Ogmius



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Newsletter of the Center for Science and Technology Policy Research

CENTER FOR SCIENCE AND TECHNOLOGY POLICY RESEARCH COOPERATIVE INSTITUTE FOR RESEARCH IN ENVIRONMENTAL SCIENCES UNIVERSITY OF COLORADO AT BOULDER



Subscribers to Ogmius will be notified by email when a new edition is available, and may access it either in pdf or html format. The newsletter is also available online at

http://sciencepolicy.colorado.edu/ogmius.

Inside this issue:

Introduction to Ogmius	1
Ogmius Exchange Mother Gruesome's Nursery By Benjamin Hale	1
Research Highlight	
The Influence of Climate Change on the Functioning of Water Rights	3
Center News	
• We are Hiring!!	4
 Center Interim Director Dr. William (Bill) Lewis Testifies Before Congress 	5
 Roger Pielke, Jr.'s New Book Reviewed in Science, Nature, and The New Atlantis 	5
• Fall Noontime Seminar Series	6
Project News - Application Deadline for Graduate Certificate in Science and Technology Policy	6
Recent Publications	7
Recent Prometheus Blogs	7
Center in the News	8
S&T Opportunities	8
About Us & Donation	12

Introduction to Ogmius Exchange

his edition of Ogmius features an essay by Ben Hale (http:// sciencepolicy.colorado.edu/ about us/meet us/ben hale/), a faculty member in the Environmental Studies and Philosophy departments at the University of Colorado, Director of CU's Center for Values and Social Policy, and new affiliate of the Center for Science and Technology Policy Research. In it Ben discusses the tricky ethical and policy issues surrounding a recent decision to allow scientists to create human-animal hybridized embryos for experimentation. As Ben



notes, the new policy will allow scientists to create cytoplasmic hybrid embryos by inserting human DNA into empty animal eggs.

To read more of Ben's work, including The Moral Considerability of Invasive Transgenic Animals, visit his selected writings (http://www.practicalreason.com/). Your comments are welcome!

Ogmius Exchange Mother Gruesome's Nursery

arly last
month the British
government
approved plans



to allow scientists to create humananimal hybridized embryos for experimentation. The new policy will allow, among other things, creation of cytoplasmic hybrid embryos, a technique which involves the insertion of human DNA into empty animal eggs.

Many detractors find such experimentation ghastly. They express a range of worries, from concerns that the resultant creatures will be mutant human beings, to concerns that they might gain consciousness or suffer from

painful maladies. Most such worries seem unwarranted, influenced more by science fiction than reality. More theoretically, however, some have argued that such experiments blur the boundaries between human and animal. Unfortunately, it is unclear from most of these arguments what the implications of blurry boundaries are. Still others suggest that such research is horrific, and think that we should listen to our instinctive revulsion (the socalled 'yuck' factor) when setting public policy. But neither is it clear that all have this instinctive revulsion, nor that all ought to. Indeed, the Human Fertilisation and Embryology Authority produced a study reporting that a majority of British people are 'at ease' with the creation of such hybrids;

Ogmius Exchange Continued

and it was apparently this report that spurred the government to go forward with approval.

On the flipside, advocates claim that the potential benefits of such experiments are too great to get bogged down in icky details. They often also add that the only relevant difference between cell-level hybridizing and traditional animal husbandry is a matter of scale; suggesting therefore that scale oughtn't to matter.

In previous articles I've argued against most of these common positions. I've suggested, by contrast, that we can make good moral sense of this morass by appeal to constitutively embedded, but procedurally and socially validated, duties. That view is a bit too complex to cover in an essay of this length, so I'll take a shortcut. I think we have significant and special duties to our hybridized creations, just as we might have significant and special duties to our own children. Clumsy though this comparison may seem, I think there are important parallels. Consider the following:

Jones is an anonymous sperm donor. A research team decides to accept and cultivate his sperm for use in an experiment. Upon accepting his donation, they presumably exculpate him of responsibility for whatever eventuates from their experiment. If the experiment works well, the hybrid result will neither suffer nor gain consciousness, and Jones will have done nothing wrong. If the experiment does not work well, and the hybrid result is a hideous chimera stolen from the pages of an H.G. Wells novel, it will be the researchers, and not Jones, who have created such a monstrosity. Bad for them; not so bad for Jones. It is attractive to assume that Jones has done nothing wrong. He has behaved responsibly by donating his sperm anonymously and to responsible researchers. Presumably, under these conditions, the researchers assume responsibility for the outcome of their experiments. Jones's sperm is simply a resource, genetic material for the creation of a new creature.

