

# *Eubios Journal of Asian and International Bioethics*

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Official Journal of the Asian Bioethics Association (ABA)

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### **Send papers to the editor in electronic form if possible.**

*Please use reference style of citations by author's name in the article and an alphabetical list at the end of the article, do not use automatic footnotes or endnotes. Papers are peer reviewed. The papers do not represent the views of Eubios Ethics Institute, or the editor or editorial board, which upholds the principles of freedom of expression.*

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Deadline for the March 2008 issue is **1 March, 2007.**

## **Editorial: UNESCO Ethics of Energy Project**

In the first editorial of Volume 18, 2008, the topic is a reflection of one of the most pressing issues of the century, the ethics of energy. This issue of *EJAIB* includes a meeting report from the UNESCO launch conference, together with an invitation for persons to join the 14 working groups. Please read inside (especially p. 12-14). We hope that many scholars in bioethics will join with engineers, scientists, private and public sector, to produce realistic yet forward looking reports.

This theme of environmental ethics and technology assessment will be also a topic to be discussed in the Ninth Asian Bioethics Conference in Yogyakarta, Indonesia, 3-6 November, 2007. A preliminary call for proposals is open.

Also in this issue are papers from Arthur Saniotis who examines some of the issues with an evolutionary perspective. There is a critique from Brewster Kneen, the editor of the *Ram's Horn*, of the language of rights. It is reminiscent of debates that have occurred over the term "rights" in many conferences in Asia, and also during the recent conference on Ethics of Energy technologies. It may also be interesting that none of the working groups uses the term "rights" in their title, although the issues of equity and justice and responsibility are found. The final paper is by Bing Tang looking at US debates over fetal and ES cell research, suggesting alternative principles and a model of moral intensity. The journal invites comments from readers on these provocative articles.

A reminder is made for those who wish to receive a hard copy of the journal, please send an email with the details requested in the membership form, or copy and fax the form for renewal of membership to the Asian Bioethics Association (ABA). As always the pdf files of the journal are on-line on the Internet.

There is also an announcement of a cooperative association between the UNESCO Asia-Pacific School of Ethics and Aristotle University for a UNESCO International Bioethics Journal Club. It will build upon the scholarly traditions of *EJAIB* for dialogue on topics using new technology through the Internet for exchange of views and comments on moral dilemmas, and current news.

# Report of the UNESCO launch conference for the project Ethics of Energy Technologies in Asia and the Pacific

Hosted by UNESCO Bangkok in collaboration with the Ministry of Science and Technology and the Ministry of Energy, Thailand

Imperial Tara Hotel, Bangkok, 26-28 September 2007

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## Background

This regional conference launched the project 'Ethics of Energy Technologies in Asia and the Pacific'. The meeting was hosted by the Regional Unit in Social and Human Sciences in Asia and the Pacific (RUSHSAP) at UNESCO Bangkok with the cooperation of the Thai Ministry of Science and Technology and the Thai Ministry of Energy. Two specialized institutes of the Ministry of Science and Technology, the National Metal and Materials Technology Center (MTEC) and the National Science and Technology Development Agency (NSTDA) also cooperated.

This project is linked to several key activities of UNESCO Bangkok, which include ethics of science and technology, environmental ethics, philosophical dialogues, linking research with policy-making and promoting the culture of peace. UNESCO is committed to working with regional Ministries of Science and Technology in implementing the Ministerial 'Bangkok Declaration on Ethics in Science and Technology' issued at the conclusion of the 4<sup>th</sup> Session of the COMEST on 25 March 2005.

There has been prior discussion of some aspects of the ethics of energy in a previous UNESCO report from the World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) Sub-Committee on 'The Ethics of Energy', 2000. There are also various activities related to energy being conducted in different United Nations agencies. UNESCO is the only UN agency, however, that has ethics as one of its overarching priority areas.

This project will develop these multidisciplinary and cross-cultural discussions in a context that is relevant to the Asia and Pacific region. As the global region with the fastest annual growth in energy demand, countries face increasing pressure to articulate their energy policies. There are many countries in the region that are considering adopting nuclear energy, including Australia, Bangladesh, Indonesia, Iran, Kazakhstan, Malaysia, Thailand, and Vietnam. And there are other countries in the region already using nuclear energy, including China, DPR Korea, India, Japan, Pakistan and Republic of Korea. As the international focus on climate change intensifies, the environmental and social ethics of all energy choices need to be considered holistically. This meeting and project is not intended to duplicate the numerous meetings being held on energy and environment, but to open up ethical and value questions that have often been neglected, and to depoliticize discussions on environmental ethics to produce substantive cross-cultural outputs that will be relevant for long-term policy making within each nation.

## Summary

There were approximately one hundred conference participants of evenly balanced gender from Australia, Bangladesh, France, India, Indonesia, Italy, Japan, Jordan, Korea, Nepal, New Zealand, Sri Lanka, Thailand, the United Kingdom, and Vietnam. Participants attended in their individual capacity and came from diverse backgrounds, including engineering, government, institutional advisory bodies, civil society organizations (CSOs), energy-related industries, education, marketing, and academia. The disciplines amongst academics ranged from engineering, philosophy, ethics, environmental science, medicine, ecology and social work. Two members of the World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) were present: Dr Somsak Chunharas and Ms Nadja Tollemache.

After welcome addresses from the Director of UNESCO Bangkok, the Minister for Science and Technology (Thailand), and Deputy Permanent Secretary for the Ministry of Energy (Thailand), Dr Darryl Macer of UNESCO Bangkok outlined the rationale for the project. There were sessions on:

- Ethical worldviews and the environment;
- Visions of the future: Ethical views of different energy strategies;
- North-South divide and energy equity;
- Constructing & reconciling visions of different communities;
- Ethics of nuclear power and alternative energy systems; and
- Energy independence and security.

Presenters were asked to give 15 minute talks, followed by questions. The plenary sessions were interspersed with breakout working group sessions throughout the conference. As the focus was on dialogue, and as delegates were considered to attend in their individual capacity rather than representing their country, there was no statement issued at the meeting. The working group sessions were intended to set the themes for ongoing working groups that will produce reports over the course of the project. The abstracts, discourse and proceedings of the meeting will be available online at <http://www.unescobkk.org/index.php?id=energyethics>.

## Meeting report

The **Opening session** for the conference commenced with a welcoming address from Dr Sheldon Schaeffer, the Regional Director of UNESCO Bangkok. Dr Schaeffer acknowledged the cooperation of Thai government partners in hosting the meeting. He noted that energy was a topic of immediate global concern. He stressed that it was not the role of UNESCO to be prescriptive about countries' energy choices, but rather to be a neutral broker of interdisciplinary and interregional dialogues. The project aimed to develop a deeper public understanding of the complexities of different energy sources and technologies for meeting the region's projected energy needs, including the strengths and weaknesses of energy industries (considering environmental, economic, social and legal aspects).

There was an address from Prof Yongyuth Yuthavong, Minister of Science and Technology, Thailand, who outlined the basic problems with energy as those of ever-increasing demand, rising prices, depletion of fossil fuels and the impact on climate change. Prof Yongyuth appealed for a balanced approach to assessing alternative energy choices, which recognized that all attempts to solve problems have problems, and that lobbying on single agendas was not productive. Governments, civil society groups and educators all had roles in increasing public awareness and encouraging environmental and social responsibility. He suggested that individuals, industries and countries could consider voluntary codes of ethics to guide their activities.

There followed an address from Dr Kurujit Nakornthap, Deputy Permanent Secretary of the Ministry of Energy,

Thailand. He noted that as the Thai economy grew, the population increased, and people enjoyed a higher standard of living, so did the national demand for energy. More than 60 per cent of Thailand's energy needs have to be imported and in 2006 Thailand spent more than 900 billion baht on energy imports. Electricity demand was forecast to grow at an annual rate of 5-6 per cent per year for the next 15 years. Dr Kurujit suggested that 'ethics of energy' implied an aim that the people of the world, either from developed or less developed countries, have access to affordable and reliable supply of energy for their basic needs in life. Thailand placed a high priority in its energy policy to the diversification of sources and types of our energy supplies. In order to increase generation capacity, Thailand was looking to purchase arrangements with neighboring countries, renewables, and nuclear power (currently the subject of an infrastructure planning committee) with the intention of operating reactors by 2020.

In the second session, **Ethical worldviews and the environment**, Dr Darryl Macer, the Regional Advisor for Social and Human Sciences in Asia and the Pacific, outlined UNESCO's project rationale. Dr Macer discussed the background to UNESCO's work in bioethics through the creation of the Bioethics Programme in 1993 and the establishment of external advisory bodies including the International Bioethics Committee (IBC), the Intergovernmental Bioethics Committee (IGBC), and the World Commission on Ethics of Scientific Knowledge and Technology (COMEST). He expressed hope that the Ethics of Energy Technologies project would provide a forum for reflection and open dialogue on these issues, and requested that participants consider a variety of options for project involvement. He confirmed the commitment of UNESCO to this theme, which is also consistent with the expressed desires of many people in all countries.

Prof Hyakudai Sakamoto from Japan spoke on an 'Asian ethos and environmental ethics'. The technological advances of the 20<sup>th</sup> century, particularly in oil-based energy technologies, were monopolized by developed countries and even today, many South East Asian countries had no, or a poor system of, oil-based energy technology. There needed to be greater transfer of technology and skills to these countries. Given the environmental damage caused by fossil fuel power the focus should be on renewables or nuclear power. Prof Sakamoto also raised doubts over the Western idea of 'human dignity', as it privileged human interests over those of other living things. The future Asian development of technology should draw on an indigenous 'Asian ethos' of 'harmony with nature'.

There was a debate after the presentation on how to dialogue on philosophically complex concepts such as human dignity. While human dignity can be looked at from many different angles, Prof Sakamoto said that the Asian idea was that everything has dignity. Dr Ayoub Aby-Dayyeh believed that some renewable energies could assist in restoring human dignity, and Prof Abhik Gupta observed that there is essentially no conflict between human dignity and the dignity of all the other systems. He observed that with over enthusiasm regarding science and technology and in arrogance some thought that we would be able to conquer nature and make a totally humanized environment. He supported the observations on the idea of the destructiveness of human dignity, when not attached to the dignity of other systems. Dr Charn Mayot agreed with both the dignity of human beings and the dignity of everything in the environment, but didn't think that human dignity is an obstacle to living in harmony with nature. Good masters can live at peace with their subordinates. Prof Nesy added that the idea of humanism, in the sense of conquering and exploiting nature, came with the development of science in the eighteenth and nineteenth centuries. The Christian tradition

has focused on what is called stewardship. It is the responsibility of human beings to sustain the environment, to protect it, and then enjoy it, and that this is very relevant to the current debates on energy technologies. Prof Sakamoto replied that there are some differences in our understanding of what humanism is, and what humanity is. Do we think that humanity is superior to other beings in nature? Humanism has promoted a high quality of life for only humans and that is the problem. Modern humanism was the product of that time - modernism - but it was not applicable to the society from now on.

Dr Somsak Chunharas of Thailand spoke on 'Cross-cultural reflections on ethics of science and technology', drawing on his experience as a medical doctor and his involvement in issuing research grants and public policy processes. Ethical principles were, he suggested, guidelines for determining how the more powerful should deal with others who have less power. Scientists, policymakers, professional and societal leaders, therefore, all needed ethical principles appropriate to their particular forms of power. Ethical principles may develop from particular cultures also, and Dr Chunharas gave the example of concepts of *dhamma*, non-permanence and respect for all forms of life as Buddhist environmental ethical principles with cross-cultural application. In any culture however, there were of course trade-offs between the ideal and the practical (utilitarianism) which society needed to negotiate.

In the discussion, Dr Jasdev Rai asked why none of the eastern states are inspired in their public policies by these indigenous philosophies. Dr Chunharas said that he thought that in Thailand, governments do not pay much attention to what their public policy is, and whether they are actually in line with the so-called 'local wisdom' or 'indigenous context'. Governments believe in the Western free market economy in terms of development policy and public policy. He discussed several exceptions, for example, consumer protection and environmental policy, discussing community forestry. He applauded the King for his continuous advocacy of the sufficiency economy, rather than going full steam for a globalized economy. Dr Hoang Tri asked about the role of Buddhism and other religions in the work of the UNESCO COMEST and IBC. Dr Macer described the drafting process of the Universal Declaration on Bioethics, noting that several of the earlier drafts circulated for consultation had a footnote about how work on a Declaration of Environmental Ethics would proceed after the Declaration on Bioethics. However, these footnotes were dropped after government negotiations, because of the objections of certain countries to the development of a potentially binding commitment on environmental ethics that might relate to economic issues. There is an inter-agency UN working group on bioethics, and perhaps in the future there could be a declaration, with agencies such as FAO who are already members, and new agencies such as UNEP, combined with a more unanimous call from UN member countries. COMEST is working on environmental principles and will start work on the ethics of climate change.

Prof Ayoub Aby-Dayyeh from Jordan, in 'Energy politics and environmental ethics', questioned whether we could really depoliticize choices about energy. As fossil fuel supplies were dwindling and climate change was accepted as a reality, clean renewable energies, like wind energy, geothermal, wave, tidal, hydropower, and photovoltaic were the way of the future. Reduced energy consumption through passive architectural design, reinforcing and updating building codes on thermal insulation and education was also important. Europe and to a lesser extent, North America, were leading the way with wind power and photovoltaics. There were many other examples of energy innovation around the world. In Jordan, however, there was a target of only 3 per cent renewable energy by 2015, which was very low

compared to European Union's target for 20 per cent renewables by 2020; India's 50 per cent by 2050; and Thailand 8 per cent by 2011, for example. He recommended that the UN and the World Bank needed to invest more in renewable energy technologies for poorer countries, if they were sincere in fighting poverty, political conflicts and global warming.

Following the presentation, Dr On-Kwok Lai asked how the UN or other international organizations contributing to international cooperation at various levels could promote the ethical use of renewable energy in developing countries. Dr Aby-Dayyeh said he was pessimistic, because what was really needed was financial investment in renewables, and even though the World Bank had increased lending in this area it wasn't enough to give developing countries a chance to increase their energy independence. Dr Mayot asked a question about reducing what appeared to be an innately human desire to consume more and more energy. The reply was that education was important to teach people to reduce their energy consumption, but that states could be so preoccupied with security, economic monopoly and other spending priorities that education for sustainable living was not a priority.

As the last speaker in this session, Dr Paritid Bhandhubanyong from MTEC, Thailand, spoke about the '4 Fs' that could be derived from plants: (bio)fuel, feed, food and fiber; and questioned how we would cope with increased competition for land area to meet these needs. As countries rushed to find alternative energy sources to fossil fuels, the global biofuel industry was growing. In Thailand, renewable energy (along with nuclear) was part of the government's strategy for energy development. In 2003, the Cabinet agreed to a target of increasing the share of renewable energy from 0.5 to 8 per cent of total final energy by 2011, 3 per cent of which would come from biofuels. The government was investing in a number of community and industry-based pilot biodiesel projects. It hoped to increase oil palm plantation area in Thailand to 4 million rai by 2009 and to grow another 1 million rai of oil palm in neighboring countries. Even with technology for yield improvement, however, there would not be enough land available to meet our energy needs, and diversion of land to energy crops was already pushing up food prices. Countries needed a balanced approach to resource competition that might include a suitable portfolio of different energy sources.

Dr Abhik Gupta asked a question about production, purchase and lifecycle costs of biofuels which was clarified. Mr Issa Abyad asked why governments did not provide better incentives to the private sector for investment in renewables. Dr Bhandhubanyong said that in Thailand there were in fact some such incentives, for example, producers of biogas with excess power generation for their intended needs were paid to put that power back into the grid. He would like to see a stronger incentive or disincentive structure for other things, however, such as the excessive use of air-conditioning in hotels and shopping centres. Some discussion ensued on the local versus larger scale aspects of biofuel and whether biofuel production was best developed through community-owned models; also on the lack of documented case studies of such tensions in Thailand to date. Dr Robert Kanaly made the point that if biofuel crops required large volumes of fertilizer, its supposed value as a low-carbon form of energy would be neutralized, as industrial fertilizers were based on fossil fuels. Dr Bhandhubanyong acknowledged the point but said he was not sure about the use of fertilizer on Thai biofuel crops. Potentially genetic modification of crops could reduce fertilizer and pesticide use by growing stronger, more resistant crops.

The first afternoon session included a number of reports on **Visions of the future: Ethical views of different energy strategies**. Prof Bundit Fungtammasan of Thailand talked

about some of the ethical challenges encountered in Thailand in efforts to meet continued increase in demand for electricity and transport fuels. In order to meet projected energy demand, a near doubling of capacity was required by 2021. Renewable energy development was high on the agenda, but there were lessons to be learned about engaging communities in this process. Prof Fungtammasan talked about the Electricity Generating Authority of Thailand (EGAT) lignite-fired plants in Mae Moh, the Bangpu Public Company Limited (BCLP) coal-fired plant in Rayong, and the Pak Mun hydroelectric dam in Khong Chiam as case studies. In the first case, excessive sulphur dioxide emissions had adversely affected the health of local residents and surrounding areas, including plants and animals. EGAT had managed to reduce emissions and was paying compensation, but there was still considerable community resistance. The BCLP plant in Rayong, on the other hand, had instituted extensive community consultation prior to plant construction and mechanisms for public monitoring of human and environmental safety. In the case of the Pak Mun dam, the closing of sluice gates affected fish population and diversity, river ecology, and livelihoods, leading to compensation claims. Eventually a compromise was reached in which the gates were opened for four months of the year. Prof Fungtammasan noted that there was a Power Plant Community Development Fund to be established by end of 2007 to provide some resources for communities affected by large energy projects.

In discussion, Dr Amru Nazif queried the timeframe for public consultation for large power projects such as those described. Although it appeared as if extensive dialogue and consultation happened after construction, should this have taken place before the decision was made to build the power plant? Prof Fungtammasan replied that it was certainly ideal to have consultation before the project was conceived. But once a country has a power development plan in place authorities are bound by time constraints to quickly find the site. Large power projects have lead-in, planning and construction phases of several years and consultation time is sometimes sacrificed for expediency.

Ms Nadja Tollemache from New Zealand spoke on 'Environmental ethics and energy ethics in the context of the work of COMEST'. COMEST was established in 1998 and had over its life established sub-commissions on themes including the ethics of energy, the ethics of fresh water, the ethics of the information society, and the ethics of outer space. From the beginning, the Energy Sub-Commission had emphasized the relationship of energy and environment. Ms Tollemache reported that some controversial principles, such as whether to approach from an anthropocentric perspective or from a biocentric approach, or whether the viewpoint was from the individual or community, were the focus of considerable debate in COMEST.

Following the presentation, Ms Tollemache was asked for her opinions on whether the declarations of COMEST or UNESCO should be normative, as a way of pushing for action on renewable energy. She said that although a normative declaration would be nice, it was not feasible in the current political environment, and that it could be more prudent to work in different ways, such as in education.

Prof Nesy from India spoke on science and technology policy in India. She claimed that just as the goals of the scientific profession were morally founded, science and technology policy in India was strongly based on moral principles of enduring significance to humanity. Science and technology should empower the community as a whole and not merely some sections of it, and the policy should incorporate principles of self-reliance and sustainable and equitable development.

Dr Abhik Gupta commented that there were many finely worded policy documents, but there was a large gap between intention and execution. He noted, for example, the case of

BT cotton in India, where despite having a reasonable policy, thousands of farmers had committed suicide. Dr Gupta asked what role ethicists could play in narrowing this gap, to which Prof Nesy said that ethical principles of informed consent and public participation needed to be more widely acknowledged, and that education was vital in giving citizens information and involving them in the discussion about energy.

Dr Samai Jai-in from the National Metal and Materials Technology Center (MTEC), Thailand, talked about the current energy revolution in bioenergy, which was in its early stages of implementation. He drew on examples from Thailand's experience in the past decade to explore the opportunity for science and technology to become enabling factors in the improvement of the environment, energy efficiency and equity of the rural economy. He noted that agriculture comprised 9 per cent of Thailand's GDP and 39 per cent of employment, and was still the main sustaining force of regional areas. Thailand was in transition from a hydrocarbon economy in 2000 to a carbohydrate economy in 2030, although much research and development was still needed. Dr Jai-in noted the foresight of His Majesty the King of Thailand, who had established an ethanol distillation plant 22 years ago. Thailand had an ethanol yield productivity far in excess of the world average, and palm oil was also expanding as an energy crop, particularly in the south of Thailand where the best growing conditions were found. Palm oil cultivation was suitable for degraded agricultural soils previously used to grow oranges. Along with food, feed and fiber crops, biofuels including palm oil, cassava, and sunflowers offered opportunities for self-sufficiency and development in rural communities.

In discussion, Dr Charn Mayot commented that whilst bioenergy was strongly supported by many scientists and engineers working in the field, ordinary people did not have an awareness of or an appreciation for it. Dr Jai-in acknowledged this problem, saying that although many dedicated scientists were working hard, they were not necessarily communicating a message to the general public and had not managed to attract government funding for public awareness and development to the same level as the emerging nuclear program. Many scientists in Thailand preferred to work quietly and independently rather than actively promoting their work through the education system or media. Additionally there was also some resistance from the car manufacturing and oil industries.

