must conduct their own investigations of allegations of research misconduct. However, clarifications and changes include the rule that universities must have written policies and procedures for addressing allegations of research misconduct, foster an "environment that promotes the responsible conduct of

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research," and deal with allegations or possible evidence of research misconduct promptly. Universities have the option to give those accused of research misconduct an opportunity to cross examine their accusers. Furthermore, universities are not required to report preliminary investigations if no evidence of research misconduct is found, but must notify the U.S. Office of Research Integrity if they settle an accusation before the investigation concludes.

One of the most significant changes has to do with the appeals process. The new rules call for an Administrative Law Judge (ALJ) to hear and judge all appeals. The ALJ will replace the existing Departmental Appeals Board panel. This new system reduces the role of scientists in the appeals process. ALJ's will have the option to request a scientific expert but they are not required to do so unless either party makes such a request. The experts will be required to submit advice by written report with copies served to both parties. After the hearing, the ALJ will make a recommendation to the Assistant Secretary for Health on whether the accused party is guilty or innocent, and if the former, what administrative action by the HHS would be appropriate.

The new rules became effective June 16, 2005. For a copy, visit http://ori.hhs.gov/documents/FR_Doc_05-9643.shtml

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PROPOSED MEDICARE GUIDELINES AND INFORMED CONSENT

On April 7, 2005, the Centers for Medicare and Medicaid Services (CMS) released new draft guidelines for Coverage with Evidence Development (CED). The draft seeks input from stakeholders on what factors CMS should consider regarding prospective data collection. If adopted, the guidelines would require patients to participate in data collection in order to receive coverage for certain technologies and drugs. A review of the data collected will allow physicians and patients to make informed decisions about whether an item or service is "reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member." This is the standard set by law for Medicare Coverage. CMS administrator Dr. Mark McClellan stated that "better evidence can help doctors and patients use the treatments that Medicare covers more effectively," which would lead to "faster coverage expansions, greater access to beneficial treatments, and better health outcomes."

The draft has aroused opposition. Some feel that requiring data collection for coverage infringes upon the fundamental right of informed consent. Instead of volunteering to participate in research, patients may feel pressure to participate in order to receive the care they need. However, the guidelines limit the scope of CED, by stating that "Data collection should only continue as long as important questions remain and it is determined that the effort and resources required to collect this data are justified through potential value of the information that will be generated." The draft includes a list of questions to the public. After receiving responses (due by June 6), CMS will review the draft in order to address the public's concerns.

To view the draft, visit www.cms.hhs/gov/coverage .

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PRECAUTIONARY OR INCENDIARY: IN PURSUIT OF SECURITY

On April 6, 2005, a panel of experts from the National Academy of Sciences (NAS) finally released a declassified version of their 130 page report on the use of pools for the storage of nuclear fuel.[1] Despite the prompt release of the NAS report to Congress last July, the public version was issued almost nine months later due, in part, to the sensitive nature of the material it contained.[2] The panel determined that the storage of fuel rods in pools is a less threatening way of handling the waste, but experts acknowledged that there are practical limitations to altering current reactor sites to accommodate dry storage. In the report, the panel scrutinizes the current security measures that have already been enacted by the Nuclear Regulatory Commission (NRC) to protect these fuel storage pools from terrorists and offered both short-term and long-term recommendations in order to raise the visibility of this important national security issue.[3]

The delay in release has spawned much attention given the recent slew of controversies over how to deal with sensitive, but unclassified government information. The NRC disapproved of the classified NAS report, and also complicated the process of preparing a document that would be appropriate for public distribution by rejecting a draft version of it in December under the guise that the document was still riddled with "sensitive information." The NRC then took advantage of the fact that it was keeping the NAS report confidential by issuing its rebuttal in March, initially without challenge. However, the NRC rebuttal was subsequently countered by the NAS, and NRC representatives eventually admitted that its "document overstated a finding of the academy report by claiming that the committee had called for 'earlier movement of spent fuel from pools into dry storage' when it had not." Unsettled by the NRC admission, Congress insisted on the release of a public version of the report. According to NAS officials, the April 6 version of the report is largely unchanged from the version that the NRC rejected in December.[4]

Several groups have used this incident as an example of the improprieties that can accompany the national security debate. David Lochbaum, a nuclear safety engineer with the Union of Concerned Scientists, condemned the NRC for withholding the NAS report until after its rebuttal was released, claiming that "The NRC wants only their views to shape the debate."[5] In addition to the controversial aspects of withholding classified reports with which the government may disagree, this practice has broader national security implications. When important reports are prevented from reaching the public because of perceived secrecy issues, oftentimes the information they contain may not reach those who have the resources to rectify the problems.