What's enticing about this view is that it doesn't rely on mystical attributions of ethical value to genes or to human beings, and it also doesn't depend on spooky attributions of consciousness to bags of cells. Jones has provided genetic material and done little else, much like he might shed his hair or slough cheek cells while eating a cracker. Responsibility is neatly passed along by fiat, much like we might transfer responsibility for an automobile or a record collection.

Suppose now this: Smith is an anonymous sperm donor. He carries a dread genetic disorder for which there is a 90% chance of genetic inheritance. He is unaware of this disorder and so cannot inform researchers who hope to use his genetic material for a hybridizing experiment. Suppose that the

experiment goes poorly and that the hideous mutant humananimal chimera imagined above becomes a reality, partly due to the genetic disorder unwittingly carried by Smith. Should we not ask whether Smith's sperm, like Jones's sperm, is simply a genetic resource? Or can one reasonably say of Smith that he bears some responsibility to whatever creature eventuates as a result of the research? I am inclined to think that Smith maintains some responsibility to that creature, or at least some responsibility for its creation. To see this, it may help to take a few more steps back.

Would we feel any differently if Jones and Smith had donated their sperm not to a research team, but to a prospective parental unit hoping to give birth to a human child? I think we would. In Jones's case, we might argue that the prospective parents could cleanly assume responsibilities for the child. In Smith's case, I think matters are considerably blurrier. If, through an unfortunate cascade of genetic events, the child contracts Smith's genetic disorder, there's a sense in which we would want to say of Smith that he owes something to the child, that he is the fallback caregiver, even though, by contract, he has done just what Jones has done. If that's hard to see, suppose that the child's adoptive parents die, and that the child will be left to suffer in an institution for the remainder of its days. Is Smith not the standout default person to approach here, if only at least to ask whether he can or would like to help? I think he is.

What then cements Smith's responsibility to his offspring but allows Jones to exculpate himself of responsibility to his, if anything? Surely Jones passes along genetic information just as Smith does, and surely this genetic information provides just as many shortfalls to its recipient as it does windfalls. Same goes for Smith, as we saw. Surely, further, both Smith and Jones can enter into agreements with others in which they relinquish legal responsibility for their offspring. There is an important sense, however, in which Jones and Smith both have a responsibility to their offspring, even though they may have signed away their legal rights and responsibilities as parents. I mean so in this sense: they've both played a critical material role in a chain of events that eventuates in a morally indeterminate outcome. To understand the far-reaching extent of this moral indeterminacy, and particularly how the moral indeterminacy is not restricted to an unpleasant biological outcome, suppose now Brown, who is also an anonymous sperm donor.

Suppose that some malicious profiteer, Snidely Whiplash, decides that he will cultivate sperm in random sperm banks for the purpose of selling said children into sex slavery. Suppose he doesn't tell anyone his plans, but instead just randomly uses Brown's genetic material for his own bad

Ogmius Exchange Continued

purposes. Now, on some accounts of responsibility, there's no sense in which Brown could be said responsible for whatever happens to his offspring. The sex slave operation is clearly not of Brown's creation or intent, and he could never have anticipated that Mr. Whiplash would be so base as to use his (Brown's) sperm to create sex slaves. But in another sense, Brown has clearly lost control of his genetic material, which he is responsible for.

It is tempting to think that any of these gents—Jones, Smith, or Brown-can sign responsibility over to sperm banks, or to prospective parents, or even to research teams, such that those on the receiving end of the contract become responsible for the genetic material and its development. But I think our cases of Smith and Brown demonstrate that this does not completely capture how responsibility is transferred from parent to child, or from donor to recipient. Effectively, Brown has enabled the possibility that someone could breed his own children into sex slavery. For this he is somewhat responsible. True, he himself did not breed them into sex slavery and had not even the slightest malicious intent, but by relinquishing control of his genetic material, he creates the conditions necessary for this bad outcome. He would be right to feel terrible that his biological children were put to this use; and we would be right to chastise him for not being more cautious with his sperm. We therefore may not want to hold Brown 'culpable' for the unfortunate state of affairs, but this does not mean that he is at least somewhat responsible (meaning that he has a moral obligation to ensure that this state of affairs does not come into being) for having enabled it.