Prof On-Kwok Lai and Ms Shizuka Abe from Japan spoke on 'Synergizing alternative-clean energy and self-sufficiency for the future? Interfacing the ethics of bio-regionalism and energy independence'. Between 1995 and 2005, East Asia and South Asia reported the strongest regional economic growth in the world, and South East Asia and the Pacific were growing at a rate above the world average. But Asia and the Pacific were under-utilizing their natural sources of renewable energy, which included solar energy, extensive river networks for hydropower, geothermal energy and biomass. Barriers to renewable energy systems were institutional, political, technical and financial. Renewable energy resources also were bioregional in the territory they covered, so there was a potential conflict between bioregional, potentially unstable energy systems and countries' desires for energy independence and self-reliance. Guiding ethics insights that could be applied in the choices regarding clean energies were available in Asia Pacific cultures, through historic folklores and myths. These could be invoked to revitalize and rejuvenate current local ethics and they could also be adapted within a 'global eco-ethics'.

Dr Ayoub Aby-Dayyeh asked why Thailand did not use more renewable energy, particularly natural gas over coal, which would dramatically reduce pollution. Prof Lai declined to answer specifically. He said, however, that a country's energy mix really depended on the existing governance and

the international sourcing or supply chain of energy. The supply chain for renewable energy was dominated by the developed countries who owned the technology; for example, the intellectual property of solar cell technology was dominated by Japan, Germany and the US. Dr Samai Jai-in, of Thailand's National Metal and Materials Technology Centre (MTEC), said that in Thailand currently 76 per cent of electricity comes from natural gas. Of this 75 per cent is produced in the Gulf of Thailand, and 25 per cent is imported from Myanmar. There was still significant government investment in coal-fired power although there was growing interest in the potential for small-scale renewables, such as local biomass production. A speaker from the Ministry of Energy also added that Thailand was a strong supporter of renewable energy development, and had, like Germany and Denmark, introduced a special tariff to make renewable energy feasible to produce.

In his presentation, 'The risk of big energy technologies and ethical aspects of renewable energy technologies', Prof Pil-Ryul Lee from the Republic of Korea argued that renewable energy sources offered a far more realistic solution than those of fossil fuels or nuclear power for fighting global warming and climate change. From the ethical point of view, nuclear power presented many problems at each point of the complex supply chain, including uranium mining, enrichment, and risk management in a functioning plant. It was a highly centralized and state-controlled source of energy that did not promote participatory democracy. Nuclear and fossil-fuel based power also triggered international conflicts. On the other hand, renewable energies such as solar, wind, small hydro, biomass, geothermal and tidal energy are often decentralized and can be used in remote areas without a solid energy supply system. While they can cause conflicts over social and aesthetic impacts this conflict remains at a local or national level.

Prof Lee's presentation was followed by a discussion about the feasibility of small-scale renewable technology in a world with insatiable energy demands. Dr Alastair Gunn acknowledged that local small-scale renewable energy solutions were attractive, but asked whether we could realistically power aluminum smelters or paper mills, for instance, with renewable energy. Dr Lee replied that he did not necessarily advocate for small-scale green energy technologies in all circumstances, and that the best energy mix depended local conditions, including living conditions and rates of energy consumption. Dr Abhik Gupta commented that energy could become a great limiting factor on sustaining civilization beyond a certain point. At present we are reaching the environmental and ethical limits of carbon fuels and nuclear power, but solar and wind power might not be enough to sustain to sustain industrial production which traditionally relies on coal. He said that there was a real need for a breakthrough in solar and wind research in terms of conversion efficiency, stored energy efficiency and so on. The best option for now could be to cultivate multiple energy sources appropriate to a country's energy needs.

Prof N. Manohar from India spoke on 'Energy technologies for the future', noting that the TRIPs (Agreement on Trade-Related Aspects of Intellectual Property Rights) process worked towards the internationalization of the energy industry through market dynamism and free trade. Energy technology preferences for the region should be attuned to its cultural values, however. Given the environmental and security hazards implicit in many energy options, the region needed to avoid tension and instability and focus on peace and development. There was a role for the international community to facilitate the transfer of clean energy technology to South Asian countries who could not previously afford it. Further, stricter international ethical standards and compliance cultures were needed to ensure safety and the use of energy technologies for peaceful purposes. Some

discussion ensued, following on from the previous discussion, about the scale of energy technologies and the implications for governance, centralization of decision-making and democratic participation. Prof Manohar said that his recommendations would be to decentralize power generation facilities, utilize local resources wherever possible, and develop international cooperation on the peaceful use of energy technologies.

The second day, 27 September, started with a session on the **North-South Divide and energy equity**. Dr Masami Nakata from UNESCO's Jakarta office reported on UNESCO's Natural Science Sector's efforts for improving energy equity. Dr Nakata said that there was already a large population in lesser developed countries who did not have good access to conventional technology such as electricity and fossil fuels. A decrease in availability of fossil fuels in the future could heighten inequity in energy access. UNESCO's Natural Science Sector was therefore working on renewable energy as a way to improve energy equity and promote environmentally responsible development. She outlined several projects the office was working on, including the Renewable Energy Database, led by Prof Kumar of the Asian Institute of Technology in collaboration with UNESCAP and UNESCO; the Gender Mainstreaming in Energy project, led by the University of Indonesia in collaboration with UNESCO; and e-learning distance education courses in the Asia-Pacific on renewable energy.

Dr Pil-Ryul Lee asked Dr Nakata about the extent of cooperation between her office in Jakarta and the Paris headquarters of UNESCO. He was aware that there was a summer school on renewable energy at headquarters as well as many programs on technology transfer to Asian and African countries. There was a lot of communication with UNESCO headquarters, she replied, as they were in the same organization and the number of people working specifically on energy issues was few. Headquarters' geographical focus was, however, on Africa, whereas the Jakarta office was of course focused on Asia. Dr Macer added that in many of the UN organizations, the focus was on the continent with the direst situation, which is Africa. However, this has meant that the Asia Pacific region receives less attention, both in terms of funding and activities from headquarters. This was one of the issues of working in a region which has intermediate and very diverse status. The field offices in Asia and the Pacific therefore networked with many partners, as in the project described by Dr Nakata and as in the Ethics of Energy project being launched at the conference.

Dr Charn Mayot asked for more information on the target audience of the e-learning programs on renewable energy mentioned by Dr Nakata. Were they intended for technical people, such as engineers, or for ordinary people who wanted bioenergy in rural communities, for example? Dr Nakata said that originally the target had been graduate students, middle-level policymakers, the NGOs and also the private sector, but that in practice many students joined and more research and refinement was needed to recruit policymakers for the next round of courses.

Dr Alastair S. Gunn from New Zealand spoke on 'Energy, efficiency and equity', noting the inequities in access to energy both between and within nations, in part because of natural endowments and financial resources that determined the number of 'energy slaves' available to each person. Dr Gunn suggested avoiding generalizations between 'rich' and 'poor' countries, noting that states of development were not static, and in the Asia Pacific region especially enormous gains had been made. Nevertheless, there were important questions of socio-economic equity in determining who will bear the costs of a reduction in carbon emissions and pollution. While most people in developing countries (and the poor within affluent countries) were seeking 'social and

economic justice ... freedom and self-determination', the post-affluent were rejecting values of over-consumption, technological efficiency and economic growth. Dr Gunn argued that the affluent have no right to preach subsistence living to the poor, however. There was no realistic way to reduce energy demand in developing countries, although it might be offset by innovation and improvements in efficiency in both generation and utilization.

There was a diverse range of questions about Dr Gunn's presentation, and especially about New Zealand's ability to innovate in energy policy relative to other countries in the Asia Pacific region. Dr Gunn felt that New Zealand was a historical innovator in social and environmental policy, but this was in part due to the fact that it was a lucky country: it was medium-sized, relatively wealthy, had a mild climate, no major environmental problems, and was a highly educated, democratically literate population that expected governments to be responsive to their concerns and consult on major policy decisions. The population was relatively low and stable, which meant that inhabitants could lead an affluent lifestyle that might be environmentally disastrous elsewhere.

Dr Sumittra Charochochkul and Mr Issa Abyad asked specifically about how New Zealand planned to accommodate dairy farming within its target to become 'carbon-neutral' by 2020; as cows contributed to emissions by producing much methane. Dr Gunn said that this was a subject of discussion in New Zealand. The problem was that cows have inefficient digestive systems. Possible options were improving the digestive system of cows or improving the quality of the feed provided through genetic modification.

In his presentation, 'Global warming and disparity in energy consumption between North and South: The need for global justice principles to take care of the environment', Dr Soraj Hongladarom from Thailand outlined some of the arguments about the respective ethical obligations of developed and developing countries in light of the Kyoto Protocol process and climate change at large. Developed countries had the highest per capita consumption of energy, at rates which the world would be unable to sustain if applied to every person in China or India. Through a system of exploitation and colonialism (old or new), the North reaped the benefits, leaving the South to scramble for what was left. Yet some rich countries such as the USA and Australia did not sign the Kyoto Protocol, arguing that developing countries also needed to curb energy consumption, and to strengthen their legal and political frameworks against environmental degradation and corruption. Dr Hongladarom called for a system of global justice that would transcend national interests and recognize that all countries shared the same planet. A fair system of sharing, where the North shared the expertise and the South the resources, needed to be combined with a more prudent use of energy and environmental mindfulness.

Dr Mayot asked for some clarification on Dr Hongladarom's use of the term 'global authority' as a corollary to 'global justice'. Dr Hongladarom explained that he had used the term global authority in a wide sense. It could mean the United Nations, but the United Nations was not a sovereign power, although if the five permanent members of the Security Council worked together unanimously they could have some teeth. The usual conception of justice was that there has to be some form of power to enforce justice. So if we continued to rely and believe in the principle of sovereign states then perhaps global authority was not going to be effective. Dialogue might be another approach.

Finally, Dr Amru Hydari Nazif spoke on 'Ethical analysis hardly made: Energy paths not considered in energy planning in Indonesia'. Oil, coal and gas remained Indonesia's most important energy resources, but there were also uranium reserves that had been the subject of speculation since the 1950s. Indonesia currently had three research reactors and was considering nuclear power for centralized electricity

generation. Dr Nazif expressed concern about the threat posed by radiotoxicity to flora and fauna, including humans and the environment. He questioned why renewable energies had not been more seriously considered as an 'energy path' in Indonesia and considered the appropriate point(s) in an energy planning cycle for rigorous ethical analysis with community consultation.

Dr Ayoub Aby-Dayyeh asked why the Indonesians, having started on research nuclear plants in the 1970s in parallel with the South Koreans, were not more advanced in nuclear power and technology. Was it because Indonesia had plentiful oil reserves and had not felt a critical need to develop alternative energy? Dr Nazif agreed that it was, although Indonesia was now working with the International Atomic Energy Agency (IAEA) to progress its nuclear program.

After a tea break, there was a fifth session on **Constructing and reconciling visions of different communities**. Dr Miyako Okada-Takagi from Japan described in her presentation 'Enhancing energy education through internet game content', how Nihon University in Tokyo had designed a computer game for the Tokyo Electric Power Company (TEPCO). The game was available on the power company's home page, and was intended to educate the Japanese public, particularly young people, about how energy is generated, including nuclear, thermal and hydroelectric power. The information provided was factual information about the entire electric power system, from power stations to the power supply system. Dr Okada-Takagi showed a demonstration of the game and gave out key chains featuring game characters which were distributed by the company.

There were a number of questions and comments on the effectiveness and content of the game. Dr On-Kwok Lai said that game looked like it was fun to play, but to what extent did it help people to accept nuclear energy in their daily life? Dr Okada-Takagi replied that although 40 per cent of Japan's energy is supplied by nuclear power generation, the Japanese people were still extremely sensitive about nuclear energy and this was due in part to the fact that they did not understand the technical aspects of it. So the game demystified the power generation process and was a learning experience at the same time as being fun. Dr Masami Nakata and Dr Robert Kanaly queried the ethics of a power company (the game's sponsor, TEPCO) taking it upon themselves to educate the population about a product they had a commercial interest in. If the people did not understand nuclear power, asked Dr Kanaly, surely it was the responsibility of the government and education system rather than the private sector? Dr Okada-Takagi said that although there were seminars held by the government and information was available about nuclear power, it was not presented in an entertaining way so people did not come. Also, she clarified that in addition to the game about nuclear energy, there were games about other systems such as hydro power and thermal power. At the company's request, the content of the games was limited to factual information about how power generation worked, rather arguing the pros and cons of different energy types.

Prof John Weckert from Australia analyzed two arguments used in the energy debate: 'If we don't others will', and 'we won't until others do'. Prof Weckert considered the validity of these arguments, often used in Australia with regards to action on climate change, in terms of consequentialist and deontological points of view. In determining its energy policy, should a country judge a policy by its likely consequences (including the harm caused, effects on other countries by way of setting an example, and the likely effectiveness in combating climate change)? Where the consequences of a national policy appear to have little impact on the global community as a whole, should a country do

what is ethically right anyway, even at cost to its economy and citizens' livelihoods?

Prof Weckert received a question about his personal opinion regarding uranium issues in Australia, and also the reason why Australia did not sign the Kyoto Protocol. Regarding the Kyoto Protocol, he said that the two main arguments were that the US and China had not signed it, and Australia's foreign policy was heavily influenced by the US; and that Australia's economy was very reliant on brown coal and to curb emissions dramatically would have an impact on economic growth and employment. Regarding nuclear power, he said that he was not a scientist, but personally he felt that political sensitivity about nuclear power indicated that it was not as safe as it was made out to be. Dr Jasdev Rai made the observation that the argument – 'if we don't sell it, somebody else will' – was also used in the arms industry. He made the point that this argument did not consider that if we sell, others might sell it at a more competitive price with fewer safeguards. Prof Weckert agreed that if Australia sold uranium with fairly stringent safeguards, that would make its uranium less attractive in some ways than uranium from countries that didn't have those safeguards, and it might well make it more expensive at various levels of its transportation and use and so on. Australia might then come under pressure to lower its safeguards to avoid being undercut.

Dr Nguyen Hoang Tri from Vietnam spoke about energy demand and consumption in Vietnam. Like many other countries, the demand for energy in Vietnam was increasing as a result of increased use of air-conditioning, increased private vehicle ownership, increased consumption of meat and dairy, and cycles of domestic consumption and overwork.

Dr Ayoub Aby-Dayyeh asked about technology transfer into Vietnam. If Vietnam was to develop renewable energies, how would it develop the technology for its people to use, and could it compete in technological development and research with the ever developing world market sponsored by wealthy countries and companies? Dr Hoang Tri said that while previously, Vietnam had to choose between Western countries and the former Soviet states for technical cooperation, international relationships were now becoming more open, and Vietnam had many contacts in Japan and Germany and so on. Dr Masami Nakata noted that Vietnam had in fact very promising indigenous biogas technology also.

Dr Abhik Gupta asked about how the Vietnamese Government was planning for the tremendous increases in energy demand driven by the current rapid pace of infrastructure development in Vietnam. Dr Hoang Tri replied that Vietnam was looking at a number of options. Biogas was an attractive possibility, highlighted as a priority in the 21<sup>st</sup> Government Agenda. Some experiments from Thailand in ethanol and biodiesel could also prove very useful for Vietnam because Vietnam was an agricultural country. Hydroelectricity and nuclear energy were also being considered.

Dr Ngo Thi Tuyen from Vietnam spoke on aspects of her work as Deputy Director at the Center of Education Technology, for the Ministry of Education and Training. The Center promoted environmental education in a 'Confucian Heritage cultural context' that stressed interpersonal relationships and group cohesion in debates. Environmental education in schools – through the arts and sciences curriculum, outdoor activities and care of the classroom environment – is an important way to make community attitudes more considerate of the environment. Ms Tuyen told the conference about children's fairs that had been organized in schools for exchanging and sharing used things, clothes, toys and books. In order to encourage a culture of saving and sharing, children brought in things they didn't need from home and exchanged them for others, or made things such as dolls' clothes from recycled fabric.

Dr Masami Nakata asked whether the energy education campaign differentiated between children in big cities and rural areas in Vietnam. Her understanding was that even the electrification rate in Vietnam was not that high, and that many people and children did not even have access to a water tap. What kind of education was necessary for children in rural areas who had no access to energy or water? Ms Thi Tuyen replied that the campaign was for children in all 64 provinces of Vietnam, and that the principles of conserving resources, sharing things and saving money were relevant everywhere, regardless of how communities accessed water or electricity. Dr Chemba Raghavan asked about the potential for extending the education campaign to the children's families, particularly mothers, who typically allocate environmental and financial resources in the family home. Ms Thi Tuyen explained that educating families could be difficult, but that the education campaign had involved parents by inviting them to meetings about the fair project, asking them to organize things to bring from home and raising awareness about what the children were learning at school.

The afternoon session was on **Ethics of Nuclear Power and Alternative Energy Systems**. Ms Puttida Suriwong and Mr Pahuton Sriwichai, representatives of Thai Youth Leaders for Ethics in Science and Technology, told the conference about a project they had planned at the joint UNESCO-National Science Museum (NSM) Youth Leaders in Ethics of Science and Technology Workshop in 2007. The project would be done in college dorms, involving a competition about which dorm groups could collectively reduce their electricity consumption by the greatest amount.

Mr Issa Abyad commented that he thought the focus of the competition should be on fun, and that the competition could be based on a reduction in electricity bills, and the students said they had in fact incorporated this into the design of the competition. Dr Chemba Raghavan congratulated the students on their initiative and asked for further details on the role play component; she also suggested that the students think about the evaluation component of the project to assess whether it had actually changed behaviour.

Dr Darryl Macer explained that the students had spent two days at the workshop in various introductory lectures and group activities and games. Over the coming year, UNESCO and partners such as the NSM would probably be holding youth leader training workshops with different sets of young people seeding universities. In 2008 there would also be some international youth exchange forums on the ethics of energy. If participants or other parties were with a foreign university and wanted to bring some of their students in the summer holidays to Thailand or another country in the region UNESCO would try to develop this.

Dr Sumittra Charojrochkul from MTEC, Thailand, spoke about solid oxide fuel cells and the potential they represented as a source of renewable energy that did not depend on climate or weather. Solid oxide fuel cells were electrochemical energy conversion devices which generated energy from hydrogen (from hydrocarbon) and oxygen (from air). A current research project at Thailand's National Metal and Materials Technology Center (MTEC) was investigating bioethanol modification for use as a fuel in solid oxide fuel cells, and they could provide village-based power.

Ms Tanuja Bhattacharjee commented that solid oxide fuel cells were a promising technology. She asked about whether there were any life cycle analyses on the hydrogen used in the fuel cells. Dr Charojrochkul said that she was aware of some lifecycle analyses but had not done any herself. Pure hydrogen produced from fossil fuels was not carbon-neutral, but the hydrogen could also be produced from other sources, like ethanol, which did not generate extra carbon into the cycle. Phosphoric acid was one type of fuel used as an electrolyte, but for the solid oxide fuel cell phosphoric acid was not used at all. Dr Obelin Sidjabat asked

about electricity production capacity of solid oxide fuel cells and how big the units were if installed in a village. Dr Charojrochkul replied that the 1 kilowatt Swiss-made model was about the size of a household fridge. The bigger combined cycle model had a fuel cell of about 150 kilowatt with a micro turbine of another 70 kilowatts. Dr Masami Nakata asked what the lifetime of a solid oxide fuel cell was, and about the cost of electricity generation. Dr Charojrochkul said that the capital costs were very expensive, about US\$1000 per kilowatt, because production was not on a commercial scale yet. The running or operation costs were comparable to existing power generation. Regarding the lifetime of the fuel cell, she said that they were currently testing this with a view to reaching the standard of other comparable commercial products. The type of fuel cell she had been talking about was ceramic, so it did not release any toxic substances in landfill and was simple to dispose of.

Prof S. Panneerselvam from India spoke on 'The environmental ethical implications of biotechnology as a knowledge-based industry in Tamil Nadu State, India'. He noted a traditional Indian concept in the word 'shakti' representing energy and referring to the 'capacity to do work'. Tamil Nadu state had forest, agricultural and plant resources with tremendous biodiversity. There was potential to create a critical mass of industrial activity in biotechnology, in the fields of medical healthcare (including diagnostics, vaccines, therapeutics and veterinary drugs), agriculture/food, environmental and industrial products. As India sought to reform the environmental frameworks governing more traditional industries, the role of bioethics, biosafety, and the ethical implications of genetic engineering were important in contemporary society.

Prof Panneerselvam's presentation was followed by a discussion with Dr Jasdev Rai about theory and practice in the implementation of Indian law and the role of judicial activism in significant decisions about environmental rights. Dr Fakrul Islam asked for information on Indian government support for biotechnology, to which Prof Panneerselvam replied that government attitudes were changing. Where previously all government assistance had been focused on information technology, more resources were now being put into biotechnology, especially in Tamil Nadu state. Dr Abhik Gupta also added that the Indian state and the university grants commission were funding new biotechnology departments in almost all Indian universities, even at the undergraduate level. Engineering institutes were also being encouraged to set up new departments such as in agricultural biotechnology, biomedical engineering and so on. The applications of biotechnology in pharmaceuticals and agriculture were being considered.