*JB

[1] "Experts: Nuclear Plants may be Vulnerable to Terrorists." *U.S. CNN.com*. April 6, 2005. Cited on May 2, 2005. <http://cnn.com/2005/US/04/06/nuclearfuel.ap/>.

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[2] "Experts: Nuclear Plants may be Vulnerable to Terrorists." See footnote 1.

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[4] Geman, Ben and Mary O'Driscoll. "NRC, NAS Clash on Spent Fuel Safety Report." *Greenwire: Tracking Policy, Politics, and the Press*. March, 28, 2005. Cited on May 2, 2005. <http://www.eenew.net/Greenwire/include/print.php?single=03280501>.

HHS REQUESTS THAT "TOXIC MILK" PAPER NOT BE PUBLISHED FOR SECURITY REASONS

A spokesman for the U.S. Department of Health and Human Services said that for the first time ever HHS asked a journal to withhold an article that had already been accepted for publication for national security reasons. The paper, by Stanford professor Lawrence M. Wein and graduate student Yifan Liu, explains how a terrorist might use the botulinum toxin to attack the nation's milk supply and potentially cause thousands of deaths. Spokesman Marc W. Wolfson called the paper a "road map" for terrorists and expressed HHS's views that "the benefits of printing the article were outweighed by the potential harm it could do."

Stewart Simonson, HHS's assistant secretary for public health emergency preparedness, asked that the paper not be published in a letter to Bruce Alberts, president of the National Academy of Sciences. Even though the paper was already "evaluated for scientific merit and potential biosecurity issues" as part of the acceptance procedure of the *Proceedings of the National Academy of Sciences*, PNAS and NAS agreed to take another look. Originally scheduled to be released May 30, the new publication date will be announced by NAS at a later time. Simonson called the letter a "request," and stated, "There wasn't anything coercive."

The *New York Times* however, did publish an opinion piece titled "Got Toxic Milk?" on May 30 by Wein that was originally meant to be published in conjunction with the paper. In the op-ed, Wein wrote how terrorists could use a manuel titled "Preparing BotulismToxin" from a jihadist web site to make several grams of botulinum, a botulism causing toxin, and easily dump only a gallon sized mixture of the substance into an unlocked milk tank or truck. Wein claimed that such a seemingly simple attack could cause the deaths of hundreds of thousands of people. He wrote that protection from this threat might cost as little as a 1 percent increase in a gallon of milk and argued that the federal government should more stringently regulate the milk and other food industries.

However, the International Dairy Foods Association said it has already been working with the US government to protect the milk supply from threats, "including the one raised in the Wein paper." Scientists raised objections to the paper as well. In a rebuttal to the Wein article appearing on the Federation of American Scientists' webpage, Milton Leitenberg of the University of Maryland and George Smith of globalsecurity.org in Virginia, wrote that Wein overestimates terrorist capabilities. They question the ability of terrorist to make gram quantities of botulinum, the existence of a "black market" source of the toxin, and the scientific infrastructure of specialized equipment and resources needed to which terrorist might have access. They also referenced the work of the International Dairy Foods Association in the past year, stating the Association's steps "would significantly reduce by several orders of magnitude the survival of any botulinum toxin." Leitenberg and Smith call Wein's paper not a road map but a "mathematical model built upon a thin supposition," in which the actual result of such an attack might be "only one-billionth as much." The fate of the paper is still unclear.

*BK

WEB RESOURCES

NEUROETHICS RESOURCE GUIDE NOW AVAILABLE

Neruoethics.upenn.edu, hosted by the Center for Cognitive Neuroscience at the University of Pennsylvania, is a resource site on various neuroscience ethical issues. Issues are divided into the following areas:

- Brain imaging
- Pharmaceutical enhancement of cognition
- Pharmaceutical enhancement of mood and related functions
- Brain-machine interfaces and nonpharmacologic enhancement
- Responsibility
- Science and the soul
- The Consciousness continuum

Each area contains an introduction and links to abstracts of articles, links to other websites, and pointers to literature. Background reading on neuroscience, neuroethics, and bioethics can be found in the Overhead section. Neroethics.upenn.edu also posts a Calendar of Events on neuroscience discussions, and reports monthly interviews with neuroscience experts.