It would be easy, given public coverage of this issue, to paint the hybridization policy question as a debate between the squeamish moralist and the cold, calculating cost-benefit analyst. I think that's too simple. Despite the convenience of contract law and legal responsibility, we can't just sign away our moral responsibilities to our children, or to our genetic material. If we could, daddies and mommies could abandon moral responsibility to their children with the mere stroke of a pen. And they can't.

So the truly important observation is that our obligations aren't tied into our sentimental revulsion, our genetic code, or our contracts with others; and they also don't stop at the benefits or the drawbacks of such hybridization research. They are tied to pre-existing commitments that are socially upheld but constituted by our identities as scientists, academics, citizens, and, in this case, parents.

Having said all this, nothing above should serve as an outright condemnation on human-animal hybridization. It should only suggest that human beings have obligations to human-animal hybrids that extend over and above concerns about life, humanbeingness, consciousness, or harm. If it turns out that the hybrid creations that emerge from this research develop into the nightmarish chimeras of Dr. Moreau's island, that's a hideous outcome that should make us more than blanch. We will have done something deplorable; and most importantly, it will be we—researchers, donors, and advocates of this research—who have made the deplorable happen.

I don't at all expect a deplorable outcome. I don't even think it's a great possibility, given the stringent oversight requirements of internal review boards and the fact that there are termination options pretty early in the gestation of the hybrid. But I do think it's important for us to bear in mind that we are not building automobiles and we are not gluing atoms together in a beaker. We are acting as parents to these hybrids, intent on creating genetic farms out of our offspring.

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Research Highlight

The Influence of Climate Change on the Functioning of Water Rights

enter Managing Director Bobbie Klein (http://sciencepolicy.colorado.edu/about_us/meet_us/bklein/), along with Center Research Affiliate Doug Kenney (http://lawweb.colorado.edu/profiles/profile.jsp?id=87), Chris Goemans of the Department of Agricultural and Resource Economics at Colorado State University, and Christina Alvord of the Western Water Assessment, are participating in a recently launched WWA study titled "The Influence of Climate"

Change on the Functioning of Water Rights." The following is a description of the project:

Most surface water in the western states is allocated under the prior appropriation system. Water rights under this system are generally defined by the quantity of water to be diverted or consumed; the type of use (e.g., irrigation, municipal, etc.); the priority date (i.e., the date of the first diversion); and the point of diversion. Additionally, there is often some description—either implicit or explicit—of the time frame

Research Highlight Continued



(e.g., season) associated with use of the right. The extent to which these water right details have been formally established and adjudicated varies greatly; many long-established rights—especially those where no changes have been made regarding the parameters

outlined above and/or where no controversies or shortages typically exist—have not been fully quantified or otherwise precisely defined. Local administrators frequently make these determinations as part of day-to-day and year-to-year operation of water systems.

In most settings, surface water rights are sustained directly by spring snowmelt, or by pulling water from reservoirs replenished during this period of spring snowmelt. Since many characteristics of the spring snowmelt are governed by weather and climate, long-term climate change may impact the functioning of water rights in the western states. In this investigation, we are interested in the impacts of earlier snowmelt which can affect water rights in at least 2 significant ways: (1) by modifying the date upon which rightsholder wish to divert, store and/or use water; and (2) by increasing water demand through a lengthening of the growing season.

This project will try to ascertain the extent to which the mismatch between hydrographs and temporal elements of water rights is occurring in several western states, the extent to which it is problematic, and the mechanisms available to remedy any observed problems.

For more information visit the project homepage (http://www.colorado.edu/current_projects/
water_rights_climate_change.html).

Comments are welcome! bklein@colorado.edu.

Center News We Are Hiring!!

his is a fantastic opportunity for individuals who conduct science



conduct science and technology policy research. Please see our we

research. Please see our webpage at: http://sciencepolicy.colorado.edu/ for the wide range of research and outreach going on at the Center. Also feel free to contact Lisa Dilling (ldilling@cires.colorado.edu) at the Center if you have any questions about the position.