Dr Tavivat Puntarigivat expressed concern that a global biodiesel industry would soon be captured by multinationals, citing the establishment of huge plantations by US companies in Latin America. Potentially this would offer no benefit to the poor who were growing the biomass. Prof Panneerselvam said that he thought biodiesel could bring more income and greater self-sufficiency to the rural poor, but that the industry needed to be regulated to protect their security. Dr Abhik Gupta said that he felt that in these areas a lot of watchdog activity was needed, particularly from ethicists, and ecologists, and particularly for maintaining natural biodiversity of flora and fauna. Another contentious area was benefit-sharing and this question of copyright, which had already been the subject of controversies in India, such as that which erupted over basmati rice.

In his presentation, Dr Robert A. Kanaly from Japan asked participants to reflect on the fact that food was energy, but that it also required energy to obtain food. The production of meat placed high demands on energy resources and was, at least in US-style systems of intensive factory farming, based on oil and water consumption. This was because growing livestock feed such as corn required large amounts of



chemical fertilizer and water. The ratio of energy input to protein output under such a system was poor. Animal protein was only 1.4 more nutritious for humans than a comparable amount of plant protein, yet consumed 11 times more fossil fuels. Further, feed ingredients were varied and included such items as dying and diseased animals, fecal material from other factory farmed animals, blood, feathers and hair, and plastics, which had already led to health scares such as bovine spongiform encephalopathy ('mad cow disease'). Dr Kanaly argued that as world per capita incomes and rates of urbanization grow, the true costs of cheap meat and the ethics of this sort of food production need to be seriously examined, since both translate into an increased demand for animal products.

Prof Abhik Gupta noted that energy subsidies for all kinds of food, even vegetables, were enormous in some countries, and mentioned the trend of 'cage-free' or 'free-range' meat in the US. Dr Kanaly agreed that it was a small movement, at least in some parts of the US, but as consumers grew more aware of livestock conditions producers were potentially changing their public face rather than actual practices. He cited an example of an egg farm in South Carolina owned by Catholic monks who used imagery of care to sell their eggs even though the operation was basically a factory farm. It was very difficult for consumers to get accurate information about the sources of their food and how animals are treated because the industry was very reluctant to divulge it.

Prof Abhik Gupta from India presented a paper on the need for application of the precautionary principle with regards to the mass cultivation of biodiesel-yielding plants in biodiversity-rich areas. Being biodegradable and non-polluting, increasing use of biodiesel was expected to reduce carbon dioxide emissions and was seen by many as a 'win-win proposition' towards meeting the energy requirements and providing livelihood opportunities in the densely populated Asian countries. Prof Gupta argued, however, that hasty and indiscriminate plantation of biodiesel-yielding plants in Asia, especially in its biodiversity-rich areas, was fraught with environmental and ethical concerns. In his home country of India, the biodiesel crop *jatropha* was being aggressively promoted by government and industry for an area in the North-East recognized as a Biodiversity Hot Spot, and in Malaysia and Indonesia, oil palm plantations were usurping tropical forests. Features such as invasive potential, toxicity, and effects on water and soil content were not being fully assessed in biofuel proposals. Prof Gupta suggested that biofuels be made one of the foci of the project, and that participants or partners could consider building a database on the different facets of biofuels, especially biodiesels, in order to be able to make an informed assessment.

Prof Gupta was asked about the need for high usage of fertilizers on biofuel crops, given that there had been problems with the soil for Indian *jatropha* plantations. He agreed this was a problem, mentioning a study done by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in India which found that *jatropha* planted on marginal land will grow, but without fertilizer and labour-intensive canopy management it will not produce seeds, which are the valuable part of the crop. He questioned whether farmers would be able to meet these conditions or whether *jatropha* might lead to further land degradation and rural indebtedness. Dr N. Manohar wondered if *jatropha* might represent a similar scenario to the planting of eucalyptus in India in the 1960s and 70s, which had negative environmental impacts because it lowered the water table. Were there, he asked, site-specific environmental impact assessments done in planning *jatropha* plantations? Regarding the toxicity of *jatropha*, he remembered it being used during his childhood days as fencing material, as cattle never grazed it and people never touched it. Prof Gupta agreed that eucalyptus was damaging, and that site-specific assessments were needed to

avoid a similar demand on underground water resources by *jatropha*, as was already happening with *jatropha* in other parts of the world. Huge monocultures would always bring ecological problems, and he felt it essential that legal limits be placed on any kind of monoculture. There also needed to be awareness campaigns, particularly for farmers.

An additional comment came from Ms Tanuja Bhattacharjee on consideration of the issue of food security as a consequence of energy crop plantations. The export of biofuel may result in the import of food which could have a severe impact at the national level, particularly in countries that are poor such as Bangladesh or Myanmar. She felt, therefore, that it was not a global solution to encourage or compel biofuel plantation without analyzing the long-term socio-economic benefit.

These papers were followed by the first working group sessions of the meeting.

The final day of the conference, 28 September, began with the session on **Energy independence and security**. Dr Sail Sen of Thailand spoke on 'Green advertising: Green supply chain - CSR driven retailing and logistics'. The configuration and context of business at the global level was transforming, with a growing need for sustainability coupled with growth. Intensified competition, consumer expectations, and the natural resource crunch were driving corporate leadership to synthesize their corporate social responsibilities with corporate strategies. There were some tensions, however, between the imperatives for developing renewable and biofuel resources, and the imperatives for advertising and promoting high energy consumption luxury products.

Prof On-Kwok Lai asked how Dr Sen saw the future for communications in terms of green messages, in how the products related to the user and producer, which both affect the extent of the environmental problem. Dr Sen replied that the product was taking a back seat now and it was services which were emerging. People were concerned about their own health, about societal health and about the sustainability of our planet.

Dr Jasdev Singh Rai from the United Kingdom spoke on 'Concepts of communities, energy security and independence'. He outlined three essential concepts that define the relationships between communities, energy and their environment: anthropocentric systems which hold that human beings are at the centre of God's design (Abrahamic cultures); ecocentric systems which hold that human beings are only one life form in the universe (Eastern and other philosophies); and post-enlightenment scientific systems with confidence in human reason to solve every possible problem (modernity). States and communities often view energy from different perspectives – the state from the rational and the community from other views rooted in past traditions. Energy security and energy independence were sources of increasing conflict in the international community, for example, in the case of Iran. Dr Rai suggested that there was a need to extend the mandate of the International Energy Agency to give it a greater role in setting up secure energy resource supplies between countries. There could be international supervision, or even international ownership of, nuclear power plants and nuclear technologies. Plural outlooks would best engage marginalised communities. The international community should move away from universal conventions and declarations to multiple systems which are rooted in regional cultures.

Dr Ayoub Aby-Dayyeh took issue with some comments of Dr Rai about the history of the relationship between Islam and science, which Dr Rai later clarified. He was also critical of Dr Rai's questioning of our commitment to prolong the human lifespan at all costs. He felt that population growth, rather than lengthening the life of human beings, was the waste of energy. Dr Rai suggested that longer lives and increased

births were both types of population growth, and even in affluent countries with low birth rates, the energy that was invested in bringing up a child was enormous. As a medical doctor, he saw old people in hospitals, and the amount of energy that was needed to keep them surviving was also enormous. While he was not suggesting terminating their lives, he argued that these were problems we had not addressed in our quest to live longer, healthier lives.

Dr Md. Fakrul Islam from Bangladesh spoke on the 'Trend of using fossil fuel for irrigation purposes: A case study of the Teesta Barrage Target Area, Bangladesh'. Mega irrigation projects in Bangladesh and India drew on ancient water cycles between the Himalayas and the Bay of Bengal. Water flow had been decreasing in recent years, however, and farmers were increasingly relying on diesel-powered wells to extract groundwater to irrigate their crops. As a result, the use of imported fossil fuels in Bangladeshi agriculture was increasing, and as global prices for these commodities rose many farmers were at risk of poverty. Dr Islam raised concerns about the impacts of extracting groundwater on a large scale when health, hygiene, income and employment levels did not appear to be improved. He suggested that regional cooperation, for example, bilateral treaties between India and Bangladesh, was needed to secure water and energy sources, and to protect the environment.

In discussion, Dr Nguyen Hoang Tri suggested that similar problems could be found in the Mekong Delta also, and what happened in Bangladesh to avert flooding where there were no barrages. Dr Islam said that embankments could be built to protect river banks, although it was expensive. Constructing reservoirs was another option, although the area he had been discussing was unsuitable for this as it was flat. Dr Abhik Gupta made the comment that modern international flood management was going against building embankments, and they had proved ineffective in Assam. He suggested that the reality was that these areas were flood-prone, and that rather than flood control, we needed to think about flood management to reduce the human misery caused by flooding. Dr Islam explained that his preferred solution was not flood control, but an economic solution that optimized water sharing between India and Bangladesh.

As the last speaker for the conference, Dr Ir. Khin Ni Ni Thein from Myanmar spoke on 'Sustainable hydropower and engineering ethics: A quest for a two in one solution', drawing on her previous advisory position to the World Commission on Dams and her current position as Vice President for Development and Resources at the Asian Institute of Technology (AIT). She said there were enormous ethical issues linked to water resources. The world's richest people consumed the most, while a billion poor people still had no ready access to drinking water; they often have to buy their water from vendors at a price which is 10 to 20 times higher than water sold through the regular distribution network. Dams raised a particular set of issues. Whereas in the past, debate had focused on whether dams should be built at all, dams were gradually being recognised as being about development strategies and choices, and the focus had shifted to how to build sustainable dams. AIT was currently conducting research and providing education on sustainable hydropower that included engineering ethics and corporate social responsibility. Five sustainability measures were proposed: technical, economical, societal, ethical, and environmental.

Dr Tavivat Puntarigivat asked about how we might go about achieving more equality in access to water. Dr Thein replied that there were many actors working for water equality, including the United Nations, NGOs, CSOs and global water partnerships which went into regions and formed water user groups so that people could manage their own water. It was an uphill battle, however, because a growing number of companies selling water believed that water was a

commodity to be bought and sold for profit, whereas she believed water was a human right. Dr Alastair Gunn asked a question about teaching engineering ethics and how it could be incorporated into degree structures. Dr Thein said that she could only speak for the Asian Institute of Technology, and that they were integrating ethical issues into course materials, for example, their course on sustainable hydropower. Ideally they would like to develop a specialist unit on engineering ethics that could be offered as an elective. At the moment, however, they were offering guest lecturers and seminars to students in engineering and other courses on campus, such as gender studies, management, and environmental resources.

The remainder of the day was spent in working group meetings on subtopics to develop activity plans in parallel groups, interspersed with plenary sessions for general feedback.

#### **Working group reports**

The working group report on **Interregional philosophical dialogue and ecocentric world views, environmental rights and timeframes** was presented by the rapporteur, Prof Alastair Gunn. They raised some preliminary questions including: should the term be intercultural rather than interregional? This was because regions are simply geographical groupings, whereas dialogues between different cultures are both meaningful and urgently needed. Cultures shape values in a way that regions don't. However, the important thing is for people to *seek common ground through dialogue*. The group described the United Nations' ideology as universalistic. But genuine dialogue between people from different cultures, with different worldviews and different (or no) religions implies a pluralistic position with respect for different ethical positions as genuine alternatives.

The group then discussed universalism and multiculturalism, and why UNESCO needed to change its orientation if it is to achieve the goals implied in the topic. This topic is fundamentally about values. There are many views on the source of values, such as religion, authority, reason or intuition. The group took the view that the values that people actually hold and live by are best seen as a product of culture.

What are claimed in UN documents to be universal values are often a historical derivation from the Abrahamic/Christian tradition through the European Enlightenment and Modernism, which seem to have been adopted without argument. According to one group member, they have even formed the basis for documents such as the Indian Constitution, which has few roots in the philosophy that has been the basis of Indian society for thousands of years, for example.

A universalistic approach ignores people's attachment to their cultures. The group thought that ordinary people did not think in such terms. The UN could be said to have helped to pave the way for globalization by encouraging the view that ethics is concerned with universal values. Globalizing forces often dwarf and squeeze out local values.

Nation states are not necessarily representatives of any sets of values because many are not directly represented. Typically, even in participatory democracies, policies that states will advance in the UN are not the subject of dialogue.

The example of Indian philosophy was taken as a worldview. Indian philosophy was an example of a source of ecocentric values, whereas UN values focus on individual rights which are not a good basis for ecocentrism. Philosophical traditions are the basis of ways of life in Asia. The texts of the Vedas and Upanishads are the basis of Hinduism, Buddhism, Jainism, and Sikhism. Karma is an important principle which could be described as universal order based on law of cause of effect (Newton's Second Law). It reminds us that our environmental behaviour will return to haunt us. Another relevant principle is Dharma, which is duty and righteousness. Nature is sacred, for

instance, forests are a place for meditation at the end of life. Forests and rivers provide for us so we should protect them.

There is an emphasis on balance and harmony; recognizing that humans are not superior to the rest of nature. We have a right to utilize and enjoy nature and a duty to protect it as a whole. Specific beliefs, such as the value of forests as a place to meditate and develop to a higher stage, are found. Traditionally, practices such as seeking permission from the tree spirit to cut a tree show respect for nature. There should be minimal interference with nature (for example, Sikhs don't cut their hair). The viewpoint is not anthropocentric, as humans are just one of millions of species. We might call it ecocentric or cosmocentric or even 'cosmo-theo-andric', meaning World-God-Human. There is no distinction between 'personal' and other areas of life since the same values apply in all.

The group felt that there were, however, limitations to ancient traditions. They had developed in times when there were no problems of pollution, resource depletion, or biodiversity loss. There was limited scientific knowledge. For example, neither Jesus, the Buddha, nor Mohammed knew about the ozone layer. There was little need to worry about future generations having somewhere to live. However, followers try to interpret the traditions in a modern context.

To what extent can cultural values survive the assault of Western capitalist values? The group discussed the example of Vietnam, which had a Buddhist ecocentrist tradition. Under the influence of capitalism, overexploitation of resources, pollution and destruction of nature appeared to be more common, though it was a matter for research. Developed countries largely responsible for problems such as climate change, and we cannot tell poor people to conserve when they're hungry. Nonetheless, everyone has environmental responsibilities.

The group debated the extent to which 'ordinary people' still understand and appreciate the philosophical basis of their culture. It was the responsibility of philosophers to keep these values alive, by relating them to people's traditional lifestyles in the people's language.

We need to understand the roots of the problem, whether it be in capitalism, the Western tradition or other monotheist 'religions of the book' such as Judaism, Christianity, and Islam. While these are not necessarily inherently anthropocentric they have typically been interpreted in anthropocentric way as providing God-given dominance over the natural world. Religions with a notion of heaven in the afterlife may lead people to think that this life and the earth are not important.

The group examined whether the worldviews created by such religions had a concept of stewardship over the earth, rather than dominance. The Old Testament and the Koran were full of celebrations of the beauty and value of God's creation. In Judaism, Islam and pre-modern Christianity there was an emphasis on duty, responsibility and obedience to God, not on individual rights. These concepts of responsibility could be extended to the natural environment created by God.

Is dialogue between 'Asian' and 'Western' cultures possible, given fundamentally different worldviews? From a multicultural perspective, regardless of conceptual basis, is there an underlying universal ecocentric worldview after all? The group felt that many differences between worldviews were only in the detail. They suggested trees as an example. In the Shinto religion, trees are sacred. In Buddhism, trees are symbolic of key events in the life of the Buddha. In Maori culture, trees are seen as environmental kin. In Arabic cultures, trees have no spiritual value, as there are no forests.

On the other hand, world views were increasingly secular, emphasizing individual rights. Secular science may also arrive at an ecocentric world view, as evolution tells us we descended from single-celled organisms, and we are all part of a system that began 3-4 billion years ago. Secular

environmental ethics are based on an understanding of ecology, for example, Aldo Leopold's Land Ethic, and the concept of the human as a 'plain citizen' of the biotic community.

The report of the working group on **Energy equity and human security** was presented by their rapporteurs, Prof N. Manohar and Ms Nadja Tollemache. A number of issues were identified by the group.

Energy needs are related to human rights such as lack of basic needs, food, clothing and shelter. While there are specific human needs that must be met (and the group indicated a need to enumerate what we consider the most important), it does not mean that the same unsustainable ways of meeting those needs that have evolved in the 'developed' world should be introduced in countries that have not got those facilities. Rather it should be an opportunity to assist the invention and spreading of new, sustainable technologies to make the life of the people more healthy, comfortable and pleasant. New technologies should suit the current level of development and should help further augment development and the social and economical security of the people.

This will advance 'human security' from the point of view of individual and community health and wellbeing, and be of global benefit by showing that sustainable ways are possible to meet basic needs- whether it be solar cooking or water heating techniques, or appropriate building styles for natural cooling of building interiors in hot countries, or using solar or wind turbine techniques on high rise buildings to produce electricity and so on.

There are also basic equity issues related to sharing of fresh water supplies not only between communities within nation states, but between upstream and downstream countries, and related to the avoidance of pollution and other emissions affecting neighboring countries.

Countries need to develop their own parameters in their economic policy, perspectives and ethos, keeping the spirit of satisfaction of national needs for peaceful use of the energy technology within their reach. Strict legalistic approaches to development issues devoid of social security and ethics would fail the law and its system; since the law sustains itself on the value of ethics undercurrent in a system.

Human security is the ultimate goal surrounding the concept of energy equity debate, keeping the ethics of posterity in mind. Sustainable human security would balance the needs and restraints against misuse of energy technology. Regional cohesion is needed. Common concern and needs should be worked out. Regional unity and cooperation should be attained. Countries efforts to monopolize the energy sector with technology having transnational environmental impacts should be properly monitored with a sense of equity.

The group suggested common sharing of energy technology resources and facilities among the countries which are proximate to each other in the region. Bilateral exchanges of knowledge will maintain a sharing culture while permitting independent decisional decisions for countries.

The group also suggested identifying the inhibitors against achieving energy equity and human security in the region. There is a need to address and identify who has to be involved or consulted in the project and which are the probable interest groups. Each country's energy needs should be assessed, as well as their economic system and their ability to provide energy equity for human security and development planning. Energy technology demands should be assessed and bringing in technology from other countries should be a priority.

Ultimately, however, the group felt that the definition of energy equity should be analyzed in greater detail, and that

the nature of its relationship to human security was a matter for further debate.

The report of the working group on **Ethical frameworks for research agendas and policy** was presented by the rapporteur, Ms Tanuja Bhattacharjee. She reported that group discussion had focused on energy security and energy access for all. Rights to energy should be preserved by policy and action without violating greater human welfare. The energy options should come as a compatible solution to the region's culture and values. A lifecycle view of any technology is helpful to rank the options on the basis of their overall impact on life. Energy, an undeniable demand of growth today, should not be at the cost of life on earth. Moving towards a 'sustainable solution for energy' should be the ethics of research and policy in a word. Any option should be analyzed in a holistic approach rather than viewing it in a partial frame.

In light of the above, the working group intended to make a work plan for groundwork to compare the present scenario with an ideal one. This groundwork might include a review of existing policies in the Asia Pacific region; identification of selected future technologies to be analyzed in a lifecycle approach; a review of decentralized energy options to strengthen participation of all with a view to country specific 'policy mix' options.

The approach for research and policy agendas should be more towards regional aspects rather than national aspects. Energy regions consisting of several countries and communities may be able to come up with a complete self-reliant energy solution. Before switching to new solutions, effort should be made to refine the existing system. The total potential defined by the working group based on conservation and efficiency should be the first priority. The trend of energy growth in various sectors should be taken into consideration to stop the current exploitation of energy.

The environmental aspects of every technology needed to be carefully with a holistic view linking with all other parameters. Overall values and the rights of each should be honored and preserved to negate the imbalance of power. The motto of the group was to 'maximize the benefit for the maximum' to avoid possible conflict between the diversified stakeholders.

Key concepts for research and policy will be: energy conservation; energy efficiency; environmental impact (LCA); energy security; energy mix; regional cooperation; encouragement of alternative energy; and energy generation integrated into a development framework.

The working group report on **Community engagement with energy technologies** was presented by Ms Chema Raghavan and Dr Charn Mayot. The group requested that UNESCO urge the governments in the Asia Pacific to come out with clear and unambiguous energy policies that clearly spell out the environmental, socio-economic and cultural trade-offs involved in all energy technologies, both existing and proposed, to be introduced against a framework of ethical guiding principles.

The provisions of the Precautionary Principle should be invoked when introducing new energy technologies including nuclear and biofuel technologies vis-à-vis their impacts on human societies and biodiversity.

The participation of all stakeholders before implementation of all energy projects was essential, including for nuclear projects and those involving large-scale monoculture biofuel plantations. Planning for energy projects should reflect the emerging paradigm shift from principles of paternalism through those of informed consent to informed choice. One approach could be to create an interdisciplinary web-based database accessible to all, outlining both positive and negative environmental and societal impacts of energy technologies.

Governments also needed to ensure appropriate gender-sensitive aspects in policy formulations right from planning through implementation and impact assessment and to emphasize that women in a society are assets (UNEP) in environmental and energy management.

All energy projects/technologies need to take care to show respect for a) all forms of life; b) indigenous values; and c) cultural and religious beliefs and values.

