

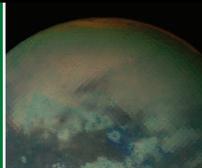
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LETTERS

edited by Jennifer Sills

Immigration Law Jeopardizes University Collaboration

RECENTLY, THE ARIZONA LEGISLATURE PASSED AN AGGRESSIVE IMMIGRATION law requiring that local police ask individuals for proof of citizenship or immigration status if there is reasonable suspicion that they are in the United States illegally. We believe that this law increases the likelihood of race-based inquiry by police and the possibility that individuals will be treated differently solely because of their appearance. The consequences of this law can be profound.

The passage of the law has led to similar apprehension in Mexican institutions of higher learning. Many Mexican faculty and students have expressed serious concerns about traveling to Arizona to work on collaborative projects. Four Mexican universities so far have also canceled or placed on hold programs that required Mexican students to attend Arizona universities (1). Sadly, this means that innovative collaborative programs in fields such as medicine, toxicology, and biotechnology, as well as a binational economic development initiative (Advanced Technology Transfer Program) aimed at increasing the quality of life of citizens of Mexico and Arizona, are now in jeopardy.

The faculty and students that comprise an educational community, whether on a single university campus or across international borders, represent a social model built upon diversity of culture, ethnicity, and ideas. Indeed, institutions of higher learning exist to educate and enlighten our population precisely so that practices such as racial stereotyping are recognized as destructive forces that are contrary to basic principles of human dignity. As faculty and students of



Unintended consequences. Concerns about Arizona's new law have led Mexican universities to cancel collaborative programs.

Mexico and the universities of the state of Arizona, we must continue to work hard to celebrate the richness of the diversity of our border, work across fiscal and cultural boundaries, and strive to better our ways of life. We will continue to work in a collaborative spirit, which is the hallmark of all great societies.

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Note

1. Canceled programs include a mobility program for bachelors of arts students at the Universidad Nacional Autónoma de México, a Technology Transfer summer program at the Centro de Investigación Científica y de Educación Superior de Ensenada, all collaboration programs at the Universidad de Guanajuato (UG), and all collaboration Programs at the Universidad Autónoma de San Luis Potosí.

Graduate Education: The Future Is Now

AS CHAIR AND VICE CHAIR OF THE COMMISSION on the Future of Graduate Education, we appreciated J. Mervis's detailed News of the Week story on the Commission's report, *The Path Forward: The Future of Graduate Education in the United States* ("Report seeks expansion in a time of belt-tightening," 7 May, p. 678). We would like to address the issue it raised about the timing of the report's recommendations.

It is clear that the United States faces serious fiscal challenges. The Obama Administration has begun to address reducing the federal deficit, which will help ensure our

long-term prosperity. Every effort must be made to spend public dollars wisely, focusing on those investments that will yield enhanced productivity in the future.

The Commission's recommendations are designed to be an integral part of a national innovation strategy to ensure that the United States will have the intellectual leadership, along with the innovative technology, necessary to be successful in the 21st century global economy. A central theme of the Commission's report is how graduate education plays an essential role in strengthening our national competitiveness and innovation capacity, especially given the projected 17 to 18% increases over the next decade in the number of jobs

requiring a doctoral or master's degree (1).

Our proposed investment of \$10 billion over the next 5 years for a graduate education training initiative will yield substantial benefits to our country in the future. We must be—and we are—ready with a plan that charts a path forward.

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1. U.S. Bureau of Labor Statistics, "Employment projections: 2008–2018 summary" (2009); www.bls.gov/news.release/ecopro.nr0.htm.

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Sustainability: A Household Word

I THANK Q. WANG AND G. P. PETERS *ET AL.* (“China’s environmental civilian activism” and “Effects of China’s economic growth,” Letters, 14 May, p. 824) for responding to my Policy Forum, “China’s road to sustainability” (2 April, p. 50). Their Letters reiterated important forces affecting sustainability, which I have previously addressed (1–3).

In contrast to Peters *et al.*, I maintain that the direct and indirect impacts of households on the environment (4) are important and deserve much more attention. For example, the household sector is the major direct and indirect consumer of energy (5). From 1980 to 2006, direct residential electricity usage in China increased 31-fold, whereas electricity usage in other sectors increased only 8-fold (6). In 2005, households’ indirect energy usage (e.g., energy usage by other sectors that produce and transport products

for households) was 4.5 times as high as their direct energy usage; between 1992 and 2005, indirect energy usage increased 6.3 times as fast as direct energy usage (7). CO₂ emissions from households increased over time (5, 8). With increasing domestic demand and household proliferation (rapid increase in the number of households) in China, household impacts on the environment may continue to rise in the future.