Faculty Position, Center Director Science and Technology Policy Research CIRES, University of Colorado at Boulder

The University of Colorado at Boulder seeks to hire a Faculty Director for the Center for Science and Technology Policy Research of the Cooperative Institute for Research in Environmental Sciences. Applicants must have demonstrated achievement in science and technology policy research. This position allows substantial time for research as well as leadership and administrative service as Center Director. The successful candidate must have an established interest in interdisciplinary research and teaching, and must be willing to

contribute to both undergraduate and graduate teaching related to science and technology policy. The position will carry tenure within an academic department to be mutually decided upon by the candidate and department. Possibilities include Geography, Political Science, Environmental Studies, Communications, and numerous others.

Required Qualifications: Ph.D. in a field relevant to science and technology policy, a demonstrated record of excellence in extramurally supported research, and a commitment to teaching at the undergraduate and graduate levels.

To Apply: Applicants should send a letter of application, curriculum vitae, a statement on teaching experience, and three names to be used for letters of reference to http://www.jobsatcu.com, job posting number 802370.

Questions about the application process can be directed to CIRES Human Resources (<u>Dempsey@CIRES.Colorado.edu</u>). Review of applications will begin November 15 and continue until the position is filled.

The University of Colorado at Boulder is committed to diversity and equality in education and employment.

Center News

Center Interim Director Dr. William (Bill) Lewis Testifies Before Congress

enter interim Director
Dr. William (Bill) Lewis
(http://
sciencepolicy.colorado.edu/
about us/meet us/bill lewis/)
testified at an oversight hearing
before the House Committee on
Natural Resources on July 31. The
topic was "Crisis of Confidence:
The Political Influence of the Bush

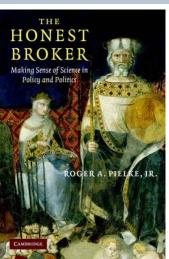


Administration on Agency Science and Decision-Making" (http://resourcescommittee.house.gov/index.php? option=com jcalpro&Itemid=32&extmode=view&extid=85). Dr. Lewis testified about his experience as chair of the Committee on Endangered and Threatened Fishes in the Klamath River Basin ("Klamath Committee"). His testimony is available at: http://resourcescommittee.house.gov/images/Documents/20070731/testimony-lewis.pdf.

Center News

Roger Pielke, Jr.'s New Book Reviewed in Science, Nature, and The New Atlantis

he new book by Roger Pielke, Jr. – The Honest Broker – has received positive reviews in Science (http://www.sciencemag.org/cgi/content/full/317/5840/900) and Nature (by subscription only) (http://www.nature.com/nature/journal/v448/n7156/full/448867a.html).



A few quotes from the review by Georgetown University's Nathan Hultman appearing in the 17 August 2007 issue of *Science*:

"In The Honest Broker: Making Sense of Science in Policy and Politics, Roger Pielke Jr. successfully illuminates these challenges to science and scientists."

"Pielke's framework provides a helpful starting point for investigating factors that complicate the science-society relationship. . . Pielke deftly shows how scientists' selections among these options can affect outcomes."

"[T]he book's direct language and concrete examples convey the concepts to a wide audience. By categorizing different roles in the often vexed but necessary relations between scientists and their social world, Pielke clarifies choices not only for scientists but also for the diverse

members of democratic society, for whom scientific perspectives are an essential component of better policy."

And from the review by Andrew A. Rosenberg from the University of New Hampshire in the 23 August 2007 issue of *Nature*:

"Happily, the book by Roger Pielke, Jr. on the engagement of scientists in policy offers a pithy, insightful basis for discussing the contributions scientists can make to advising policy makers..."

"This is a clear, thought-provoking book that helps move us away from thinking of science as 'pure' and distinct from policy. It would make an excellent basis for a graduate seminar. It isn't a textbook, but a think-piece, and we all need to consider carefully our responsibility to engage as scientists in policy making."

Jonathan Adler, Professor of Law and Director of the Center for Business Law and Regulation at Case Western Reserve University School of Law, also has a thoughtful review of The Honest Broker in *The New Atlantis* (http://www.thenewatlantis.com/archive/17/adler.htm).

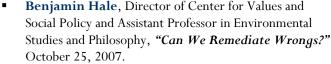
The Honest Broker may be purchased at: http://www.amazon.com/Honest-Broker-Making-Science-Politics/dp/0521694817/ref=pd bbs sr 1/105-0071991-0524472? ie=UTF8&s=books&qid=1187369082&sr=8-1. Cambridge University Press is offering The Honest Broker at 20% off -- for the coupon code visit the CUP site: http://www.cambridge.org/us/uspromotion/polsci/poltheory.html.