The working group report on **Responsibilities in scientific research for environmental conservation and social innovation** was presented by Dr Summitra Charoijrochkul and Dr Macer. A key question for the group was 'who decides what is wise or not?' There are the issues of identifying the problem, deciding on the goal or product (such as designing a machine for greater efficiency). There is a need for better public understanding of science, and communication on the risks and benefits. There is also a need to discuss time frames. What are the goals over the short (<1 year), medium (<5 years) and long term? Should oversight of scientific responsibility be reactive or regulatory-based in scope? Other issues to discuss include the efficiency argument; 'gross national happiness'; and an ethical framework for goals.

There was a need to elaborate stakeholder responsibilities. Stakeholders might include scientists, policy makers (funding and regulation), the public (including consumers and non-consumers of different products), investors, companies, institutions, particular interest groups (e.g. those geographically close to a power plant, occupational groups, faith groups), and other living organisms. What are their moral obligations? The role of scientists is to provide more options and to transfer innovation to public. Corporate social responsibility (CSR) was one way of funding initiatives. There were some existing codes of ethics and legal requirements.

A state of the art review of innovation in new science and translational research was needed to find ways for greater diffusion of technology. Global networking and IT was one way to share information. There was also diversity and an analysis of points of different alternatives should be reviewed.

Innovation in social goals and targets, and their adoption, was important. Sublimation of concepts, paradigm shifts, value changes and quality of life (QOL) all need discussion.

The governance, accreditation, and application of ideas was an area that needed development. Alternatives should be provided. Should governance be voluntary or by laws and regulations? The system needed accountability and compliance with laws, and ethical ideals should be studied. Labeling of products could also encourage alternatives.

A review of existing policies would involve looking at the existing policies in each country, and how it was implemented. This can be aggregated for several countries to identify potential for improvement. Selected future technologies, for example, biofuels, nuclear and hydro power could be analyzed in a life cycle approach.

The group suggested a review of decentralized energy options to strengthen democratic participation. A search for energy generation potential at micro level (developing countries having several examples of renewable energy programs installed and generated by rural people integrated with microcredit programs) as a guiding route for encouragement in energy generation to groups, investors, apartments and cooperative firms.

Country-specific 'policy mix' options should be the goal. This will require the identification of country energy consumption patterns and growth trends; defining potential sectors to maximize energy conservation; searching for efficient management systems to reduce demand in a development-friendly manner. After this review outlines for regulatory and legislative structures could be made. For example, transport system energy reduction can be achieved

by comfortable mass transport systems discouraging personal fossil fuel vehicles. Additional advantages were lower pollution, reduced traffic congestion and traffic time, financial savings for individuals, and a safer and comfortable journey.

Cost benefit analysis of some prioritized sections identified as a consequence of the above studies would be made. Some prioritized cost benefit energy projects would be identified and proposed for analysis in a regional aspect.

### **Conclusions of the conference**

The conference papers will be published in a future UNESCO publication, and the presentation files are available on the RUSHSAP website. A proceedings volume will be produced in electronic copy also to fully share the discourse of the meeting. Dr Macer thanked all attendees for their participation and for their commitment to new working groups to take the project forward. The initial groups were broken up into the identified topics and the list is as below.

#### *1 Universalism and environmental values*

Environmental values in the Asia Pacific region are drawn from a diversity of rich philosophical and religious heritages. To what extent can common ground be found within a United Nations system that seeks to implement universal rights and dialogue among different values? Is it appropriate to seek universal or pluralist environmental values? Is there such a thing as an 'Asian environmental ethos' that might be the foundation for building and promoting a more sustainable economic growth?

#### *2 Ethical worldviews of nature*

Are there worldviews inherent in philosophical and religious traditions of the Asia Pacific that shape ethical relationships with the natural world? Are these anthropocentric, biocentric, ecocentric or cosmocentric worldviews? How do our worldviews allocate value and meaning to people, plants, animals and the biosphere? What are the relationships between such worldviews and actual decisions made by policymakers or the daily lives of the people they represent?

#### *3 Visions and hopes of the future*

What is the most appropriate timescale to consider problems of environmental ethics – years, decades, centuries, or generations? Is there a common vision of where we would like society to go beyond the Millennium Development Goals (MDGs)? How to balance economic growth, quality of life, and other future aspirations in a holistic vision?

#### *4 Representation and who decides*

What are the rights of nation states to decide on energy technologies for their people, when such decisions may pose an environmental or security risk to neighboring countries, to the region or to all countries? What are rights of provinces, communities and ethnic groups with regards to energy infrastructure in their geographic area?

#### *5 Community engagement*

How can we engage communities in the decision-making process? Are communities being given a chance to articulate their environmental values? Do communities have adequate access to information about energy technologies and their risks and benefits? What is the role of education in assisting communities to make decisions about their future? Are women and young people being engaged? What are the appropriate stages of an energy project for community consultation? Is there a trade-off between adequate consultation time and expedient implementation of a project? How can we develop the 'not in my backyard' view when it comes to large-scale energy infrastructure? How can community engagement reflect the emerging paradigm shift

from principles of paternalism through those of informed consent to informed choice?

#### *6 Stakeholder responsibilities*

What are stakeholders' responsibilities towards the environment and to future generations? Is a rights' based framework really appropriate for environmental ethics, when an emphasis on responsibilities may be more important? When regional or global consensus cannot be reached, do countries have a responsibility to do what is 'ethically correct', even if no-one else will? The group will articulate the responsibilities of scientists, policy makers (funding and regulation), the public (including consumers and non-consumers of different products), investors, companies, institutions, particular interest groups (e.g. geographically close to a power plant, occupational groups, faith groups), and other living organisms, as examples in a cross-cultural perspective.

#### *7 Energy equity and human security*

While energy generation supports economic growth and a higher standard of living, it also has financial and environmental costs. How do we reconcile the disproportionate consumption of energy by developed countries with increasing demand for energy in developing countries, and particularly across the Asia Pacific region? Is it appropriate for rich countries to encourage less developed countries to limit their energy consumption and shun luxury lifestyles? Is there a way for developing countries to access the technology and expertise that permits more efficient energy generation in the developed world? At the social level, should governments provide concessions to make energy more affordable and accessible for lower-income people? Do government subsidies for energy run the risk of subsidizing inefficient use of energy?

#### *8 Cost-benefit analysis and economic constructions*

How can environmental and cultural values best be incorporated into cost-benefit analyses for energy projects? What are the real costs of 'cheap energy'? What are the costs of any form of energy if we consider the opportunity costs of infrastructure construction or land surface area, and total energy costs over the lifecycle of a product, including waste, disposal and security?

#### *9 Adoption & development of energy technologies (state of the art review)*

This review of energy alternatives for local and national scale projects will focus on the ethical implications inherent in different research options for energy production and delivery. It will include development of innovation in new science and translational research, diffusion of technology, and energy diversity. It will also consider global networking and information technology. It will analyze the points of different alternatives.

#### *10 Ethical frameworks for research agendas and policy*

What criteria do policymakers use in deciding to adopt energy technologies, and how are ethical considerations taken into account? How should policy makers identify and employ the precautionary principle? How can they ensure appropriate gender-sensitive aspects in policy formulation from planning through implementation and impact assessment, emphasizing that women in a society are assets in environmental and energy management?

This group will examine the different understanding of ethical frameworks by looking at critical ethical issues including: codes of ethics for researchers, societal values, rights of all participants (stakeholders), rights of indigenous peoples, religious values, legal issues and take account of the conclusions of the specialized working groups above. After a

review of all policies it will analyze the ethical frameworks inherent in the documents to draw up a model ethical framework.

#### *11 Educational frameworks for environmental ethics*

This working group will link to ongoing efforts to develop and test environmental ethics education materials and strategies with pilot trials. The topics link to the coverage of all the above working groups.

#### *12 Nuclear dialogues*

This group will look at the particular sensitivities of the nuclear energy debates from an ethical perspective.

#### *13 Energy flow, environment, and ethical implications of meat production*

Meat, as a food, is a form of energy for humans, but in order to produce enough meat to satisfy global demand huge reserves of energy are required in the form of feed, fertilizers, pharmaceutical production, transport and refrigeration. This group will examine the consumption of energy, particularly fossil fuels, in the meat production industry, and ethical implications for humans and the environment.

#### *14 Water ethics and water resource management*

The ethical issues associated with water resource management, including its uses in energy and other domains are a priority area in many countries. There are also issues over equity of access, ways to conserve water, and privatization of what many consider to be a common resource.

#### **Follow-up**

Invitations to join the working groups are being forwarded to other interested parties across the region unable to attend the conference. UNESCO Bangkok continues to welcome collaboration on this project. Individuals, institutions and others interested in joining this project should write to Darryl Macer, [d.macer@unesco.org](mailto:d.macer@unesco.org) for more information.

**There is a yahoo group, [unesco\\_eet@yahoogroups.com](mailto:unesco_eet@yahoogroups.com)**

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## **Invitation to Join Working Groups on *Ethics of Energy Technologies in Asia and the Pacific***

UNESCO Bangkok, on behalf of project partners (including the Ministry for Science and technology and the Ministry of Energy, of Thailand), invites interested individuals and organizations to participate in working groups for the Ethics of Energy Technologies in Asia and the Pacific project.

Energy is intimately related to our environment and use of its resources, as well as to almost every sphere of economic activity. As policy makers around the world grapple with climate change, choices about energy generation and consumption will have a significant impact on levels of greenhouse gas emissions and on environmental health, as well as people's ability to access energy to heat and cool their homes, travel, work and enjoy leisure time.

This project is not intended to duplicate the numerous meetings being held on energy and environment, but to open up ethical and value questions that have often been neglected. It aims to depoliticize discussions on environmental ethics to produce substantive cross-cultural and multidisciplinary outputs that will be relevant for long-term policy making.

The Asia Pacific region is experiencing the fastest annual growth in energy demand in the world and meeting this demand over the next two decades will be a tremendous challenge. As oil prices continue to climb, countries face

increasing pressure to articulate their energy policies and achieve energy security. The ethics of all energy choices, including fossil fuels, biofuels, nuclear energy, fuel cells, renewables, etc., need be considered holistically. How will energy production affect the environment and other living organisms? How will rising energy prices affect the poor? What are our ethical obligations for consultation with local people? What are our ethical obligations to future generations and what vision for the future do we hold? Do environmental values held in Asian philosophical and religious traditions affect the sustainability of our relationships with our environment?

The project was launched in September 2007 with a three day conference at the Imperial Tara Hotel, Bangkok. Hosted by UNESCO Bangkok in collaboration with the Ministry of Science and Technology and the Ministry of Energy, Thailand, it was attended by a hundred people from about 20 countries, from many sectors and backgrounds, with a range of views on these issues.

#### **About the working groups**

Following on from the conference fourteen provisional working groups have been formed on the following topics (more details below):

- Universalism and environmental values
- Ethical worldviews of nature
- Visions and hopes of the future
- Representation and who decides
- Community engagement
- Stakeholder responsibilities
- Energy equity and human security
- Cost-benefit analysis and economic constructions
- Adoption & development of energy technologies (state of the art review)
- Ethical frameworks for research agendas and policy
- Educational frameworks for environmental ethics
- Nuclear dialogues
- Energy flow, environment, and ethical implications of meat production
- Water ethics and water resource management

The aim of the working groups is to develop dialogue around these particular issues with a focus on environmental ethics and human security. Each group will produce a report that can be used by policy makers, scientists and researchers to consider the ethical dimensions of energy policy.

#### **Who are we looking for?**

We are looking for people interested in participating in the working groups with a diverse range of experience in energy and environmental ethics, from fields including but not limited to engineering, government, institutional advisory bodies, civil society organizations, energy-related industries, education, and academia. The people participate as individuals in the highest standards of intellectual vigor and integrity, and the reports will be subject to peer review, and will not represent the views of partner organizations.

We are also looking for organizations with an interest in this project to help support the process of deliberation, consultations and dialogue.

Working group members are not paid for their time although there may be funds available through UNESCO Bangkok and project partners for physical and virtual meetings and other resources.

#### **Want to know more?**

For further information on the project please contact Dr. Darryl Macer, Regional Unit in Social and Human Sciences in Asia and the Pacific (RUSHSAP) at UNESCO Bangkok on +66(0) 2391 0577, extension 147 or email [d.macer@unesco.org](mailto:d.macer@unesco.org).

**There is a yahoo group, [unesco\\_eet@yahoogroups.com](mailto:unesco_eet@yahoogroups.com)**

# Evolutionary Thinking, Global Warming, and Environmental Ethics

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## Introduction

Global warming will prove to be the most significant phenomenon which will inform the planet's evolution in the forthcoming centuries. Not since the mass extinctions at the end of the Cretaceous period has the earth witnessed such a threat to biodiversity (Laszlo 1994:xiii). Ervin Laszlo calls the present period a grave threat to the biosphere by a terrestrial species. While the critical output of scientific analyses on global warming has only recently been acknowledged by social power brokers, there has been no "sustainable framework for the management of global warming" (Held 2005:96). This is concerning due to the natural developments which are currently taking place such as widespread droughts in Australia, recent heat waves in Northern Europe, melting ice caps in the North and South Poles, and diminishing glaciers in Africa, North India, and Northern Europe. The sheer volume of scientific studies done on climate change makes it untenable to suggest that the earth is not undergoing global warming. The information confirms otherwise. The question which now faces humanity is whether the kind of intelligence that it had evolved for is sufficient to guide it into the future (Laszlo 1994:97). This is both an ethical and a necessary question due to humanity's rapacious treatment of the planet. While human cognition has been an evolutionary hallmark, its continuous failure to live synergistically with ecology is perhaps due to the biological default of *Homo sapiens* (Ehrlich 2000). Whether humans lack the basic behavioural skills to exist in a non-parasitic manner with nature is a point in question. The social collapses of the Easter Island people, the Maya, and the Mohanjo Daro in the Indus valley point to widespread ecological degradation. Moreover, millennia of fire burning of the Australian habitat and the probable extinction of ancient mega fauna by Aboriginal Australians effaced the landscape. For the biologist Paul Ehrlich, human beings seemingly have a penchant for degrading the environment which otherwise opposes the plethora of ecological worldviews. Anthropogenic climate change is a continuation of *Homo sapiens'* ill legacy. This paper will outline a need for evolutionary thinking in response to global warming and its ethical issues. I will argue that global warming is an increasing ethical issue which demands a new way of understanding earth's ecology and humanity's place in its scheme.

## Changing Paradigms: Evolutionary Thinking

For Bateson (2000, 2002), Laszlo (1996), and Capra (2002), human beings have been informed by negative cognitive maps (mental representations) in relation to the environment. Bateson refers to negative cognitive maps as "internal incoherence" (2000:173), a process which obviates from internal critique and "external reality" (2000:208). The process of critical awareness is a creative exercise or an evolutionary way of learning as it foregrounds co-operation and networking (Montuori 1993).

Here Maslow and Honingmann's analysis of societies is instructive. Both authors categorise societies into dominator and glynic societies. Dominator societies have low synergy

between individuals, exploit nature, encourage competition, and are not mutually reinforcing. The oeuvre of dominator societies is cognate with Jung's description of the "Odin Archetype" – the image of cruelty, conquest (Laszlo et al 1996:52). Moreover, learning patterns in dominator societies sustain practices for the generation of conflict, thereby mitigating conflict resolution strategies (Montuori 1993). In this way, learning patterns amplify negative feedback loops thereby repeating non-corrective mechanisms (Montuori 1993). Glynic societies have high synergy between individuals, view nature as organismic, and have mutually reinforcing behaviours (Maslow and Honingmann 1970:324). This categorical schema corresponds with Gert Hofstede's high/low masculine cultures (Hofstede 2001). High masculine cultures such as the United States, Japan, China, United Kingdom, Australia, and Canada are characterized by material and value achievement, control, and social power (Dysart-Gale 2006). Low masculine cultures found in Scandinavian countries are typified by co-operation, less emphasis on gender roles, and importance of inter-personal relationships (Dysart-Gale 2006).

Laszlo et al's (1996) analysis of cognitive maps further locate internal incoherence to the mitigation of internal moral structures. Their tri-partite model categorises three kinds of moral maps; pre-conventional morality, conventional morality, and post-conventional morality. The pre-conventional moral stage is characterized by a self serving attitude; the individual is ruled by the dictum, "If it feels good, do it." In the conventional moral stage individuals comply with group ethical standards and recognize the moral authority of law and dogma. The top end of this stage is typified by a "legalistic orientation" where individuals may challenge group authority via engaging in "citizenly activities" (Laszlo et al 1996:46). At the post-conventional moral stage individuals are deeply morally conscious, encourage universalism, and advocate critical learning skills which are often at odds with other social members (Laszlo 1996:47). The degree of divergence between the three cognitive moral maps reflects the inability of individuals to work in partnership to solve global problems. For this reason Laszlo et al advocate for the development of new societal and individual cognitive maps for tackling pan-human issues such as global warming (1996:105). A fundamental shift is needed based on learning from nature, and not dominating nature (Benyus 1997:2).

In relation to global warming Laszlo (1994) Laszlo et al (1996), and Capra (2002) support the emergence of ecoliteracy and sustainability. Capra notes that the changing perceptions of sustainability are a significant ethical development (2002:229). Ecoliteracy entails:

1. Understanding principles of nature's organisational principles. In systems theory ecosystems are viewed as being autopoietic (self creating), inter-related, and with increasing complexity. Eco-systems are based on co-operation, co-evolution, and networking. As Capra (2002:232) points out, nascent life on earth originated by networking not combating.

2. Ecosystems have evolved to sustain life and possess multiple feedback loops in a dynamic balance.

The process of ecoliteracy would entail the application of nature's organisational principles for the development of new societal and individual cognitive maps, and applying these in the creation of new, sustainable technologies and socio-economic systems. Thus, human purposes would work inter-dependently with natural systems. Laszlo et al suggest three areas in which ecoliteracy can be developed which comprise social and ethical dimensions.

## 1. Male/Female Relationships

Problems such as global warming will necessitate the partnership of men and women in all social domains. This will

create a positive feedback loop in foregrounding increasing co-operation and networking.

## 2. Wholeness versus Fragmentation

Emerging cognitive maps will view nature as an organism which opposes out dated paradigms of nature. For example, ozone depletion will be viewed as a negative feedback loop which is contributing to greenhouse gases caught in the stratosphere which results in the outer stratosphere cooling thereby increasing the rate of ozone depletion (Pittock and Wratt 2001).

## 3. Competition versus Co-operation

Nature's organisational principles privilege co-operation, symbiosis and networking. Anthropogenic global warming has been symptomatic of dominator societies and their pathologic worldview. Evolutionary thinking will emulate nature's organisational principles in all social areas.

This leads to the issue of emergence. Emergence has taken place at critical points of natural instability arising from environmental fluctuations and "amplified by feedback loops" (Capra 2002:117). Emergence results in the generation of novelty that is consistently different from the phenomena which it had originated (Capra 2002:117). Whitehead insisted that novelty was "nature's creative advance," which is central to all biological and social systems (Capra 2002:117).

An example of emergence of evolutionary thinking and ethics was the 2004 tsunami which had devastated South-East Asia, East India, and Sri Lanka. The inordinate loss of human life and mass destruction in the wake of the tsunami deeply affected millions of people throughout the world. Information about the tsunami quickly circulated around the world via print and television media and the internet to such a point that it became a world event. The vast amount of information which circulated on the event eventually became chaotic with disinformation emerging from news reports. Conflicting reports as to how many people died or were missing became widespread. From the chaos of the post-tsunami emerged novel ways of existential retrieval. Many tsunami survivors began posting photographs of missing loved ones on billboards. People began the process of rebuilding. World citizens mustered their economic resources and donated tens of millions of dollars in a short period of time. Medical resources and experts from various countries were directed to areas hit by the tsunami, preventing the outbreak of disease. The unprecedented outpouring of good will revealed how current technologies based on nature's organizational principles could be utilized to solving or mitigating global problems.

## Evolutionary Changes

The intense consciousness of the human species is amplified by human biodiversity in which different individuals and social collectives possess different ways of problem solving (Leavitt 2004:69; Capra 1996). Leavitt goes on to note that human biodiversity may also mean that different peoples have a particular affinity to a specific geographical region. If this is the case, then, each social collective functions in co-evolving with natural environments and through their unique "structural coupling" (i.e. "through recurrent interactions" (Maturana and Varela 1987; Capra 1996: 260), emerge greater complexity and differentiation which impinges on the human inner world – consciousness, language, culture, and new kinds of problem solving (Capra 1996:261).

The current rate of social and technological change is so rapid that it is constitutive of a global transformation (Thompson 1996:244). Teilhard de Chardin (1961) saw a future pan-human transformation in terms of a global ideational network ("*noosphere*"). For Teilhard de Chardin, the emergence of such a global network was a means of understanding humanity's place in the universe. The *noosphere* was viewed as a harbinger of a new kind of mind - collective, non-differentiated and co-evolving, an emergent

collective consciousness. Such a global mind had vast potential in problem solving and world bringing capabilities. Similarly, Thompson posits that the individual consciousness is presently co-evolving within a global complex (i.e. global electronic networks) which enables the individual consciousness to become more dynamically effective for instigating social change than at any other time in human history (1996:245-246). Thompson asks us to deconstruct the geometrical social systems with their systemic hierarchies, and supplant them with rhizomic systems of networking as can now be witnessed in the various kinds of global scapes (Appadurai 1996), which foster continuing complexity and adaptational novelty. Indeed, the continuing multi-linear flow of ethical ideals across the globe (ethicscapes), make it possible to explore different kinds of approaches for challenging climate change.