*KH

ICOI CONFERENCE MATERIALS NOW AVAILABLE

Materials from the December 2-3, 2004 conference entitled "Developing Policy on Institutional Conflict of Interest: Maintaining Public Confidence" are now accessible on the Office of Research and Graduate Studies, University of Nevada, Las Vegas website. The materials include general information on the conference and its objectives, the agenda, sponsors, and focus group and synthesis sessions. An executive summary is available on the conference results page, as are the session speakers' slides and notes. Contact information is also listed for further information. The website is http://www.unlv.edu/Research/ecoDev_ICOI.html.

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HUMAN RESEARCH ARCHIVE

The Office for Human Research Protections (OHRP) has a new page on its website - the Belmont Report Historical Archive - available at http://www.hhs.gov/ohrp/belmontArchive.html. The Belmont Archive includes: Belmont Report Oral History Interviews - transcripts of interviews with members, staff and consultants of the National

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Commission for the Protection of Human Subjectsof Biomedical and Behavioral Research (1974-78); OHRP will soon add the video versions of these interviews; Training Video - a 9-minute educational/ training video with highlights from the Oral History interviews; Commemorative Program Video - a one-hour edited version of the November 16, 2004 Department of Health and Human Services (HHS) ceremony honoring the members, staff and consultants of the National Commission; and History of the Belmont Report - a short history of the Belmont Report and the current human subject protection regulations.

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RESOURCES

NO SOLUTIONS, ONLY PROBLEMS: AN UNSATISFYING EFFORT BY THE PRESIDENT'S COUNCIL ON BIOETHICS

By Brent Garland

"Alternative Sources of Human Pluripotent Stem Cells" is the most recent white paper published by the President's Council on Bioethics, and follows up on its 2004 report *Monitoring Stem Cell Research*. The current paper proposes four possible ways that pluripotent stem cells might be derived without the disaggregation of a potentially viable embryo.

The four proposed methods are:
1) deriving stem cells from cells taken from embryos at the 4 to 8 cell stage that have been determined to be "dead";
2) deriving stem cells via biopsy of embryos at the 4 to 8 cell stage;
3) creating "biological artifacts" that resemble some characteristics of embryos, but which could not become a child if transferred to a uterus; and finally,
4) deriving stem cells by dedifferentiating adult somatic cells to a pluripotent state.

The paper assumes that, since some people find disaggregation of any embryo ethically problematic, it would be preferable to avoid disaggregation at nearly any cost. If one agrees with this assumption, then the paper will make for interesting reading about research that may one day lead to the derivation of stem cells or cells similar to stem cells.

Otherwise, the reader might observe, as council member Michael Gazzaniga does in his personal statement (included in an appendix to the paper), that the alternatives seem like "high-risk options that only have an outside chance of success and raise their own complex set of ethical questions." In this one fragment of a sentence, Gazzaniga has summed up the core problem with the entire paper: it proposes a set of alternatives that are themselves ethically problematic and far from being able to yield functional stem cells.

While the paper may be more useful when read in conjunction with the Council's 2004 report on stem cells, as a stand-alone document it is disappointingly devoid of context. There is very little discussion of the ethical issues in stem cell research in any detailed or nuanced way. This is despite prefatory language by Leon Kass, the council chairman, that the paper sought to give "special weight to the ethical analysis." The paper often takes a "laundry list" approach to the ethics of the proposed alternatives—some believe this, others believe that—but no substantive comparison of positions. In addition, there are a set of "provisional conclusions" at the end of the paper about the ethics of the various alternatives. These conclusions are ultimately unsatisfying to the extent that the larger case for them is never made.

Nor is there any context regarding where this proposal fits in the developing scientific dialogue on stem cells. The proposed alternatives would require substantial scientific research to develop, such that the effect would be to continue to delay federally funded stem cell research for years in the U.S.—a *de facto* moratorium. And even if one were to proceed with the alternatives, there is a highly questionable assumption: that eventually one of the proposed alternatives will yield stem cells.

Certainly there will be many in the scientific communities who ask themselves the same question with which Gazzaniga closed his personal statement, and which seems appropriate to close this essay: "Is the United States of America going to allow embryonic stem cell research and biomedical cloning to go forward using the now widely accepted techniques used by the private sector, by the State of California, and by dozens of other countries, or is it going to remain hostage to the arbitrary views of those with certain beliefs about the nature of life and its origins?"