Center News Fall Noontime Seminar Series

he Center's popular Noontime Seminar Series enters its 7th year this fall with an exciting lineup of speakers:

- William Lewis, CIRES Associate Director and Interim Director for Center for Science and Technology Policy Research, "Klamath Raises its Head Again." September 13, 2007.
- Rad Byerly, Research Scientist at the Center for Science and Technology Policy Research, "Health

Policy Research, "Health Care as a Science Policy Issue." October 4, 2007.





Wayne Ambler giving a talk on April 18, 2007: "How Should We Introduce Engineering Undergraduates to STS and Policy Issues?"

- Paul Ohm, Associate Professor at University of Colorado School of Law, "The Internet Privacy Debate: The Problem with Balancing Security and Privacy." November 1, 2007.
- David Cherney, CSTPR and ENVS graduate student, "The American West's Longest Large Mammal Migration: Clarifying and securing the common interest." November 15, 2007.
- Genevieve Maricle, CSTPR and ENVS graduate student, "Shaping Science: How to Turn Science Studies into Science Action." November 29, 2007.

All talks are free and open to the public and will take place in the Center's conference room (for directions see: http://sciencepolicy.colorado.edu/about_us/find_us.html).

For a complete list of all past and future talks at or sponsored by the Center (with any schedule changes), along with presentations (if available), please visit our Talks page: http://sciencepolicy.colorado.edu/outreach/center_talks.html.

To receive email notification of upcoming talks, along with abstracts, add your email address at this page: http://sciencepolicy.colorado.edu/mailman/listinfo/events/.

Project News

Application Deadline for Graduate Certificate in Science and Technology Policy

he Graduate Certificate in Science and Technology Policy at the University of Colorado-Boulder is a rigorous educational program to prepare students pursuing graduate degrees for careers at the interface of science, technology, and decision making. Recipients of the certificate have gone on to positions in Congress, academia, NOAA, and elsewhere.

Each year, the certificate program will begin with a capped enrollment of 18 students per cohort. These 18 students will take three required courses, (Science and Technology Policy Certificate, or STPC) STPC 6000/ENVS 5100, STPC 6010/ENVS 5110, and STPC 6020/ENVS 5120, as well as 3 additional courses from a list of approved electives. See: http://sciencepolicy.colorado.edu/stcert/curriculum/courses.html for list of required courses and electives). Successful completion of the certificate program requires the

completion of 18 hours of coursework (or coursework plus internship credit).

Applications are due **November 30, 2007** for admission into the Program beginning spring semester 2008. Students will be notified of their acceptance into the program by December 11, 2007. To apply students must provide the following information by the deadline to Ami Nacu-Schmidt (ami@cires.colorado.edu):

- A statement of interest
- Academic transcripts
- A letter of support from a faculty member in their home department

Acceptance will be based on the qualifications of the student, as well as the importance of fostering a diversity of disciplinary representation within the program.

For more information visit the certificate program website: http://sciencepolicy.colorado.edu/stcert/.

Recent Publications

Dilling, L., 2007. Toward Carbon Governance: Challenges across Scales in the United States. Global Environmental Politics, Vol. 7, No. 2, Pages 28-44, May.

Abstract: Public and private sector actors increasingly recognize the need for action to address climate change. With the introduction of "carbon sinks" into the policy dialogue, the notion of managing

Introduction
Nations, regions, local communities and individuals are currently moving to ward or are in the process of implementing actions to reduce carbon dioxide emissions because of concern over global warming (Moser this issue). Stan anging Carbon milks been directly described the standard of the

Toward Carbon Governance: Challenges

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www.camare.tust.org/index.php; and Unicago Camarie Exc http://www.chicagoclimatex.com/. Global Environmental Politics 7:2, May 2007

human activities to mitigate climate change has extended beyond energy systems and emissions of carbon dioxide to include management of the carbon cycle itself, through manipulation of the terrestrial and oceanic realms. The number of decision makers involved and scope of managing the carbon cycle deliberately for climate purposes raises enormous challenges to governance including identifying appropriate mechanisms where they do not yet exist and adding additional criteria onto existing mechanisms that are already affecting the carbon cycle. In this paper, I define effective carbon governance as limiting the amount of carbon dioxide in the atmosphere. This paper outlines a number of challenges to effective carbon governance at multiple scales using the example of land use in the United States and elsewhere. **Read more** at: http:// www.mitpressjournals.org/doi/abs/10.1162/ glep.2007.7.2.28?journalCode=glep.