From this perspective, ethics can contribute to a new global vision. However, I do not agree with Thompson who states that the "immune system of consciousness" has been dominated by technology, thus compelling a retrieval of the "anarchic vision of Lao Tsu" (1996:260, 306-307). Rather, technology mediates global scapes from which emerge disparate and novel systems of thought, morals, and ethics (Sharma 2003:332). The de-evolution model postulated by Thompson does not account for international responses to natural catastrophes such as the 2004 South-East Asian tsunami. Alternately, Thompson's vision of a world alleviated from the dictates of geometrical thinking is both relevant and achievable. For over two thousand years human cognitive maps in many societies have foregrounded verticality and horizontality in the form of hierarchies. The medieval European worldview depicted in The Great Chain of Being was juxtaposed by Chinese and Muslim cosmologies which viewed their societies, as did the ancient Greeks, as intellectual and moral centres of the world. Even current evolutionary theories cannot break themselves from this thinking. Evolution is still depicted as either a horizontal or vertical line, beginning from the Big Bang some 15 billion years ago and culminating in self conscious creatures - human beings. Geometricity is so entrenched in human thinking patterns that most of us cannot comprehend a world without it. Perhaps, here the integrative system approach is a more appropriate one. As Boulding (1995:49) claims: "The creation of evolutionary potential, indeed, in integrative structures is a very mysterious phenomenon," which is difficult to perceive. In systems of this genre, random or anthropogenic events such as global warming, biodiversity loss, environmental pollution, and other bifurcations threaten a spectacular social collapse. Out of this indeterminacy may emerge the "flexibility that is key to survival in an uncertain world" (Boulding 1995:50).

## Conclusion

The need for evolutionary thinking is vital in order to challenge the problems of future climate change. In the words of the socio-biologist E. O. Wilson an enduring environmental ethic will seek to preserve the human and non-human species (Preble and Safina 2002:179). The resolution of our present dilemma lies in the realisation that self interest and altruism lie at opposite ends of "our moral compass" (Preble and Safina 2002:179). Undoubtedly, human beings possess the power to exert some level of ethical control over their environments. Certainly, developed nations have the technological, infrastructural, and intellectual resources to foster ethical standards "for building receptivity" into human societies (Leopold 1966:269). There remains much scope for advancing a new system of ethics which works conterminously with new understandings of biological systems. To this end Donnelley (2002:170), declares: "In particular, our understanding of the "integrity, stability, and beauty" of the land needs ongoing reinterpretation in light of what we further learn about the dynamism of evolutionary,



ecological, ethological nature. Our current ethical valuations demand novelty in terms of creative thinking. Our humanity is grounded in the organic and animated by the "great evolutionary drama of ecological life" (Donnelley 2002:172). Like the Hindu myth of Indra's web, human biology and consciousness are inter-dependent with other physical and biological systems. The stark predictions of global warming and its threat to biodiversity will require a supreme moral shift in human consciousness.

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## The Tyranny of Rights

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*While I take responsibility for this text, I am certainly not its sole author. It has benefited from the critiques, comments and wisdom of a large number of people. Like open source software, this is not a finished text. It is simply the version of 3 September, 2007, as indicated above. You are invited to contribute to subsequent versions.*

Before reading this paper, please consider how many times you have read or heard the word 'rights' when its elimination, or replacement by more explicit terms, would have strengthened the message.

### Introduction

The argument of this paper is that the concept of 'rights' is embedded in and arises from the particular culture of individualism, materialism and rationalism that arose out of the European Enlightenment. In recent years, the language of rights has gained increasing usage, if not currency, both within Western society and more broadly, as code that identifies an idea, principle, or even legal condition as a proxy for actualization of what is designated as a right. Thus the 'right to food' is stated as a moral claim but it does nothing in itself to ensure that the person or persons actually get food.

Given that 'rights,' like property, are socially constructed, it is essential to recognize that any discussion of rights and property must acknowledge its specific context. In this paper I am not pretending to present a universal critique but only a discussion of what I consider the relevant history and social context of the current all-too-common advocacy of (human) rights as the solution to social and individual injustice. To be sure, there are histories of struggle not simply for individual rights and justice, but for social and collective 'rights' and justice such as the 1960s civil rights movement in the USA which was always called 'the civil rights movement,' not 'the human rights movement.' It was launched when a tired Rosa Parks decided to sit down in the front of the bus in Birmingham, Alabama, not when some lawyer pleaded a case for the right of blacks to sit at the front of the bus before a white court.

While the civil rights movement did achieve a vast increase in social justice in the USA, it has to be noted that some of the individuals and organizations that were major players in that struggle have since become distressingly right-wing politically. For example, CORE, the Congress on Racial Equality, which was one of the leading civil rights organizations, suffered a right-wing takeover by a black man and re-manufactured Martin Luther King into a drug salesman and purveyor of genetically engineered food! One has to wonder if a lack of discernment between individual and social rights allowed for this unfortunate shift. A contrasting situation might be found in Latin America where 'social rights' have a long history, particularly in the Christian churches, and are assumed as an aspect of the fabric of social life. While a comparative study of rights and cultures would be a worthy project, this is not my objective here.

The language of rights has, in recent years, come to assume a place of honour and utility in the discourse of NGOs and CSOs, as well as liberal and conservative politics. Whether it be in reference to human rights or property rights,

the 'right to life' or 'abortion rights,' 'farmers' rights' or 'intellectual property rights,' the word itself seems to have become a sort of essential – if powerless – incantation or invocation even as it functions to reinforce (or enforce) individualist and libertarian<sup>1</sup> claims against society and state. Its widespread use also undermines the intents and aspirations of those seeking to liberate themselves from capitalist hegemony.

Beauchamp & Childress, in their classic *Principles of Biomedical Ethics*, comment that, "It may seem odd that we have not employed the language of rights, especially in light of the recent explosion of rights language in contexts from applied ethics to foreign policy. Many moral controversies in biomedicine and public policy involve debates about rights, such as the right to die, a right to reproduce, a right of privacy, a right to life. . . . These moral, political and legal debates sometimes appear to presuppose that no arguments or reasons can be persuasive unless they can be stated in the language of rights. Rights language is congenial to the liberal individualism pervasive in our society. At least since Thomas Hobbes, liberal individualists have employed the language of rights to buttress moral, social and political arguments and the Anglo-American legal tradition has incorporated this language." (Third Edition, Oxford, 1989, p.55).

It is time to consider whether the language of rights actually serves the intents of social justice or has become just an illusion of intent while business-as-usual carries on unimpeded.

### Rights: Human and Property

In European and North American culture and society there has long been a commingling and confusion of *human* and *property* rights, attributable, arguably, to the claim that property rights *are* human rights and the claim that property is essential to or an expression of human identity and dignity – or at least the identity and dignity of some humans. Responsibility for both the claims and the confusion is generally attributed to the English philosopher John Locke (1632-1704). Locke wrote that, "Though the Earth, and all inferior Creatures be common to all Men, yet every Man has property in his own Person. This no Body has any Right to but himself. The *Labour* of his Body and the *Work* of his Hands . . . are properly his. Whatsoever then he removes out of the State of Nature hath provided, and left it in, he hath mixed his *Labour* with, and joined it to something that is his own, and thereby makes it his *Property*."<sup>2</sup>

Locke added that there must be "enough, and as good left in common for others" and that no person take from the commons more than he can use.<sup>3</sup> Following Locke, property rights came to be regarded by the Enlightenment and consequent capitalist systems as an expression of a person's being, thus laying the foundation of the contemporary confusion between and conflation of human and property rights.<sup>4</sup>

The idea of human rights has been recognized by both secular and religious constituencies. Human rights are secularly recognized as rights inherent in the being of a person, i.e., *natural* or *ontological*. This formulation,

however, begs the question of authority: who or what defines, and gives authority to, 'natural'? In various religious traditions, and certainly in the Christian faith, *human rights* are theologically based (as in "created in the image of God") and therefore demanding of respect, at least by believers. In one sense they are also *natural*, that is, there from the beginning, but with an explicitly recognized authority as their source.

In an era of corporate impersonation – corporations pretending on both legal and moral grounds to be persons and claiming all the rights of persons for purposes of enhancing their dominance and profits – the conflation of *human* and *property* rights must be contested.<sup>5</sup> The importance of disentangling human and property rights becomes unavoidably obvious when the biological properties of persons are claimed as private property by others. I refer here to the patenting of isolated genetic sequences and body parts by, literally, outsiders, usually corporate.<sup>6</sup>

### Property Rights and the Right of Property

A property right might be described as *the right of property* to be owned, and owned exclusively, that is, with the inherent right, as property, to exclude any or all persons from access to or enjoyment of it(self). Historically, of course, this applied to land and moveable material property (jewels, food commodities)<sup>7</sup>, but more recently it has come to be applied to immaterial locationless property – 'intellectual' property.

In the Western legal tradition, *the rights to property* can be held by both natural and artificial persons (corporations). Going further, rights themselves become property, that is, tradable commodities (as do patents and copyrights) with some contemporary corporations' assets consisting solely of a patent portfolio. Rights as property then creates a category of owners referred to, particularly in regard to copyright, as 'rights holders.' In contemporary discussion and legislation concerning copyright, this new category of rights-holders, in the form of the corporate media-entertainment industry, is the power broker/property-owner between *creators*, that is, authors, musicians and artists, and the public.

(There is a Western legal position that holds property to be a 'bundle of rights,' one of these rights may or may not be that of exclusion from the use or enjoyment of the property. Urban real estate ownership, for example, carries with it a variety of encumbrances and responsibilities.)

Human rights and property rights become even more scrambled when human rights are interpreted as exclusionary rights. That is, they are treated as the right of a person to exclude (and be protected from) violation and exploitation.<sup>8</sup> A collective manifestation of this exclusionary right is the gated community, wherein individuals collectively, as well as individually in their houses, assert their right to exclude the public from their property/persons. This conflation of human and property right finds its extreme expression in the US Bill of Rights which says that no person "shall be . . . deprived of life, liberty or property, without due process of law. . . ." The converse, of course, is the recurring practice of slavery wherein the person quite literally becomes property. Unfortunately, the distance between overt slavery and the wage slaves – cheap labour – that produce and service an

1 Libertarian - a political philosophy that places supreme value on individual "freedom," ahead of any social or collective identity or responsibility or any claims by the state.

2 John Locke, "Second Treatise of Civil Government," quoted by Carys Craig, "Locke, Labour and Limiting the Author's Right: A Warning against a Lockean Approach to Copyright Law," (2002) 28 *Queen's Law Journal*, available at <http://www.forumonpublicdomain.ca/node/94>

3 Ibid

4 The concept/ideology of U.S. President G.W. Bush's "Ownership Society" is attributed to John Locke by George Ross in an article about the Bush regime's plans for privatizing Social Security. See "The Neocons' Ownership Society," *Le Monde Diplomatique*, (English edition) June 2005

5 For an incisive history of the social construction of the corporation, see David Noble, *Beyond the Promised Land, Between the Lines*, Toronto, 2005, chapter six.

6 John Moore's spleen is the classic example. See Beth Burrows, "Patents, Ethics and Spin" in *Redesigning Life*, Brian Tokar, ed., McGill-Queens' University Press, 2001, pp.245-7).

7 For a history of commodity creation and development in North America, see William Cronon, *Nature's Metropolis*, Norton, 1991.

8 The campaign against violence again women has been a kind of positivist exclusion, both individual and collective. But again, it has not been a campaign for the *right* to be free of the threat and exercise of domination and violence, but for a change in the social attitude towards women.

increasing proportion of the property of the Western wealthy and comparably-wealthy is not as great as may first appear.

### Rights as License

In the secular Enlightenment tradition, a *right*, whether human or property, serves as a license, an allowance, a privilege – or an exception granted by a secular power. The secular, or natural, right itself arose out of the religious doctrine of the ‘divine right of kings,’ but when the religious authority claimed by or attributed to the king and the church was secularized by the Enlightenment, the privilege of granting rights passed from divinely-empowered king and church to the state. The secular state then became the *religious* source and guarantor of both human and property rights, even though, theoretically, the state was simply recognizing *natural* rights.

There may appear to be a contradiction between natural rights and rights granted, if not created, by the state, but this apparent contradiction can be accommodated by recognizing the distance between philosophical positions and functional behaviour. Natural or ontological rights may well be formally recognized by the society and even the state, while functionally they are treated as a *gift* of the state, a gift that may be constrained or recalled (a copyright is granted for a period of ‘life plus 50 years,’ a driver’s license may be withdrawn for drunk driving, or a citizen is defined by the state as a ‘terrorist’ and held as a non-person without rights of any sort).

In its legal guise of person and citizen, the corporation has, since the latter years of the 19<sup>th</sup> century, increasingly asserted its sovereign, if not natural, rights in libertarian fashion against and over the state.<sup>9</sup> Assuming the prerogatives of royalty, the corporation utilizes the state as its proxy, rewarding well the agents of the state that execute the corporate will. Rights, both human and property, are assumed by the corporate *persona* and given, by the corporation, priority over the rights of *natural persons*. The rights of natural persons, such as you and me, become highly contingent exemptions or privileges recognized by the corporation and granted by the state. (This has become explicit and legal in the context of the various trade and investment agreements executed under the WTO and bilaterally by the USA and other industrial powers.)

Historically, of course, the corporation appeared centuries earlier as crown appointed trading companies, such as the East India Company (chartered in 1600) or the Hudson’s Bay Company, chartered in 1670 to trade in furs in what is today northern and western Canada. These corporations, and others, were assigned the powers of the crown in the territories in which they traded, anywhere in the world (early globalization), including the power to raise their own armies and civil administration. However, they were still expected to serve the interests of the crown (and empire) and did not have license to act in their own interests against those of their sponsor. They were not granted absolute sovereignty.

### A contemporary origin of the language of rights

In the early 1970s, I noticed the increasing use of the language of human rights by Latin American leftists and the virtual disappearance of progressive political positions and programs. A Brazilian friend offered the explanation that this was the only language of resistance that socialists could use that would not immediately make them a target of the military dictatorships then in vogue in Latin America.

More recently, it has been pointed out to me that while it was necessary at that time to avoid calling attention to one’s political position, there is also a long tradition in Latin America of advocacy for social as opposed to individual human rights

and that the rights claimed were not property rights, but social rights against the claims of property, i.e., the claims of the wealthy elite and the *latifundistas*.

Employment of the language of rights, then, may have been both natural and expedient and wise, but I suggest that its strategic use, shorn of its political context and connotations, has led to its unfortunate transformation into a surrogate language for ‘the real thing.’ That is, the *right to food* becomes a political demand without a program; the call for recognition of *the right to food* replaces the ability and facility of people to feed themselves as a matter of social and ecological justice, just as the call for recognition of farmers’ *right to save seeds* replaces the practice of actually doing so, whether recognized as a right or not. It then appears to be assumed that these practices cannot be carried on without their acceptance as ‘rights’ by the state.

In addressing the demands and claims for recognition and implementation of human rights to the state, however, the authority – if not legitimacy – of the state is implicitly recognized and affirmed. It must also be acknowledged that the state may formally recognize the rights demanded without relinquishing any of its power and without actually ensuring that everyone gets enough to eat or that seeds are saved.

Fortunately, a lot of people are not waiting for the state. They are organizing local food systems to meet the needs of their communities. They are also organizing seed saving and doing it, and while everyone is not in a position to save seeds or supply food, it is a public responsibility to create a political climate in which seed saving and food sovereignty are recognized as public goods and encouraged by the state.

The statement of a meeting of indigenous people from autonomous communities in Mexico in 2003 recognizes this: “The government resolved not to recognize our fundamental rights in the Constitution, but to intensify its plundering, destruction and robbery policies towards our lands, territories and natural resources . . . . Confronted with the aforementioned, we have decided to stop demanding further recognition for the exercises of our own rights, so now we demand respect for our lands, territories and autonomy. We have resolved that if this State has lost its legitimacy, by its legal practices, we must exercise our autonomy de facto, thus addressing our grave situation and looking forward to a better future for our children.”<sup>10</sup>

The United Nations’ Universal Declaration of Human Rights is often cited and appealed to, but the recognition and enforcement of the enumerated rights has always been dependent on the voluntary recognition of them and compliance as well as enforcement of them by sovereign states. As a result, they have been honoured far more in the breach than in the observance.

A good example:

*United Nations Economic and Social Council  
Economic, Social and Cultural Rights: The right to food  
B. Justiciability and enforcement mechanisms*

50. As noted above, when the enforcement mechanism is a court of law, then the right is justiciable. At the regional and international levels, so far a victim of a violation still cannot

10 Statement of the Pacific-Center Region of the Congreso Nacional Indígena meeting in Tlanixco, state of Mexico, January 25-26 2003. A similar statement is found in the Declaration of Tuapurie by the Congreso Nacional Indígena, Central-Pacific Region, 27 November 2005: “The betrayal of all the Mexican Government Institutions in 2001. . . . compelled us . . . to declare the San Andres Agreements as our people’s Constitution in indigenous matters, calling all the Indian people of Mexico to no longer seek recognition from the state and strengthen, by action, our autonomy, our own government and our culture. . . . With the intention of strengthening the autonomy of our communities we appeal to strengthen our own government, our assemblies and our traditional and rural authorities under the principle of command by/through obeying – *el principio de mandar obedeciendo*.”

9 See David Noble, *Beyond the Promised Land*.

bring a case of violation of the right to food before an international tribunal and therefore the right is not properly justiciable. . . E/CN.4/2002/58, 10 January 2002, p.16

The ephemeral character of *human rights* is today nowhere more evident than in the USA, where there is a radical (and cynical) disconnect between the stated values of the state and its actual practices.

### Rights Discourse or Political Program

What we have inherited from the pragmatic choice (or default) to utilize the discourse and claims of rights is the domination of a rights discourse over more explicit political and social discourse and program. From being a matter of means to achieve desired social ends, rights have themselves become the ends, leading, in extreme cases, to profoundly muddled, if not nonsensical, 'rights' demands.

For example, the Council for Responsible Genetics in the US has developed a Genetic Bill of Rights.<sup>11</sup> The first of these rights is that "All people have the right to preservation of the earth's biological and genetic diversity." What this demand implies is the Western capitalist notion that the earth and its diversity have no 'rights' of their own, but are simply there as 'resources' to serve human needs and meet human demands.

Number ten is, "All people have the right to have been conceived, gestated, and born without genetic manipulation." There is, however, no suggestion even of a political program to enact the first of these 'rights' in the state which is the world's major violator of them and the last suggests that a person who does not yet exist can demand that certain moral and technical conditions be put in place by the government prior to its eventual coming into being.

The authors of this *Genetic Bill of Rights* claim that "the adoption of a 'right' establishes a burden of proof. Those who wish to violate the right must demonstrate a compelling *government interest*." However, it should be obvious, as the Indigenous groups from Mexico point out, that there is little point in making rights demands on the state when it is the state that is the violator of recognized rights, either directly or by proxy. It appears that what the CRG is recognizing – "a compelling *government interest*" – is exactly what the US government is using to justify its non-judicial treatment of those it brands as 'terrorists.' "Government interest" is simply declared to override all rights, whether embedded in the Constitution and recognized in international agreements or not.

By themselves, of course, rights do not constitute a society, a civil order, or even a political program. The USA has had a Bill of Rights from its infancy, but that has not ensured the practice of social, economic, political or legal justice. Canada got along without a Charter of Rights until quite recently, with arguably more social justice than is to be found in the USA, and the United Kingdom has neither a written constitution nor a declaration of rights. Today the beneficiaries of the language of rights and their advocacy are more likely to be those legal entities (artificial persona) called corporations than any mere people, individually or collectively, as communities or the public. In fact, there are powerful examples of the demands of corporations for their 'rights' going directly against justice, equity and the public good, such as the demands for patent and copyright 'protection' of 'their' drugs, seeds and information by Big Pharma, agricultural biotech and Big Media.

The basic failing of the concept of rights is that it assumes an apposition. Being relational, a right without a context is meaningless. One may wish to claim *natural* rights, but to have meaning rights have to be recognized and granted – but granted by whom or what? *God-given* or *natural* (inherent or ontological) rights require a sponsor or source. To be functional, they have to have legal and or moral authority.

What bridges the gap or translates the meaning between God-given and natural? What power, class, institution or structure is expected first to recognize and then to fulfill the expectations or demands of rights, and for whom? Can their rights simply be proclaimed (with a hefty budget for advertising) and exploited by those with the power to do so, as is the current practice of corporations in regard to property, labour and genetic 'resources'? The claims of rights by the less powerful, on the other hand, have to be argued in the courts of the dominant power, which means from a position of weakness. It is this subservience which the autonomous indigenous communities of Mexico have rejected.

Even if rights are granted and/or recognized, they still have to be given substance: there is no inherent nutrition in the 'right to food.' Such a right must be given substantive meaning: the grantor of the right (the state) is obligated to provide real food to real people. (Through what agency this responsibility is to be executed is a secondary question.) This, of course, is the reason some activists have adopted the language of the right to food, hoping it can be used to force the state to take responsibility for feeding the people – or at least not making it impossible for the people to feed themselves.