The white paper can be downloaded at: http://bioethics.gov/reports/white_paper/index.html.

ANNOUNCEMENTS

MASTERS OF ARTS IN BIOETHICS – The Center for Bioethics and Health Law and the Faculty of Arts and Sciences at the University of Pittsburgh is offering a Masters degree that emphasizes the philosophical foundation of bioethics with opportunities for clinical experience in a one-year program. For information, contact Director of Admissions, Center for Bioethics and Health Law at bioethic@pitt.edu or visit www.pitt.edu/~bioethic.

CALL FOR PAPERS – Papers are invited for the special issue "Reliability and Security of Information" of the *Journal of Information, Communication and Ethics in Society*. The deadline for submissions is July 31, 2005. Papers may be submitted to ices@troubador.co.uk with a cover email stating the author's name, address and affiliation. For further details, see the journal's website at www.troubador.co.uk/ices.

CALL FOR ABSTRACTS – Abstracts are invited for a collection of essays dealing with bioethical issues in film. Some of the areas of interest are: abortion; the moral status of human embryos and human embryonic stem cell research; reproductive technologies (e.g., artificial insemination, cloning); eugenics and preimplantation genetic diagnosis; enhancement technologies and the distinction between treatment and enhancement; end-of-life issues and euthanasia; justice and the allocation of health care resources; the commodification of human organs; surrogate motherhood; and feminist and cross-cultural approaches in bioethics. Also welcome are abstracts on

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(**Announcements** continued from page 7)
any film that explores bioethical issues (e.g., Gattaca, Million Dollar Baby). Submission deadline is July 1, 2005. For more information, contact Sandra Shapshay, Editor, at sshapsha@indiana.edu.

ORI ADDS "POINT FOR DISCUSSION" TO WEBPAGE – The Office of Research Integrity (ORI) has added a feature called "Point for Discussion," which details notable comments published in journals and reports by scientific organizations, associations, and government agencies, on the state of the research enterprise. A new Point is presented each month to help stimulate discussion about research integrity, research misconduct and responsible conduct of research (RCR) during lab meetings or workshops. For further information, see http://ori.hhs.gov.

AWARD FOR EXCELLENCE – The Health Improvement Institute is accepting nominations for its 2005 Award for Excellence in Human Research Protection. This award honors excellence in promoting the well being of research participants. The nomination deadline is September 26, 2005. For more information, contact the Awards Coordinator at 301 816 2875 or at hii@hii.org; or visit www.hii.org.

NEW MULTI-MEDIA EDUCATIONAL PROGRAM – The Center for Health Care Ethics at Saint Louis University and the Continuing Education Department at the Missouri Institute of Mental Health announce a new nine session course, sponsored by the National Institutes of Health, entitled "Ethics in Mental Health Research." The program will begin August 24, 2005 onsite at the Missouri Institute of Mental Health, or by distance-learning through Web cast. To find out more about the course or register, visit http://www.emhr.net/course.htm.

NEW EDUCATIONAL TOOLS – Public Responsibility in Medicine and Research (PRIM&R) is offering two new programs designed for new administrators, staff and chairs in IRB or IACUC administration. The courses, "IRB Administrator 101" and "Essentials of IACUC Administration" will be held August 15-16, 2005 at the Drake Hotel in Chicago, IL. For registration details and agenda information, visit http://www.primr.org/education/2005_IRB_ADMIN_A/overview_ADA05.html.

INTERNATIONAL JOINT BIOETHICS CONGRESS – The sixth Asian Bioethics Congress is scheduled to be held in Sanliurfa, Turkey November 14-18, 2005. The chosen theme is "Inter-Cultural Bioethics: Asia and the West." The congress is open to the general public and experts in a wide range of different disciplines. The languages will be in Turkish and English, with simultaneous translation available. Visit the conference website http://www.jointbioethics.org/ENG/welcome.htm or contact the conference organizer, Dr. Sahin Aksoy, at saksoy@harran.edu.tr for more information.

NEW NSF PROGRAM– The National Science Foundation (NSF) has instituted a new program called Science and Society (S&S), which is a consolidation of two previous programs: Science and Technology Studies Program and the Societal Dimensions of Engineering, Science, and Technology Program. The new S&S Program may be found at http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5324&org=SBE&from=home.

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American Anthropological Association
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