Pielke, Jr., R.A., 2007. *Late Action by Lame Ducks*. Bridges vol. 15, September.

Excerpt: The administration of George W. Bush seems to have discovered a new interest in the issue of climate change, starting just before the G8 summit last summer in Germany. Common wisdom holds that this interest is either shallow or, more cynically, an



effort to derail ongoing international negotiations via distraction. But when President Bush proposed that a new international framework for climate change be developed by the end of 2008, his last year in office, he had no trouble getting other world leaders to agree enthusiastically, and a first meeting is scheduled for this week in Washington.

The dynamics of late-term lame-duck presidencies (i.e., those ineligible to run again for office) suggest that the climate issue is indeed ripe for action at the end of 2008, especially if a Democrat is elected in November. These dynamics give at least some reason for thinking that action on climate change under the Bush Administration may not be so far-fetched a possibility... **Read more** at: http://sciencepolicy.colorado.edu/admin/publication_files/resource-2571-2007.25.pdf.

Recent Prometheus Blogs

August 29, 2007 Twenty years of public opinion about global warming by Kevin Vranes

Matt Nisbet has a good paper out now about polling results on global warming...The polling supports what we've been saying for a while: the public is there. They believe (even if they think the scientific consensus isn't as strong as it really is) ... Read more at: http://sciencepolicy.colorado.edu/prometheus/archives/climate_change/001229twenty_years_of_publ.html.

September 7, 2007 Advice Requested for Survey Analysis Guest Submission by Hans von Storch and Dennis Bray

In the following we outline a research strategy to characterize sub-groups of climate scientists; the idea is to first propose a short operational list of certain interesting, mostly exclusive but not complete subgroups; these are related to three general criteria.

At this time we ask for comments on both the list of the four categories and on the three general criteria. When we have come to a conclusion with regard to the list and to these

Recent Prometheus Blogs Continued

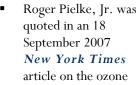
criteria, we will try to map the responses collected in our surveys of climate scientists to these groups and criteria — with the idea that in this way we may describe the a host of views , conceptions and perceptions held by these different groups... Read more at: http://sciencepolicy.colorado.edu/

prometheus/archives/ climate change/001232advise requested for.html.

For more Prometheus visit this site: http://sciencepolicy.colorado.edu/prometheus/.

Center in the News

enter personnel continue to receive national media attention on a variety of topics.





article on the ozone layer and the Montreal treaty, From Ozone Success, a Potential Climate Model (http://www.nytimes.com/2007/09/18/science/18clim.html?r=2&oref=slogin&oref=slogin), by Andrew Revkin.

 Roger Pielke, Jr. was cited in a 26 August 2007 Mother Jones article on future hurricanes hitting the US coast, A Hundred Katrinas: Climate Change and the Threat to the U.S. Coast (http://www.motherjones.com/news/featurex/2007/08/a-hundred-katrinas-climate-change-and-the-us-coast.html), by John McQuaid.

- Lisa Dilling appeared on the 13 August 2007 Santa Barbara's Business and Technology radio show (http://www.business-and-technology.com/services.htm).
- Roger Pielke, Jr. was quoted in a 10 August 2007 National Ledger article, Newsweek Burns Truth in Global Warming Story (http://www.nationalledger.com/cgi-bin/artman/exec/view.cgi?archive=16&num=15348), by Roger Aronoff.
- Roger Pielke, Jr.'s 2005 paper Hurricanes and Global Warming was cited in a 10 August 2007 Marketwire article, Bad News for Science at Newsweek Magazine, says SPPI (http://www.marketwire.com/mw/release.do?id=759815).

S&T Opportunities

Living with climate change: are there limits to adaptation? February 7 & 8 2008 Royal Geographical Society, London

he Tyndall Centre for Climate Change Research and the



University of Oslo, with the support of the Global Environmental Change and Human Security (GECHS) project, announce a two day international conference to be held on 7 and 8 of February 2008 at the Royal Geographical Society in London. The title of the conference is "Living with climate change: are there limits to adaptation?"

The overall objective of this conference is to consider

strategies for adapting to climate change, in particular to explore the potential barriers to adaptation that may limit the ability of societies to adapt to climate change and to identify opportunities for overcoming these barriers. The conference is aimed at researchers and practitioners with an interest in understanding how societies adapt to climate change.