The language of rights, then, is essentially about power. While the powerful, in the form of a state, class or corporation, *assume* privileges for themselves, they may also *grant* privileges, in the form of rights, to less powerful supplicants. Thus it is now corporations which would assume for themselves 'Plant Breeders Rights' – with approval and legitimation by the state – while they in turn would grant farmers the *privilege* – as 'farmers' right' or 'farmers' privilege' – of saving their own seeds for a season. (We'll return to this shortly.)

### Rights, individualism and property

My argument is that *rights*, at least in the European/North American cultural context, is a libertarian concept based on the premise that there is an antagonistic contradiction between individual identity and autonomy and the state, or indeed, almost any form of collective authority. The corrosion of this philosophy has eaten its way into the minds of Anglo-North Americans so thoroughly that the majority of people appear to be convinced that recognition of the social dimension of life, any suggestion of legitimacy and even necessity of collective identity and authority, can only be at the expense of the individual identity and freedom. The rights and 'liberties' of the individual are set against the claims of society. There is no recognition of or place for either responsibilities or obligations to society, the state or, indeed, any collective authority.

This partially explains the sad decline of cooperatives in North America and their conversion into capitalist enterprises appealing to individual benefits, not collective good. It does not explain, however, the apparent contradiction between libertarian philosophy and respect for and participation in the military, an authoritarian institution which deliberately fosters a team mentality and collective action combined with an appeal to the glory of individual sacrifice.

As pointed out earlier, the rights argument finds extreme expression in the absurd notion of fetal rights – the assertion that a fetus, given the status of an individual, has rights over against its mother, its social as well as physical context. Women have been taken to court and jailed for 'abusing' the baby they are/were carrying, and there have even been cases of parents being sued by their own 'disabled' children for 'wrongful birth.'

This libertarian thinking sees freedom or liberty only in the autonomy of the individual. Unfortunately, contemporary medical and bio-ethics have been constructed on this libertarian principle of the autonomy of the individual with little

11 Sheldon Krinsky and Peter Shorett. *GeneWatch*, Council for Responsible Genetics, Jan-Feb 2005,

if any regard for the social context and the health of the society as the essential context of the individual life.<sup>12</sup>

In this context, designating something as a right individualizes it, thereby reducing social solidarity, communal identity and appreciation for the public good. It becomes a matter of the individual – singularly or as a collective, whether in the form of an indigenous people or a corporation – making claims against the state and asking or demanding that the state recognize these claims. The state is then, at the same time *both* the oppressor-enemy *and* the guarantor of individual rights. There is no *public* in this scenario or even *citizen* in the sense of socially conscious public person. The public now consists of carefully selected focus groups or equally carefully selected individuals who are ‘consulted’ individually or in groups. The cult of the individual is also blatantly manifest in the business press, giving the impression that the rise or fall of a corporations is solely dependent on the personal abilities of their chief executive, even though it is obvious that an executive without office staff is dysfunctional, to say nothing of a factory without workers, despite the fact that the workers are paid only a small percentage of what the executive claims as his due – or right!

The advocacy and pursuit of rights is bound to fragment a society into competing interests and destroy any sense of social identity and solidarity. The pursuit of ‘competitiveness’ ends up destroying the very fabric of society itself.

### The Right to Food

“The human right to adequate food is a legal right which addresses head-on the moral, political and social issues relating to food poverty and food insecurity in Canada at the present time. . . Food insecurity for many Canadians raises issues of human rights and distributive justice culminating in *state action* and policies or programs *implemented through legislation*.” (*Right to Food Case Study: Canada*, Graham Riches, 2004, emphasis added)

‘The Right to Food’ is a globally popular term. It’s a morally upright claim without a cost. However, it says nothing about where food is to come from, under what conditions, or who is to get it at what price. There is no indication of who is obliged to ensure that everyone gets enough to eat, though customary use of the term ‘rights’ would indicate that it is state responsibility.

‘Food security’ can be equally problematic. *Security* is generally understood as being protection against external threats and powers. Thus food security can mean being ‘protected’ from hunger and assured of an adequate food supply for your own survival, whether ‘your own’ is you

individually or as a family or community. By itself the term *food security* does not necessarily mean enough food for everyone. On the contrary, it implies that there is not enough for everyone, and therefore I, or we, have to *secure* enough for ourselves over against the needs of others. In the broader context of the language of rights, my right to food is thus a claim, in libertarian fashion, against society, and is accompanied by no responsibility to ensure that others also have food. My presumed ‘right’ to ‘security’ – having ‘enough’ and more – may well contribute to the deprivation of others.

Food security in this individualistic sense is like private health insurance.<sup>13</sup> What is enough? How long am I going to live, how sick am I going to get, will I be unemployed and if so, for how long?

If food security is understood, as it is by the food security movement, as a social or community matter, then the security comes from sharing rather than hoarding on the assumption that as long as we do not hoard there will be enough for all. This is why the term is increasingly prefixed with ‘community’ which implies security of supply and equitable distribution for the entire community.

Is the appeal to rights, including the right to food, a secular substitute for a moral or ethical appeal for compassion and justice? Defining an issue as a right channels it to the state, relieving the citizen of his/her personal responsibility. To define an issue as a right and channel it to the state is also to obscure the fact that it is the dominant corporate sector which is actually defining where food comes from, under what conditions, and who gets it at what price. Without public recognition of the necessary social responsibilities of the state, however, and the state’s recognition and acceptance of these responsibilities, the appeal to rights falls on the deaf ears of both the state and the corporations.

A direct moral appeal to the public for the construction of an equitable and ecological food system might, actually, be more politically effective and morally satisfying. An even more direct assertion of rights is the practice in many countries of occupying farms and farm land where it is being underused or used to produce non-food or export commodities, such as the transgenic soya meal being exported from Argentina to Europe for livestock feed.

### Farmers’ Rights and Plant Breeders Rights

‘Farmers’ Rights’ is a highly misleading term. The assertion of Farmers’ Rights is functionally a claim for an exception to the capitalist laws of private property. What are mistakenly referred to as Farmers’ Rights are essentially the collective prerogative of a class of people, farmers (and gardeners). As a seed keeper, or custodian, the individual farmer participates in the social custom of selecting, saving and replanting seeds from year to year. Recognition of, not rights to, customary/traditional practices and knowledge – from seed saving to land management – is a matter of social, cultural and physical survival, not an individual business practice. Seed saving is what farmers do, without authorization from any state, jurisdiction or ‘owner.’

The *right* of a farmer to save and replant seed is only meaningful within the context of a property regime that defines seeds as property. Then the issue is, who owns the seed? In the 21<sup>st</sup> century, it is increasingly a corporation that owns the seed. Through the literal mechanisms of hybridization, certification, genetic engineering, patents and contract production, the corporation exercises its appropriated *ownership rights* over seed. The customary agricultural

12 The aborted campaign by US President Bush to transform the US Social Security system into an individual investment program was a direct attack on the concept of social solidarity and its replacement with individualism-via-ownership. “Founded on principles of general solidarity and publicly shared risk, social security is the most important part of what remains of the US social protection system . . . Objections [to the Bush program] and counter-proposals assume that the Bush administration is concerned with making social security more viable. But the primary goal is different: to undermine commitment to the logic of citizen solidarity and public risk management. In the words of Bush: “If you own something, you have a vital stake in the future of our country. The more ownership there is in America, the more vitality in America, and the more people have a vital stake in the future of this country” (“The Neocons’ Ownership Society”, *Le Monde Diplomatique*, (English edition) June 2005)

Japan’s former prime minister Koizumi seems bent on the same radical policy shift in seeking to privatize Japan Post, which would rank as the world’s third largest bank as a private institution and is the primary savings and life insurance vehicle for millions of Japanese citizens. Koizumi wanted to cut the state bureaucracy and put nearly \$3 trillion into the hands of private investors to stimulate growth. (*Guardian Weekly*, 12/8/05)

13 See footnote three on the deliberate destruction of social solidarity and its replacement with the pursuit of self-security via stock ownership. The implication is that capitalism requires the force of the state to create ‘investors.’

practice of seed saving then becomes an exception to, or exemption from, the rule of capital.

The concept and legal institution of Plant Breeders Rights (PBR) assumes that plant breeding is a formal and professional activity. Formal, corporate (whether employed by a corporation, university or government) plant breeders, as opposed to farmer-breeders, set themselves up as members of a professional scientific society with responsibility for defining their own credentials, standards and regulation. In so doing they appropriate the function of traditional farmers as seed savers and plant breeders and define custody and breeding of plants and crops as their professional right, recognized by the state, not the right of farmer-breeders. (Even though there are still some plant breeders employed in universities and government departments who regard themselves as working in the public sector for the good of farmers and the public.<sup>14</sup>)

With formal seed breeders having captured plant breeding and claimed it as their commercial right to profit by, the traditional functions and practices of farmers regarding seeds become a threat. Traditional seed saving must be redefined as a privilege – a privilege granted by commercial seed ‘owners’ with state backing. The only remaining rights for the farmer are ‘users rights,’ that is, the right to plant, cultivate, harvest and sell the crop produced by the seed that essentially remains the property of its corporate ‘owner.’ In the role of a serf, the farmer only *rents* the seed for a season. (“Users’ rights” are now appearing in the language of the media conglomerates with reference to the ‘rights’ of the purchaser of a book or record to read or listen to the purchase they have already paid for. Big Media now wants, in effect, to limit ‘users’ rights’ by asserting perpetual ownership with the ability to collect royalties on every ‘re-use’ of what has already been purchased.)

Therefore in using, and in allowing the use of, the term ‘Plant Breeders Rights,’ farmers are, in effect, recognizing the authority and legitimacy of those who would deny them one of their major traditional customs, a foundation stone of their viability, and a necessity for public food sovereignty. (Any recognition of Plant Breeders Rights, of course, also blocks the development of collaborative farmer-breeder relationships.)

In a stunning opportunistic contradiction, those who claim formal ownership of seeds (and, now, ‘genetics’) and lobby for complete privatization of the seed sector also demand state protection of what they claim as their monopoly rights. The ‘rights’ of Plant Breeders are granted by the state and ‘protected’ by state legal systems and international treaties. Without the state there would be no Plant Breeders’ Rights, no copyright and no patents. Farmers who save, select and use their own seed, on the other hand, neither have nor require such state ‘protection,’ though they now have to face the threat and experience of having their own seed stocks contaminated by corporate-owned genetically engineered seeds, the corporate ‘right’ to produce and sell such seed now being authorized by the state. This leaves the farmer having to appeal for protection from the activities of a corporation to the same state.

The practice and culture of seed saving can only be fully exercised within the context of a people whose identity and existence is recognized and respected. Recognition of a people, tribe, clan etc. also requires recognition of and respect for the conditions which make its collective life possible, of which feeding themselves is an essential constituent.

Once the wealthy farmer in an Indian village experienced crop failure and had to turn to the *dalit* (‘untouchable’) village seedkeeper for seeds, the rupture in the class structure of the

village opened the way to new social relations. (author’s personal observations)

Lawyer M.C. Mehta of the Supreme Court of India floated the idea of the seed right – the right of seeds to survive. He suggested the development of food and health security sanctuaries in areas rich in food and medicinal genetic resources on the model of national parks and protected areas for wildlife (Frontline, 16/2/02).

### Rights and Resources

If *natural resources*, including food and land, are infinite – as assumed by the imperative of economic growth and the religious notions of technological progress and sustainable development – then one might argue that the privatization of these ‘resources’ through expropriation and commodification is tolerable. Everyone might then claim a right to some portion as their own, without, at least theoretically, depriving others of their share. (The legal term for this is *non-rivalous* : i.e., my use of the resource – referring usually to an *idea* in copyright law – does not diminish yours.) In Western culture, this attitude can be traced back to John Locke, who, like many other eminent philosophers such as Adam Smith, has been used and abused for a variety of purposes. As we saw earlier, Locke assumed that there was enough for all, provided that no one took more than he or she could personally use. There is no reason to think that Locke, three centuries ago, intended to lay the philosophical foundation for the claims of transnational corporations to what its employees have extracted from nature (the Earth and its creatures), whether it be iron ore, oil, gold or human and non-human DNA, as its *personal private property*. Yet this is the absurd situation today.

To mask the brutality of contemporary claims to what can be extracted from the *state of nature* and claimed as property and owned, the term ‘natural resources,’ has been introduced. It is a term which appears to be free of any religious or theological implications or obligations. Natural resources are, of course, not limitless, contrary to the underlying premise of endless economic growth and the carefree blindness with which we consume fossil fuels and fresh water in our version of development. Furthermore, using the term *resources* suggests that value adheres only in that which is available for our exploitation and which is mixed with the labour, or just capital, of the persona (natural or socially constructed) which then becomes its owner. Nature/Creation, is not recognized as having any intrinsic value. Owning, then, is simply a natural right since it is I, we or the inanimate persona of the corporation that give value to these *resources*.

The Market Economy requires the commodification of everything designated as a ‘resource’ – *human resources* as well as natural resources – so that it can be owned. The ‘value’ that is ‘added’ by the worker (miner, butcher, field hand) who actually transforms that *resource* into a product is claimed (appropriated) by the owner. This is clearly a perversion of the labour theory of value (and a grand distortion of both Locke and Marx) as, in the current corporate world, the owners are not, in their capacity of shareholders, entrepreneurs, much less workers, yet they claim the value added. Functionally, they are simply parasites.<sup>15</sup>

Here it is worth noting that in numerous colonial situations, colonizers felt it appropriate to seize land that they considered

14 See Stephen Jones, “Breeding Resistance to Special Interests,” at <http://www.biosciencesource.org/docs/sjones-Breedingresistance.pdf>

15 “One does not see rising employee income as a measure of corporate success. Indeed, gains to employees are losses to the corporation. And this betrays an unconscious bias: that employees are not really part of the corporation. They have no claim on the wealth they create, no say in governance, and no vote for the board of directors. They’re not citizens of corporate society, but subjects. . . The oddity of it all is veiled by the incantation of a single magical word: ownership. Because we say shareholders own corporations, they are permitted to contribute very little, and take quite a lot.” Marjorie Kelly, *The Divine Right of Capital*, Berrett-Koehler Publishers, San Francisco, 2001, p.3

was not really owned by anyone because it was not being sufficiently 'worked' by the 'natives.' That is, the natives were not entitled to the land because they were not adequately exploiting the 'resources' in their care. This is the familiar situation in which the only appropriate form of agriculture is intensive (and subsequently industrial). Subsistence was not recognized as a legitimate relationship to the land. Thus land inhabited by hunter-gatherers, as in New England, was not recognized as 'owned' by anyone in the eyes of the colonizers. The only land that the English settlers recognized as 'owned' was the gardens which were visibly and effectively fenced – to keep the wild creature out. (Wm. Cronon, *Changes in the Land*, Hill & Wang, 1983)

A similar pattern of land appropriation can be seen now in Latin America and elsewhere where peasant farmers and forest dwellers are being driven off the land which provides their food by big landowners expanding their intensive production of soy beans for ethanol production and export.

The possibility of mutuality is unrecognized. Perhaps it is these 'resources' that own us. How else should we describe our dependency on fossil fuels? Can it not be said that our automobiles own us, that is, they determine the shape of much of our lives? Is it not also true that in the highly industrialized societies we are owned by the supermarkets as far as our food supply is concerned? Only a small – although growing – percentage of the population in these societies actually own their own food system in the sense of being responsible for it (growing, harvesting, preparing). Most of us are utterly dependent on the global corporate food system over which we have absolutely no control and from which we can expect no security either as gardeners and farmers or as the public.

In a sense, we have mystified *natural resources* and given them infinite capacity, energy and power. But if they are infinite, that is, without scarcity, then they have no market value and there is no rationale for claiming ownership and excluding others from their use and consumption. This logic applied to the patent system until very recently; discoveries could not be patented, only inventions (products and processes). Similarly, the principle of copyright is that ideas, regarded as unbounded, limitless and thus non-rivalrous, can not be copyrighted, but the *expression* of an idea can be owned and copyrighted.

Now, of course, we are witnessing an unlimited corporate demand that the state – which it publicly vilifies in libertarian fashion – protect its rights to property, which now includes the patenting of life forms (including genetic material and seeds), the patenting of computer software, the patenting of procedures of genetic engineering and the copyrighting of databases. In other words, the claims of ownership rights are limitless and these limitless claims are steadily being enshrined in international trade and investment agreements as universal law.

Rights, we must conclude, are all about property, that is, about the legal right to benefit by, and exclude others from benefiting by, anything and everything that can be commodified. 'The market' (buying and selling) is, then, the only mechanism by which someone other than the owner may gain access to the 'good' in question, whether food or medicine, books or land. The ultimate right in a capitalist/market society is the right to speculate, that is, to benefit by trading paper 'goods' (immaterial representations of material and immaterial commodities) in the futures market. Rights are strictly property rights, without responsibilities or obligations. In the neo-liberal era, property is *the* basic human right.

## Conclusion

One's view on rights has a great deal to do with one's self-understanding. The person who regards him/herself as an autonomous individual being will view the question of rights

very differently than a person who understands themselves as a social being. The social being may reverse the claims of the individual, understanding identity not in terms of rights over against the community/society/state but in terms of responsibilities and obligations to the community/society/state. Rights can also be understood as communal or individual, natural or civil.

*Natural* rights by definition pre-exist any temporal authority (state) and may be asserted as claims against (or protection from) the state or society or as an exclusion from the claims of the state or society. *Civil* rights, on the other hand, are by definition provided by and dependent upon the state and claims for *rights* against or from the state are problematic when the legitimacy and authority of the state are in question. A distinction should also be made between *civil* rights and *legal* rights. Legal rights are rights before the law, that is, freedoms of the individual person that are, supposedly, legally protected. Civil rights are rights before the state, that is, rights and freedoms of the individual that the state is bound to recognize and protect by means of the law. In other words, *rights* are a reservation for the individual against the collective power of the state that is granted by the state itself.

So we must ask, against whom or what are the claims for rights made? Since this question leads into all kinds of problems concerning political legitimacy and power, perhaps it is better not to think of rights at all. Of course this then casts into doubt the whole property regime of capitalism which rests on the *right* to claim ownership and exclude, a *right* which is dependent on the authority of the state or simply brute force.

The alternative is social, assuming the social identity of persons and their consequent responsibilities and obligations not only to their human communities/societies but also to all creatures – human and non-human and the environment they inhabit. This may lead quite naturally to the devolution and decentralization of the state accompanied by the development of communal autonomy.

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## Quality Analysis on Ethical Issues of Fetal Tissue Transplant And Embryonic Stem Cells Research: Arguments And A Proposed Model In Bioethical Decision-Making Process

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### Abstract

The complexity of fetal/embryonic tissue transplantation and stem cell research is well known. As a result, ethical and moral responsibility resting upon the researcher has been discussed. Sensitivity to social and cultural significance of human biological tissues has also been discussed. Approaches in the USA cover critical bioethical assessment of the issue of U.S. federal funding of human embryonic stem cell (derived from fetal/embryonic tissue) research, along with a) the research pertaining to public interest, b) the progression of science, c) demands for transparency of such research, d) the complexity in keeping all of the above to be in

equilibrium, along with; e) the unfair legal dilemma have been as well discussed. Coupled with personal moral philosophy (which is projected as an individual moral philosophy composed of both relativism and idealism for self-governing magnitudes), and moral intensity (defined as the consideration of individual perception of bioethical situations), a model depicting the process of bioethical decision-making is proposed.

### Introduction

Transplantation of human fetal tissue and stem cell research are critical issues. There are some who consider elective abortion as an unjust act. In addition, many view that human life as non-negotiable entity of a human person. Hence, there is much controversy regarding fetal/embryonic tissue transplantation and stem cell research as they involve or even generate clinical and ethical issues. The ethical and moral responsibility thus rests heavily upon the shoulder of the researcher.

Sensitivity to social and cultural significance of human biological tissues including placenta, stem cell, along with umbilical cord blood is to be examined. Critical issues such as restriction of federal funds for research that uses human embryonic stem (ES) cell due to ethical question like when human life begins is to be addressed. It has been noted that great progress with research has been made, in spite of restricted funding. Therefore, the demands for transparency of such research merits discussion. In addition to the aforementioned deliberations, coupled with personal moral philosophy and moral intensity, a model depicting the process of bioethical decision-making is herein proposed. Lastly, two hypotheses are introduced, and they are followed with the example on how to properly apply the proposed model.

The deliberation on the transplantation of "human embryonic/fetal tissue" is an extremely critical issue. According to *Time Magazine*, fetal issue transplants could be used to treat leukemia, diabetes, memory deficits, Alzheimer's disease and Parkinson's disease, just to name a few. Nevertheless, there are controversies that surround the clinical and ethical issues of what constitutes the human life, and the inviolability of that life. With the prospect of saving and improving life, apprehension over ethical decision-making in the context of bioethics has noticeably increased lately because of issues of fetal and embryonic tissue transplant as the demanding source of such tissue and cells, and the related stem cells research. This is parallel to the increasing trepidation over the exploitation of elective legal abortion as the source of transplant and research, which is further guiding towards requests for more studies that search ethical decision-making in the context of clinical, biomedical, and public health. This article answers those requests by first launching on quality analysis with analytical reasoning, in an effort to provide the argument within the framework of existing bioethical principles. Then I advance to explore some of the major current problems. While the two sides of the arguments are polarized, there should be a middle ground between the need to protect life in all its phases and the prospect of improving well-being and saving lives in all its stages related with embryonic stem cells research.

### The Background of Arguments

Researchers/scientists have identified fetal transplants, and embryonic stem cells (ES cells) from humans as the major sources of stem cell research, among which ES cells are the most controversial. Definitely, we cannot all agree that a fetus is a person, while any personal opinion may be stated as merely a suggestion. After all, what is a 'person'? According to the *Compact Oxford Dictionary*, a person is defined as "a human being regarded as an individual". Furthermore, people disagree over the definition of what a human being is. Its definition mainly depends on one's belief system. In general sense, a person is an entity having a

dissimilar identity with certain discernible and unrelenting characteristics. Within various fields of philosophy, culture, sociology, medicine, ethics, law, economic and political theory, human rights, and even animal rights, the definition of a 'person' is the subject of considerable scrutiny, examination and deliberation. Likewise, there is no universal consensus on the status of a fetus on whether the fetus is a human or not. In fact, there are two 'guidelines' that can possibly be utilized: 1) what a researcher believes personally on the status of fetus (vide supra: the section of Personal Moral Philosophy) and 2) what the law of the land states on the subject. (Azariah, Jaypaul, personal communication, January 2007). Notwithstanding, it is indeed difficult to assess which guideline to be used to determine whether the fetus is a human or not, as all guidelines inject subjectivity into the process of determination. In fact, our own belief system is very subjective, additionally, it should not be questioned by some body else, just as we really should not question some one else's belief system. The moment we bring value systems into science, such as the value system involved in the bioethics as the forthcoming two instances in neurological surgery, then science unfortunately loses its objectivity.

The field of ethics is concerned with matters of what is right and wrong, what is good and bad, both for the individual beings and for the whole of Planet Earth. To use ethics in decision-making, one has to balance values with her own value system when, because of contingencies, one must renounce an accepted value in order to protect another valued thing. For a brief illustration, if there were a fire in a museum in which there is a Rembrandt\* painting and an elderly lady who had not numerous years to live, which one of the two would one save? There are several ethical issues to be pondered upon. An ethical issue such as 'Why not leave the elderly lady decide herself?' would invite the criticism that one is trying to shun the burden of responsibility. Others may still deliberate that rescuing the most precious painting is far more important than rescuing an elderly lady who will most certainly pass away soon of other causes. Others, of course, may cite that a life, no matter what quality, is inherently more valuable than merely an object. Hence, in medicine, public health, and scientific research, ethical decision-making necessarily involves balancing values. Such values are being presented very often when there are contingencies; at that time one must formulate a proper decision as soon as possible to renounce a bottomless entrenched obsession in order to defend another respected virtue.

For example in one clinical instance, on the deep brain stimulation procedure where a person may be willing to surrender some cognitive function for physical capacity, because there is a higher importance positioned on the enhancement of some physical function. For another instance, in intractable epilepsy surgery one might abandon parts of a valued function such as the visual field cut (anopsia) in order to capitalize on the value of sovereignty through seizure lessening.

Human beings have complex thoughts and feelings, therefore, most bioethical issues are rarely black and white. These bioethical issues are not only situation-particular and issue-specific, but also can be viewed from different perspectives. Additionally, human society has developed a variety of norms, standards, and methods to help it and the individual in dealing with issues of ethics. A fundamental premise of this article is that bioethics is mostly situation-particular. There are numerous varied milieus in this society; in addition, these milieus frequently have dissimilar ethical norms (Zucker).

Bioethics, or more precisely in the context of this article, medical ethics, in general has its bottomless roots in the writings of the Greek physician Hippocrates. Philosophers and thinkers appeal to a number of bioethical principles that are essential for discussion regardless of agreement or disagreement in the issues of the fetal and embryonic tissue



transplantation. These bioethical principles include: the principles of respect for persons (autonomy), justice, non-maleficence and beneficence. The principle of beneficence promotes fetus' and embryo's interests, whereas that of non-maleficence means not to harm them. (Beauchamp 1984, US 1979, Cutas, Williams, Patel, US 2004, Katz, Lichenwalner, Beauchamp 2001, Foster, Tang 2003, Green, CIOMS, and US 2001). Other than principles, there are theories and rules on how human beings should act towards and deal with one another (Beauchamp 2001). Theories include, for example, consequentialism, utilitarianism, the human right movement etc.

### **Bioethical Issues and the Ethical Decision-Making Process**

For argument's sake, if a fetus was already aborted before the issue of tissue transplantation even arose, and then there is no sense in which the fetus's life is being traded for another. (vide supra: section of Personal Moral Philosophy)

It is noteworthy that there is someone who argues that a fetus is a person only as per the decision of the mother who does not want an abortion and emphasizes that abortion is not acceptable to her. According to the very same logic, others might as well argue that the fetus is a not a person for the reason that the mother wants an abortion. These type of arguments on the issue of when fetal life begins and ends based on the mother's decision cannot be resolved. Does the impartial moral nature toward a fetus solely depend on the (fetus's) mother's approach towards the fetus at the moment when the mother answers questions? This author argues that the mother's attitude may be arbitrary and conventional, but the underlying constancy of the fetus' value is not.

This author further argues that to allow embryonic stem cell research now merely for the reason that because embryos are not viable on their own will eventually lead to the dilemma of the killing of infants and termination of the lives of comatose patients, who have unfortunately suffered from severe head trauma or any other causes, for the very same 'reason' that those infants and patients are not viable on their own either! For argument's sake, if the fetus is a person, it may not follow that fetal tissue transplant from elective abortions and the like is contrary to the requirements of the principle of respect. The reason is that respect is mainly culturally decided. In some cultures, we might show respect for the dead by cremating their bodies; in others, it might be that cremation is extremely disrespectful and that burial is the only way to demonstrate proper respect. This illustrates that even though there may be a general moral requirement to show respect, the content of that requirement is, at least largely, culturally determined. Additionally, what one does not realize is that there is no established cultural norm of this sort yet that would indicate to us how best to treat dead fetuses. Lacking any such norm, using fetuses for tissue transplants may not violate any requirement of the principle of respect. In parallel, with regards to the human biological tissues other than fetal and embryonic tissues, such as placenta, cord blood, umbilical cord per se, and stem cells from cord blood merit discussion in the forthcoming section.

### **Sensitivity to the Social and Cultural Significances of Human Biological Tissue**

Some human biological tissues such as the placenta and the umbilical cord are characteristically regarded as leftover tissue which can be considered as a worthy candidate for research study in both life and medical science. However, little attention has been given to ethical dimensions of the various social and cultural aspects that are frequently related with these tissues even though there are numerous different cultures that have placed much emphasis on the social

significances of these human biological tissues. There are a few cultures where these tissues are given to the parents upon their request for ceremonial or other purposes. Towards those people who donate such biological tissues for the purpose of experimental study, it is essential for the researchers to pay attention to the donors and their family's sensitivity to the social and cultural significances. By so doing, researchers can then be certain to appreciate and respect such ethical significances and value system of the donor. Researchers are expected to proceed in carrying out ethically accepted and sound research studies. Discussion of sensitivity to the cultural significance is not only limited to the human placenta; extended deliberation toward the human stem cells also follows. For example, while some ethicists deliberate that stem cell research is unethical in the Islamic tradition, nevertheless, tradition permits it to the extent that such research is aimed at improving human health (Aksoy). Much of the deliberation prevails with regard to the current research programs utilizing embryonic stem cells. Such deliberations have rotated around the argument of the moral standing of the human embryo, and to what extent of respect, justice and protection for fetuses and embryos that ought to be in one accord. This is an exceptionally sensitive problem in the current pluralistic societies where dissimilar (if not contradictory) cultural, social and religious viewpoints, along with value systems hold. To the extent that the latter is concerned, a proposed model that will assist in the process of weighing values in resolving various medical situations concerning the aspect of bioethics (vide supra: the section of Concept of Moral Intensity, and more after it) will be described and discussed in details later on in this article.

### **Current Issues in the USA**

(1) Conflict of Interest: The Issue of the US Federal Funding of Human Embryonic Stem (ES) Cell (Derived from Fetal Tissue) Research

Critics have pointed out that adult stem cell research by now receives about ten times the amount of federal funding shared out to human embryonic stem cell research. Detractors have as well disputed that ES cells may hold great advantages over adult stem cells, while in some situations the advantage is overblown; hence, others argue that both paths, as well as research using stem cells derived from fetal tissue, should be pursued concurrently (US 2004, US 2003). Along with it, they also argue that opponents of the ES cell research have over advertised the assurance of the adult stem cells so that the public might come to see ES cell research as needless (US 2003). In the background of the ethical and political deliberation, the dissimilarity between them has been fairly significant and outstanding. Therefore, the contentious option of scientific substitutes, along with trepidation about the health of American civilization and social equality, the sincerity of a political discussion that strokes on the expectations and doubts of many who are both hurting are suffering, in addition, the enormous image of health-care politics all impose upon the issue of US federal funding of the human ES cell research.

(2) Cutting-Edge Science, Demands for Transparency, and Public Interest: The Complexity in Keeping All of Them in Equilibrium.

The US National Institutes of Health (NIH) policy on employee conflict-of-interest (COI) came into effect in February 2005, which should have been accurately referred as the Interim Final Rule (US 2005, DeRenzo, and Dishonesty). In essence, this document merely is a compilation of prohibitions on employees' activities and assets with an aim to reduce NIH employees any obvious conflicts of interest. Primarily, these prohibitions/bans are applied comprehensively, without any distinction among various categories of employee and other classifications. Not only in

my view is it an instance of another inadequately structured government policy that needs amendment; it is also a tale about NIH and its fights to guide the conflicting propensity of scientific goals, power politics, and public ambivalence en route for entrepreneur finances in the field of biomedical sciences. (Here, power politics is being referred as political relations and actions based on an implied threat of use of political, or economic power by a participant or agent).

(3) How Damaging and Poorly Prepared Law Can Be Adjusted and Modified to Improve National Health and Well-Being.

This U S Interim Final Rule, as well, reflects the leaning tendency of media to overstate issues with under-reporting of complex particulars. Such a theatrical and acute change in the policy of the U S National Health of Institute COI clearly illustrates the complexity in harmonizing progressive science with the requirements for transparency of the entire situation. It may also serve as an obvious instance of a law that is not only damaging but also poorly prepared. It is proposed that it can be adjusted and modified to improve national health and welfare. In the present condition, a question may be raised that why similar adjustment and modification cannot be applied to both elective abortion and fetal/embryonic tissue transplant research, which is using ES cells.

### **Ethical Concept as it Relates to Bioethical Decision-Making Process.**

#### **(1) The Concept of Moral Intensity**

In view of the aforementioned circumstances, additionally, after brief discussion in the aforementioned various issues related to the current fetal tissue transplant and ES cell research, what we can do at present? In order to thoroughly answer such a question, the application of moral intensity deserves our immediate attention.

The concept of Moral Intensity, just as bioethics, is not only a situation-particular entity, but also to be regarded as an issue-contingent replica of ethical decision-making process. It is founded on the guesswork when the state of affairs differs with respect to the moral necessity presented in that situation. This article further explores the position of an individual's discernment of situation-particular issues on decision-making in bioethical situations. It does so by applying this concept of moral intensity on the bioethical decision-making process. It evaluates the effect of moral intensity on an individual's discernment of a bioethical dilemma, along with ensuing motivations. Moral intensity (Jones, 1991) is defined as the consideration of individual perception of ethical situations. While in the context of this article, it scopes in the bioethical situations.

#### **(2) The Application of Moral Intensity to Bioethical Decision-Making**

Keep in the center of thoughts that, as previously being referred (vide infra: p. 5-6), most bioethical issues are not only situation-particular and issue-specific, but also can be viewed from different perspectives. Moral intensity proposes that ethical decisions are principally dependent on the apparent distinctiveness of the problem in jeopardy; hence, bioethical decision-making entails the communal appraisal of this uniqueness.

Moral intensity is frequently employed to study ethical decision-making process under different circumstances (Wood, Singhapakdi 1966, Nill, Ohio, Nocera, Nussbaum, Paolillo, Roth, Schibrowsky, Yoo, and Dorantes). In brief, this theory assumes that moral issues can be considered with regard to fundamental distinctiveness that affects the different phases of the decision making process. It is as well noted that moral intensity is inherent in any ethically uncertain situation. Jones argues that moral intensity influences ethical-decision-making. He fused prior research from the business and marketing field, along with it, the cognitive process to generate an issue-contingent model of ethical decision-

making that commence the perception of moral intensity. Hence, moral intensity is distinct as the scope of issue-related moral crux in a state of affairs (Wood). It is founded on the grounds that the motivation, purpose and resulting behavior stemmed from a person's insight of whether a collection of ethical mechanisms presents in an understandable and discernable environment, and to what degree and level. Those studies also indicate that relativism negatively affects one's insight of moral intensity (Arrington, and Douglas).

Conversely, a personal decision is directed by one's appraisal of six dissimilar components that cooperatively comprise moral intensity of the state of affairs. Such mechanisms include 1) magnitude of consequences - the aggregate harm or benefits of the act; 2) probability of effect - the likelihood that the act will cause harm or benefits; 3) temporal immediacy - the length of time between the act and its consequences; 4) concentration of effect - the number of people affected by the act; 5) proximity - the social distance between the decision maker and those affected by the act; and 6) social consensus - the degree to which others think the act is good or evil (Jones). There is certainly an influence of moral intensity on both ethical intuition and behavioral intents, in a context of the business and marketing. (Singhapakdi, 1966). The more these components that are present, the more likely it is that an individual will recognize the existence of an ethical problem, with a subsequent effect on judgment, intentions, and behavior (Jones and Douglas). Experimental studies in the sector of business have already indicated that moral intensity affects perception of ethical issues in general (Jones, Wood, Singhapakdi 1966, Nill, Ohio, Nocera, Nussbaum, Paolillo, Roth, Schibrowsky, Yoo, and Dorantes). In parallel, clinical and life science researchers, as previously indicated, have acknowledged an abundance of ethical theory to bear on the moral responsibility of their own research. Hence, after presenting the necessity of sound understanding in moral intensity, this author is proposing a model, with the hope that such a model will shed light on embryonic/fetal tissue transplantation and stem cell research. This proposed model indeed requires the addition of the principles of transparency and sensitivity to social and cultural significance when one is considering the use of human biological tissue in research endeavors, especially, on the use of fetal and embryonic tissues for stem cell research. Such a moral stance is in accord with community accountability and dependability. The aim of this model is to guide the bioethical decision-making process.

### **The Model of Bioethical Decision-Making Process**

An individual's combined evaluation based on these six components of the characteristics results in a given situation's moral intensity. This affects the individual's moral judgment, intentions, and ensuring decision-making. Basically, problems with high moral intensity will be identified as ethical dilemmas more frequent than those with low moral intensity, guiding the way to a positive relationship between moral intensity and reorganization of ethical problems. Additionally, problems with high moral intensity bear a positive relationship with a person's intention (motivation) to conduct in an ethical approach. Of importance in this context of bioethics is the fact that this model does require the participation of personal moral philosophy, and that of principle of transparency and sensitivity to the human biological tissues. To elaborate, in accord with existing ethical theories (Singhapakdi et al., 1996; Singhapakdi et al., 1999), two additional relationships are added. One is sensitivity to sociocultural significance of the human biological tissue has a positive relationship towards reorganization of bioethical problems. The other is the principle of transparency existing between each pair of relationships except one, which is the relationship between moral intensity and relativism. It is a negative relationship. All the aforementioned is indicated in the proposed model in the figure.

### A Model for bioethical decision-making

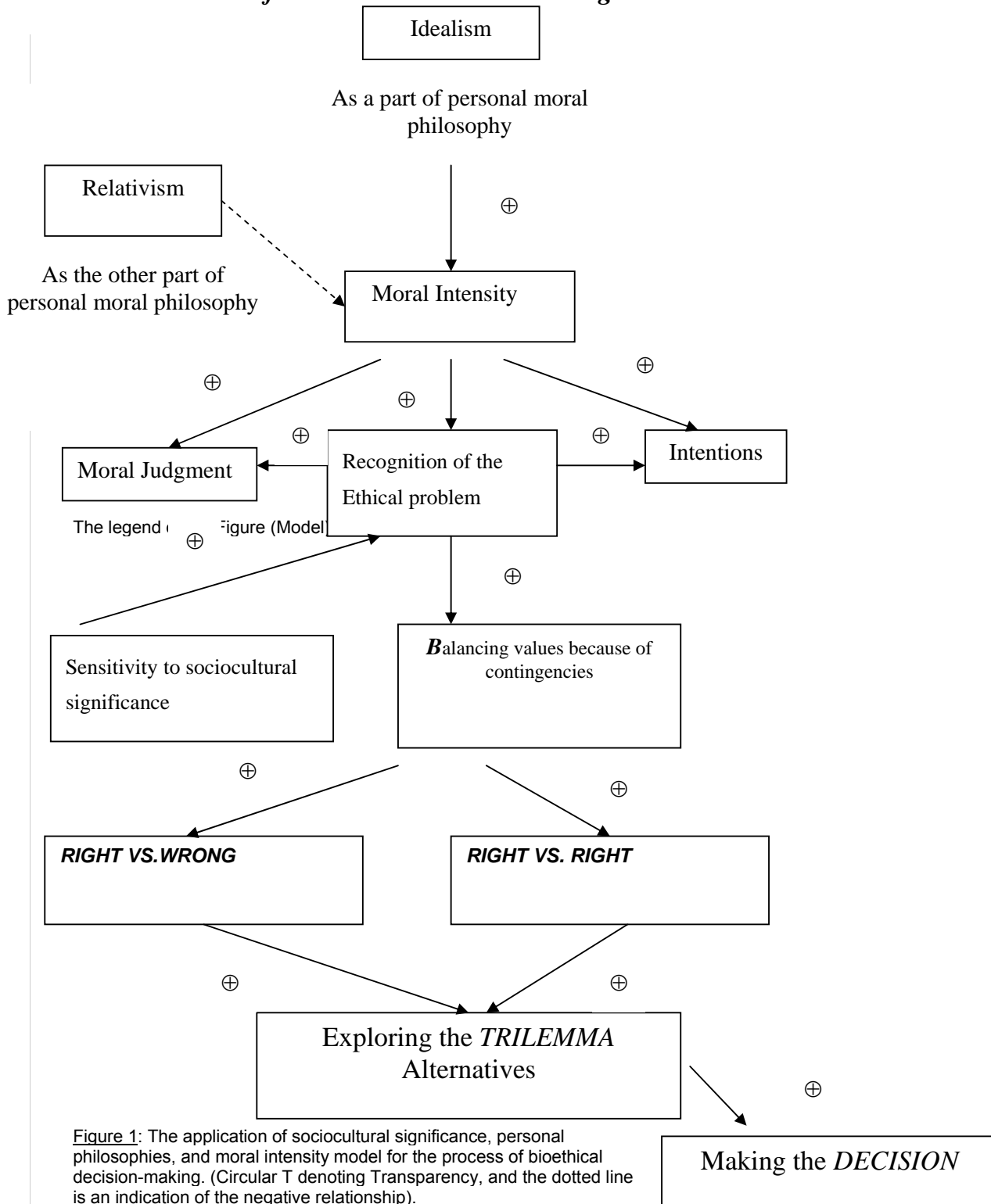


Figure 1: The application of sociocultural significance, personal philosophies, and moral intensity model for the process of bioethical decision-making. (Circular T denoting Transparency, and the dotted line is an indication of the negative relationship).

In fact, biomedical advancement has now spread all over modern countries. Nevertheless, the evolution of bioethical principles that can possibly guide the application of its use is veiled behind technological advances (Beauchamp, US 1979, Beauchamp 2001, Foster, Lichtenwalner, Tang 2003, and Aksoy). A talented approach to this problem involves identifying factors associated with ethical decision-making in a biomedical context, both in the fields of clinical and scientific

research. An individual and a professional's perception of ethical issues, inherent in a specific situation, are fundamental to the biomedical decision-making process ethically.

#### Personal Moral Philosophy as a Role in this Proposed Model

Moral intensity is as well affected by the individual's personal moral philosophy (either relativism or idealism), age,

gender, education etc., and subsequently influences various stages of the decision-making process.

Forsyth projects that an individual's personal moral philosophy is composed of both relativism and idealism, which are self-governing magnitudes. Relativism is the dimension to which the individual discards universal moral system and finds her own moral judgment on the state of affairs per se, along with this states, as well as the people concerned, more than on ethical principles. Idealism is the extent to which the individual focuses moral judgment on values pertaining to the principle of nonmaleficence (Beauchamp 2001, and Tang 2003). The suppositions are harmonious with previous non-bioethical study that individuals with lower levels of relativism perceive higher levels of moral intensity than those with higher levels of relativism (Beauchamp 2001, and Tang 2003, Singhapakdi 1999, Arrington, and Douglas).