The conference will explore the following three themes:

 Theme 1: Adapting to thresholds in physical and ecological systems

Keynote speaker: Garry Peterson, McGill University Projections indicate significant physical and ecological changes as a result of a changing climate.

What barriers and limits exist to adapting to such changes? What thresholds are there in physical and ecological systems beyond which it is not feasible for

S&T Opportunities Continued

societies to adapt? In what ways is adapting to +2 degrees Celsius possible? What might adaptation mean in a system nearing a threshold? How is adaptation possible if the change occurring is irreversible? Which habitat ranges, ecosystem functions and threats of extinction of particular species have been identified to constitute thresholds?

■ Theme 2: The role of values and culture in adaptation

Keynote speaker: Benjamin Orlove, University of California

Values and culture underpin how societies perceive and interpret the world, and this in turn influences adaptation decisions and actions.

In what ways do values, including non-material values, underpin adaptation decisions and actions? What role does culture play in adaptation? What do irreversible losses of cultural heritage mean to societies? How do impacts of climate change on culture differ from other changes in culture? How can the potential values of future generations be incorporated into current adaptation?

 Theme 3: Governance, knowledge and technologies for adaptation

Keynote speaker: Susanne Moser, National Center for

Atmospheric Research (NCAR)

Governance structures determine the way in which existing adaptive capacity can be utilised.

Knowledge and technology also affect how adaptation can proceed in societies.

What are the barriers to adaptation within various governance structures? In what ways does the status of knowledge and embedded uncertainty about climate change act as a limit to adaptation? How do different ways of knowing influence adaptation? Are there limits to the opportunities that technology can provide for adaptation? How may different forms of governance, including democratic governance, act as barriers to adaptation?

Registration at reduced rate before: 15 December 2007

Submission of full papers: 31 December 2007

Close of registration 18 January 2008

The call for abstracts is closed but you can register at: http://www.tyndall.ac.uk/research/programme3/adaptation2008/ registration.html.

Ogmius

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Or send an email to:

ami@cires.colorado.edu

and include the following information:

- Name
- Interests and Needs
- Organization

- Email Address
- How you heard about Ogmius

S&T Opportunities

American Geophysical Union Fall Meeting December 10-14, 2007

Session U13: Cooler Living in a Warming World: Solutions to the Carbon Problem

his unique session will bring together scientists, policy experts, business leaders, and government officials to discuss potential



solutions to addressing the problem of human-induced climate change. We hope to stimulate discussion among different individuals and groups who often do not have the opportunity to interact.

Are you a researcher working on mitigation, adaptation, or technological solutions to global warming? A business leader working on greening your company? A policy person thinking about national or local responses to the problem? We want to hear from you!

Session Description: Given the mature body of evidence on human-induced climate change, this session will focus on real-world solutions to the carbon problem. The enormous scale of the problem and the potentially short time period remaining in which to effect meaningful change call for solutions that will succeed within the current world economy. We seek contributions from: (1) experts in energy conservation, alternative energy generation, carbon capture and sequestration (CCS), and other strategies to decrease carbon emissions, (2) the policy community on the status of legislation to encourage positive change and prepare for large climatic change, (3) private companies on their current efforts to shrink their environmental footprint while becoming more profitable, and (4) citizen and government leaders from cities or smaller communities which are taking steps toward sustainability. Our goal is to spark ideas and increase collaboration between these diverse sectors.

For more information see: http://www.agu.org/meetings/fm07/.

S&T Opportunities

UIC University of Illinois at Chicago

New Appointment in Public Administration Faculty Position in S&T Policy

he Graduate Program in Public Administration (GPPA) in the College of Urban Planning and Public Affairs (CUPPA), University of Illinois at Chicago (UIC) (http://www.uic.edu/cuppa/pa) plans to hire a new faculty member at the senior Assistant or Associate level beginning in August 2008.

A strong commitment to an active research program, to excellent teaching at both the graduate and undergraduate levels, and to public service is expected. Candidates with research and teaching interests in science and technology policy, public management, and program evaluation are especially sought. The program is particularly interested in attracting individuals who have experience in conducting funded research.

The public administration program offers two graduate degrees: the Master in Public Administration (MPA), which is fully accredited by the National Association of Schools of Public Affairs and Administration, and the Ph.D. Beginning fall 2007, the Public Administration program will also co-

direct an undergraduate degree program (B.A. in Urban and Public Affairs) with CUPPA's Urban Planning and Policy program.