Of significance in this background is the fact that idealism is not equal to moral absolutism, but rather a conviction in values such as unselfishness and a meaning of hopefulness. Idealism and relativism have thus far revealed explicatory strength related to ethical judgment and decisions in business (Arrington). As well, idealism and relativism are significantly related to moral intensity (Douglas). Idealism is inclined to intensify discernments of moral intensity, whilst relativism tends to decrease them (See the Model in Figure 1).

#### **Arguments and Counter Arguments of this Proposed Model, With a Lively Examples, on Which this Proposed Model Could Have Been Applied During the Decision-Making Process**

That being stated, lively examples are to be illustrated and discussed as follows. Scientists have used fetal tissue in research since at least the 1930s. Geoffrey Chamberlain received a professional award for research (outlined in the March 1968 issue of *The American Journal of Obstetrics and Gynecology*), in which he took live aborted fetuses, attached them to an artificial placenta, perfused the fetuses with the blood from the latter, in order to see if he could make the fetus continue to be alive or not, and then he pulled the plug off on the fetus. No one objected to him at that time. Judge no one; yet, the following discussion from the approach of this proposed model merits attention. The more the aforementioned six components of moral intensity that are present, the more likely it is that an individual will recognize the existence of an ethical problem, with a subsequent effect on judgment, intentions, and behavior. Once more, judge no one, had moral intensity been positively impacted with stronger personal moral philosophy along with other related factors, as well as had this proposed model been applied, the conclusion of the event by Chamberlain would have been completely different at that time. It appears that there would have had lots of objection to Chamberlain's act at that time. Hence, in accord with what have been previously pointed out, moral issues can be considered with regard to fundamental distinctiveness that affects the different phases of the decision making process. Furthermore, it is as well noteworthy that moral intensity is inherent in any ethically uncertain situation (Wood).

Another instance is as follows. Nowadays, the secrets of the 'Dead-Baby Industry' reveal that aborted fetuses being dissected alive, harvested and sold in pieces to increase a vast research enterprise (Canadian, Likoudis). The interchange in fetal tissue springs worldwide into esteemed tax-funded laboratories. The research per se is usually for creditable objectives, from helping prenatal infants survive to curing Parkinson's disease (Moriera). But the trade, worth billions, brings up innumerable moral and ethical problems: Are some humans' embryos and fetuses being killed to benefit others? Are women being exploited to support the collection of fetal tissue? Who is profiting from the trade? In

addition, what are the social insinuations of such an existence?

Those questions deserve proper answers upon all of our reflection based on positively charged moral intensity as indicated in this proposed model. Obviously, as clearly indicated in the section of Arguments (vide infra: inside the section of Discussion), if the fetus was already aborted before the issue of tissue transplant even took place, there is no sense in which the fetus' life is being traded for another. Nevertheless, with such a huge monetary amount of trading going on, for argument sake, even if the fetus were already aborted before the transplantation occurred, how could anyone guarantee that such a desire for abortion has never been motivated financially?

Conversely, of significance in this context is the fact that some adult professional even sarcastically states in documented evidence that 'although life is sacred and a fetus is alive, he still can support research to certain degrees.' Such a kind of slippery argument is hardly justified. Clearly, the fetus cannot make any decision by himself; besides, he is not viable in so doing at all. Even if he were so much willingly and volitionally to contribute or support research to merely a 'certain' degree, eventually, it has to be at the expense of his (the fetus') own life, but no one else's. Obviously, researchers who ever made such kind of statement require the reinforcement of moral intensity, and better be guided with this proposed model. For the purpose of completeness, the last counterargument against the aforementioned issue is as follows. Although life is sacred and a fetus is alive, if he can really support research to certain degrees, likewise, he can as well decide not to support such a research. Why cannot he?

Of importance in this context of aforementioned arguments lies in the fact that when he (the fetus) supports fetal tissue transplantation and embryonic and/or fetal stem cell research to certain degree as on the very same premise been based, there will at least two issues as follow. First, is he volitionally for so doing? Second, there is a very much high likelihood that he will lose his own life, and will be no longer alive when he 'supports' such a research, notwithstanding, lack of informed consent given by himself. If there were some kind of informed consent given for so doing, then not only is the degree of transparency of that so called 'consent' is dubious, but also the motivation for so doing is in question. After all, the consent, if any, is definitely not given by him! The last but not least, if he can consent himself for such a decision to support stem cell research, so can he consent the opposite decision not to support. Such kind of argument in fact really violates the principles of non-maleficence and justice.

The aforementioned examples, arguments, and counter arguments well illustrate the fact that this proposed model with moral intensity, along with the principles of being transparent and that of respect to the human biological tissues, can help the process of bioethical decision-making.

Hence, moral intensity indeed is predicated on an individual's evaluation of six different components as previously stated (vide infra: the section of the concept of Moral Intensity) (Jones), which are pertinent to a given ethical situation. An appraisal of the components guides us to reach the impression that adequately evaluating factors involved is mandatory. Such factors include but not limiting in personal moral philosophy, along with other related elements with their respective magnitude and likelihood of possible consequences, the timeframe and concentration of such consequences, and the relationship among the evaluating individuals or so called rater and those who might be influenced by the action or inaction.

#### **The Other Factors Involved in this Proposed Model**

The balance of factors, such as that of education, occupation, gender, and age on the individual's perception of ethically questioned issues also need to be considered. They

all affect the manner people determine and appraise ethical issues (Hunt, McCabe, Goles, and Tang 2006 b, and Tang 2007). As well, they do influence an individual's perception of ethically questionable situations, and subsequent intentions. Of importance in this context is the fact that, most of time, moral judgment precedes intentions. Hence, this proposed model will be of help to guide one in taking an ethically well founded position in the moral dilemma transplantation of fetal/ES cells represent.

### Two Hypotheses Inherent to this Model

There still are two hypotheses that are remained to be described as follow. First, it is the hypothesis of negative relation from Relativism towards Moral Intensity. The other is the positive relation from Idealism toward the latter, both are as indicated in the proposed model, with the former (negative relation) in dotted line, whereas the latter (positive relation) in the solid line. To test and validate these two hypotheses may be a fruitful avenue for our future research in the bioethical arena.

### An Example of the Potential Application of this Model: Is there any Middle Ground to Meet With Regard To The Necessity Of Using Embryonic Stem Cells?

Of course, new technology cannot be stopped from being developed. There currently are at least two modern technologies that fulfill the criterion of being alternative to the necessity of using ES cells (Patel). These two technologies are as following: somatic cell nuclear transfer and parthenogenic stem cell derivation. Even though these two technologies are thus far still remote from healing hitherto, trepidation over the morality of ES cell derivation should not encumber the progression of these technologies. The focus of issues lie in the fact that there is still no accord with regard to when embryonic life should begin, at least in the light of currently permitted stem cell research and therapy. Under such circumstances, we all must consider our obligation to, and respect for, humankind and society over and above such so-called technological achievement. The question to ask us is where the respect for dignity and privacy lie. Additionally, the ensuring question will be how we should protect it? With this proposed model, reinforced with positively charged moral intensity, what would be the magnitude and likelihood of possible consequences of the continuing use of fetal/ES cells? What would be the timeframe and concentration of such consequences, and how will be the relationship among the evaluating individuals, agents or parties, and those who are interested and those who might be influenced by the action or inaction? While the two sides of the arguments are polarized, there should be a middle ground between the need to protect life of all its phases and the prospect of improving and saving lives in all its stages. With such reflections by applying this proposed model, we should be looking forward to developing technologies that may meet the middle ground, such as somatic cell nuclear transfer and parthenogenetically created stem cells (Patel)-- so that there will be no longer need to debate on where the ES cell comes from.

### Conclusions

The principles of respect for persons, autonomy, and beneficence unfortunately have been shown to have minimal value regarding human fetal/embryonic tissue transplantations taken from elective-on-demand (legal) abortions. When the legal case of Roe vs. Wade was considered before 1973, a part of the argument among the people was "Of course, we are not supporting more abortions; of course, we are going to have the best possible means to deal with it; but every woman has the right to do with her body as she wished." The model, which has been proposed here,

probably can help individuals who need to make similar bioethical decisions.

The elective abortion may continue to be regarded by someone as immoral, and slippery, albeit it is legal. Be it as it may, such a legal provision has, at least some parts of it, helped to rescue human embryonic/fetal-tissue transplantation, and embryonic/fetal stem cell research. In this case, the primary source of human embryonic/fetal tissue for stem cell research is from elective abortion. Hence, the principles of respect for autonomy, justice, non-beneficence, and beneficence cannot really be enforced. In addition, unfortunately, the slippery path of such elective-on-demand (legal) abortions has become even more slippery. Hence, the safeguards are still inadequate because elective-on-demand abortions are being done by thousands. Regrettably, the potential for fetal tissue transplant and stem cell research may exaggerate such a crisis, from which the burden really belongs to every one of us.

For every one of us who is involved in this process of bioethical decision-making, with all the deliberation, speculation, contemplation, etc., it is as well suggestive to have an additional consideration including but not merely limited to reflection in socio-cultural significances of human biological tissues, but as well containing the cross cultural thoughtfulness in bioethical evaluation. Along with them, the principle of being transparent pertaining to researches involving in the public interest has to be insisted. For all of us, the final argument is that there exists a set of laws that is not only detrimental but also defectively conceived and inadequately designed. The laws should be adjusted and modified, and such an amendment can thus be well applied to laws, which are expected to decently relegate elective abortion, stem cell research, and embryonic/fetal tissue transplant. Last but not the least, with this proposed model, hopefully it can be of some help in the process of bioethical decision-making, particularly in the light of the ongoing dilemma represented by elective abortion, embryonic/fetal tissue transplant and stem cell research.

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### Announcement: An Open Invitation to Participate In the

### UNESCO International Bioethics Journal Club

The UNESCO Asia-Pacific School of Ethics and Aristotle University have joined efforts to create an online international journal club known as the **UNESCO International Bioethics Journal Club** (UNESCO IBJC).

The purpose of the journal club is to promote the ideals of UNESCO, promote education and understanding of bioethics, and specifically continue and expand the dialogue, acceptance and implementation of the principles and covenants of the UNESCO Declaration on Bioethics and Human Rights. Your vital role as an Inaugural Executive Editorial Board member of the UNESCO IBJC will be critical in "keeping alive" the dialogue on bioethics amongst the 47 Member States in Asia and the Pacific region – and this will hopefully spread to include other parts of the world as well.

Aristotle University will serve as the academic administrative host for the UNESCO IBJC. Dr. Thomas A. Gionis, President of Aristotle University, will serve as Chairman of the UNESCO IBJC; Dr. Darryl Macer, Regional Advisor, Regional Unit Social and Human Sciences for Asia and the Pacific, UNESCO Bangkok, and Dr. Leonardo D. de Castro, Former Vice Chair, UNESCO International Bioethics Committee, shall serve as Vice-Chairmen of the UNESCO IBJC.

**Communication Platform**

The portal of entry for the UNESCO IBCJ is located on the Aristotle University home page ([www.AristotleLaw.com](http://www.AristotleLaw.com)). The journal club uses the state-of-the-art Scholar360 Learning Management System (LMS) to serve as its communications platform. All e-Learning, postings, and e-Discussions will occur on an asynchronous discussion-board platform, where Bioethics Abstracts and Bioethics Case Studies may be posted and discussed.

**Executive Editorial Board**

Because the scope of the UNESCO IBCJ will be to engage participants from throughout the Asia and Pacific region in an ongoing and active dialogue concerning bioethics and the promotion of the UNESCO Declaration on Bioethics and Human Rights, the journal club is managed by an Executive Editorial Board. The Executive Editorial Board manages the editorial submissions and reviews of the journal club. The Executive Editorial Board members consist of key member-leaders of Universities and bioethics related organizations from within the Member States of the Asia and Pacific region. Each member of the Executive Editorial Board shall serve as a representative of one country for an "active" one (1) year term. Because the Executive Editorial Board members serve active one year terms, there is ample opportunity for all 47 Member States of the Asia and Pacific region to actively serve and participate.

As a requirement for serving as an Active Member of the UNESCO IBCJ Executive Editorial Board, each Executive Editorial Board member shall be responsible for (a) organizing a local home chapter of the journal club and (b) making a one-time (per twelve-month term) "posting" on the journal club web site of a "Bioethics Abstract." The Bioethics Abstract consists of a short article of about 500 words, or less, which describes and raises a bioethical issue and invites a response. It may also consist of a Bioethics Case Study or Bioethics story indicating an approach and resolution of a bioethical issue.

Each member of the Executive Editorial Board of the UNESCO IBCJ will also have as the primary responsibility to actively "generate" discussion from within their home journal club in response to their own "posting" of a Bioethics Abstract. Each Executive Editorial Board member from a "non-posting" journal club (for that particular month) will be encouraged to either (a) himself/herself make a "post" or response (commentary) to the monthly Bioethics Abstract, or (b) designate a member(s) from their own home journal club to make such a "post" or response (commentary) to the monthly posted Bioethics Abstract.

**Monthly Bioethics Abstract**

Each home journal club shall have the option to choose their own topic for posting of the monthly Bioethics Abstract. A journal club will also have access to a pre-prepared list of "Topic Suggestions" from which they may choose if they so desire. The "Topic Suggestions" come from timely-news worthy topics of bioethics; journal article topics from the *Eubios Journal of Asian and International Bioethics*, or other bioethics-related publications.

We actively encourage and welcome your participation and look forward to your vibrant contributions.

- Thomas A. Gionis, MD JD LL.M. MBA MPH MHA FCLM FICS  
President, Aristotle University  
Dean and Professor of Law, Aristotle University College of Law,  
Aristotle University Institute of Law and Jurisprudence  
United States Fulbright Scholar in Law  
United States Fulbright Senior Specialist Program  
Fellow, American College of Legal Medici

**News in Bioethics & Biotechnology**  
<http://eubios.info/NBB.htm>

**International Bioethics Education Project News**

<http://groups.yahoo.com/group/Bioethicseducation/>

**IAB Genetics & Bioethics Network: On-line**

The complete address list is updated on the Internet. Send all changes to Darryl Macer. There will be a session at the IAB World Congress of Bioethics in Croatia in September 2008, and please send paper topics to Darryl Macer. There will also be a session on Arts, Drama and Bioethics, which papers are also solicited for.

**UNESCO Asia-Pacific School of Ethics**

<http://www.unescobkk.org/index.php?id=4913>

**Announcement: Applications Being Accepted for the Aristotle Scholarship in Law in Bioethics and Public Health Law**

Aristotle University and Aristotle University Institute of Law and Jurisprudence are proud to announce the Open Invitation to Apply for the Aristotle Scholarship in Law in the Master of Laws (LL.M.) program in Bioethics and Public Health Law.

**About Aristotle University**

Aristotle University is the home of the Aristotle University College of Law, the Aristotle University Institute of Law and Jurisprudence, and the Aristotle University School of Public Health and Research Institute. Aristotle University is a fully-approved institution of higher education by the State of California, Bureau for Private Postsecondary and Vocational Education (BPPVE) as a California private postsecondary degree-granting institution. Both the Aristotle University College of Law and the Aristotle University Institute of Law and Jurisprudence have degree granting authority from the Committee of Bar Examiners, The State Bar of California, State of California. In addition to the JD (Bar Qualifying) and JD Executive degrees, Aristotle University offers a total of six Master in Laws (LL.M.) degrees: Bioethics and Public Health Law; International Human Rights Law; International Law and Global Leadership; National Security Law; Global E-commerce Law; and Education Law. Aristotle University is the first University in California, and the first law school in the United States to exclusively implement the Scholar360 learning management system in its teaching methodologies.

**About the LL.M. in Bioethics and Public Health Law**

The LL.M. in Bioethics and Public Health Law is an online distance learning educational program offered through the Aristotle University Institute of Law and Jurisprudence which may be completed in 1-2 years. All instruction and communications are provided through the Aristotle e-Learning Scholar360 learning system – the most sophisticated learning management system available in distance learning. Course requirements for the LL.M. degree in Bioethics and Public Health Law include: Public International Law; International Human Rights Law; AIDS Law and Ethics; Bioethics, Biotechnology & Patent Law: Applications of Science, Law & Policy; Core Concepts in Bioethics and Cultural Frameworks; Legal Protection of Human Research Subjects and Research Ethics; and Public Health Law and Bioethics. Additionally, an LL.M. Master's Thesis must be completed and defended. See [www.AristotleLaw.com](http://www.AristotleLaw.com) for complete program description. All instruction is in English.

**Scholarship Eligibility Requirements**

Eligibility for the Aristotle Scholarship in Law in Bioethics and Public Health Law, a full-tuition waiver scholarship, includes either the previous attainment of a J.D. degree (or equivalent), or evidence exhibiting that an individual has sufficient academic achievement and excellence which

qualify them for the honor to pursue and obtain the LL.M. degree. Current senior law students, senior undergraduate and graduate students, and Faculty are eligible. In addition to the completed online Application, candidates must provide a strong Personal Statement which describes why their study in Bioethics and Public Health Law has particular significance to their career goals, interests and aspirations. This is a competitive award; only a total of six full-tuition waiver scholarships will be awarded in 2008 by the Aristotle University Institute of Law and Jurisprudence for the study leading to the attainment of the LL.M. in Bioethics and Public Health Law.

#### **Application Procedure**

Individuals may apply for the Aristotle Scholarship in Law for the Master of Laws (LL.M.) degree in Bioethics and Public Health Law by accessing the online Application through the UNESCO International Bioethics Journal Club web site located at [www.AristotleLaw.com](http://www.AristotleLaw.com).

Applications will be considered on a rolling basis until all six scholarship positions have been awarded. The LL.M. program start dates include January 2008, May 2008 and August 2008. For any additional information or inquiries, please feel free to contact:

- Thomas A. Gionis MD JD LLM MPH MBA MHA FICS  
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## **Asian Bioethics Association (ABA)**

The website for ABA is [eubios.info/ABA.htm](http://eubios.info/ABA.htm)

Please note that membership for 2008 is now due, and members of ABA will receive a discount to register for ABC9.

#### **New members**

Dr. Vajira H.W. Dissanayake MBBS (Colombo), PhD (Nottingham)  
Box 15, Matha Rd., Colombo, Sri Lanka  
Human genetics Unit, Faculty of medicine, University of Colombo, Sri Lanka  
[vajirahwd@hotmail.com](mailto:vajirahwd@hotmail.com)  
Genetics, Assisted reproductive technologies, bioethics

## **Preliminary Call for Papers:**

### **The Ninth Asian Bioethics Conference of the Asian Bioethics Association in Yogyakarta, Indonesia, 3-7 November 2008 *Bioethics in Asia: healthy and productive life in harmony with nature***

Research findings, discussion papers, and other contributions dealing with topics in bioethics and related disciplines are welcomed. Papers are invited on, but not limited to, the following themes:

- Asian Bioethics
- Can virtues be taught?
- Islamic Bioethics
- Biomedical and Biosciences Ethics
- Ethical Issues in Disaster Research and Management
- Ethnic Conflicts and Peaceful Co-existence
- Ethical Issues in Biomedical Research
- Ethical Issues on Organ Transplantation
- Ethics and Intellectual Property
- Public Health Ethics
- Technology and Culture
- Ethics of Emerging Technologies / Nanoethics
- Bioethics Education
- Cross-cultural Bioethics
- Environmental Ethics
- Science and Society
- Neuroethics

**Preliminary deadline** for receipt of abstracts for papers (200 words max)\* and proposed sessions (with lists of speakers and titles) is 31 January 2008, to Email: [nazif.amruhydari@yahoo.com](mailto:nazif.amruhydari@yahoo.com), [amru96@cbn.net.id](mailto:amru96@cbn.net.id)

The specific objectives of the ABC9 are:

♦ *to identify issues* in the enforcement of law, rules and guidelines and other regulatory means of 'good research practice' of basic and applied researches leading to quality health care involving human subjects in accordance with the universally accepted bioethical norms;

♦ *to interpret and apply* the precautionary approach; where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation; and

♦ *to recognize and duly support* the vital role in environmental management and development of local communities because of their knowledge and traditional practices.

This event will be organized by the ABA and Indonesian National Bioethics Commission, with the cooperation of UNESCO, WHO, and FAO. The local cooperating bodies and agencies will include industries, universities, and NGOs.

The updated information will be placed on the website: [www.kbnindonesia.org](http://www.kbnindonesia.org)

\*Persons who wish to apply for limited scholarship support should also submit a letter of explanation and resume. The conference will also make judgments for the best student presentations.

## **Conferences**

A bioethics conference calendar website is: <http://www.who.int/ethics/events/en/>

For a list of some ethics meetings in Asia and Pacific: [http://www.unescobkk.org/index.php?id=current\\_and\\_future\\_events](http://www.unescobkk.org/index.php?id=current_and_future_events)

### **UNESCO-University of Kumamoto Joint Bioethics**

#### **Roundtable: Self-Determination in Asia**

15-16 December, 2007 University of Kumamoto, Japan  
Contact: Dr. Darryl Macer, Prof. Takao Takahashi

### **Ninth Asian Bioethics Conference (ABC9): Healthy and Productive Life in Harmony with Nature, 3-7 November,**

2008, Yogyakarta, Indonesia. Hosts: Indonesian National Bioethics Commission.



# ASIAN BIOETHICS ASSOCIATION MEMBERSHIP 2008

<<http://eubios.info/ABA.htm>>

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