Candidates must have an earned Ph.D. in public administration, political science, public policy, economics, or a related field. Successful candidates will be required to teach four courses over two semesters. Underrepresented faculty are particularly encouraged to apply.

The University of Illinois at Chicago is a Carnegie Doctoral/Research – Extensive institution. Located just west of Chicago's Loop, it enrolls 25,000 students and is the largest public research university in the Chicago area. The College of Urban Planning and Public Affairs was created in 1995 as part of UIC's Great Cities Initiative. It houses two academic programs (Public Administration and Urban Planning). The College also hosts seven research centers: the Survey Research Laboratory, the Great Cities Institute, the Urban Transportation Center, the Institute for Research on Race and Public Policy, the Great Cities Urban Data Visualization Lab, the Center for Urban Economic Development, and the Voorhees Center for Neighborhood and Community Improvement.

Application Procedure. Please submit a curriculum vitae, confidential letters of recommendation from at least three

S&T Opportunities Continued

references, two sample publications, a one-page statement of research interests, and a statement of teaching philosophy and experience to: Prof. Eric Welch, Chair, Public Administration Search Committee, Graduate Program in Public Administration (M/C 278), University of Illinois at Chicago, 412 S. Peoria St., Chicago, IL 60607-7064 (ewwelch@uic.edu). Applications received by November 1, 2007, will receive fullest consideration. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

It is the policy of the University of Illinois at Chicago not to engage in discrimination or harassment against any person because of race, color, religion, sex, national origin, ancestry, age, marital status, disability, sexual orientation, unfavorable discharge from the military, or status as a disabled veteran or a veteran of the Vietnam era and to comply with all federal and state nondiscrimination, equal opportunity, and affirmative action laws, orders and regulations.

S&T Opportunities

Faculty Position, Center Director Science and Technology Policy Research CIRES, University of Colorado at Boulder

he University of
Colorado at
Boulder seeks to
hire a Faculty
Director for the Center for



Science and Technology Policy Research of the Cooperative Institute for Research in Environmental Sciences. Applicants must have demonstrated achievement in science and technology policy research. This position allows substantial time for research as well as leadership and administrative service as Center Director. For more information about this position please see the full job description on page 4 of this issue.

S&T Opportunities

Assistant Professor
Tenure Track Position
Purdue Departments of Political Science and Earth
and Atmospheric Science
Climate Change Policy and Science

he Purdue
Departments of
Political Science and
Earth and



Atmospheric Science, along with the Purdue Climate Change Research Center, announce an opening for a tenure track position in the area of Climate Change Policy and Science, beginning August 2008. The appointment will be at the assistant professor level.

The successful candidate must have a promising, theoretically driven research agenda and an ability and commitment to provide effective graduate and undergraduate teaching. Applicants should have a demonstrated research interest in issues related to climate change policy and science. The ideal applicant will have interest in and experience with interdisciplinary teaching or research, and have a commitment to working with the Purdue Climate Change Research Center, an emerging area of interdisciplinary research and teaching emphasis at Purdue.

A Ph.D. in political science, public policy, or another appropriate interdisciplinary program is required. The position will be appointed 75% in the Department of Political Science and 25% in the Department of Earth and Atmospheric Science, with the tenure home in Political Science. Teaching obligations will be shared between the two departments with the majority of courses taught in Political Science.

Application should include curriculum vitae, three letters of reference, samples of written work, instructional materials such as syllabi and course evaluations, and a cover letter discussing the applicant's commitment to and experience with interdisciplinary research and teaching.

Send materials to:

Prof. Leigh Raymond, Search Committee Chair Department of Political Science, Purdue University 100 N. University St. West Lafayette, IN 47907-2098.

Review of applications will begin October 15 and will continue until the position is filled. Women and under-represented candidates are especially encouraged to apply. Purdue University is an equal access/equal opportunity/affirmative action employer.

About Us

Ogmius is the newsletter of the Center for Science and Technology Policy Research which is published four times a year. The Center is within the Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado-Boulder. The mission of CIRES, which was established in 1967, is to act as a national resource for multidisciplinary research and education in the environmental sciences. CIRES is jointly sponsored by the University of Colorado-Boulder and the National Oceanic and Atmospheric Administration.

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