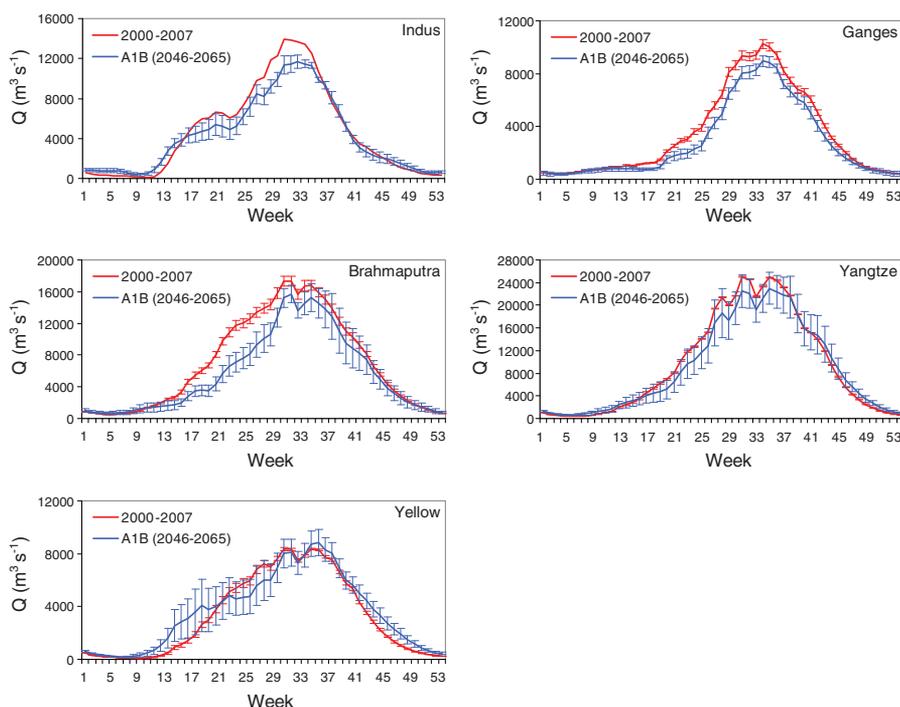
I agree with Wang that more people in China have been involved in environmental civilian activism against environmental damage from industries, but it is essential to consider their own increasing environmental impacts that result from lifestyle changes such as increasing consumption, increasing demand for household products, and increasing divorces (9). To minimize the environmental impacts of industries, it is important to reduce household demand for industrial products.

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CORRECTIONS AND CLARIFICATIONS

Reports: “Climate change will affect the Asian water towers” by W. W. Immerzeel *et al.* (11 June, p. 1382). In Fig. 3, the superscript minus signs in the units along the y axis were mistakenly omitted. The units should have read Q (m³ s⁻¹). The corrected figure is shown here.



TECHNICAL COMMENT ABSTRACTS

Comment on “Patterns of Diversity in Marine Phytoplankton”

Jef Huisman

Barton *et al.* (Reports, 19 March 2010, p. 1509) argued that stable conditions enable neutral coexistence of many phytoplankton species in the tropical oceans, whereas seasonal variation causes low biodiversity in subpolar oceans. However, their model prediction is not robust. A minor deviation from the neutrality assumption favors coexistence in fluctuating rather than stable environments.

Full text at www.sciencemag.org/cgi/content/full/329/5991/512-c

Response to Comment on “Patterns of Diversity in Marine Phytoplankton”

Andrew D. Barton, Stephanie Dutkiewicz, Glenn Flierl, Jason Bragg, Michael J. Follows

Huisman argues that environments of intermediate variability promote coexistence of model phytoplankton, apparently contrasting our hypothesis that stability allows for greater diversity of equivalent competitors in the ocean. We argue that our original interpretations of the mechanisms governing model diversity patterns remain valid and that Huisman’s results are complementary to our hypotheses.

Full text at www.sciencemag.org/cgi/content/full/329/5991/512-d

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Studies Support Probable Long-Term Safety of MRI

F. S. PRATO *ET AL.*’S LETTER (“MRI SAFETY NOT scientifically proven,” 30 April, p. 568), and the News story to which it referred (1), questioned the safety of exposure to strong magnetic fields associated with magnetic resonance imaging (MRI) scans. However, neither the Letter nor the related News story provides new evidence of risk from MRI. Prato *et al.*’s reference to a study that used functional MRI (fMRI) does not address the issue of MRI safety (2).

The literature on MRI safety focuses on the demonstrated risks of (i) physical injury from ferromagnetic objects and (ii) magnetic fields in connection to implanted medical devices (3). The limited prospective studies on the bioeffects of MRI have not identified significant biological or neurocognitive risks, even at fields up to 8 T in humans (4)

and 9.4 T in animals (5). Because of the low magnetic susceptibility of biological tissues, exposure to static magnetic fields alone produces no measurable long-term effects (6). A recent review of the health effects of static magnetic fields by Feychting concludes that the available evidence from epidemiological studies is not sufficient to draw any conclusions about potential health effects of static magnetic field exposure (7).

Risks associated with MRI are recognized and documented. The FDA has published guidelines that recommend limits for exposure to static magnetic fields below 8 T, magnetic field gradients below 6 T/s, and radio frequency fields in order to protect tissues from heating (8–10). Operating within these guidelines, our own longitudinal fMRI study in healthy children who underwent five scans over the course of 5 years found no decline in IQ scores, which were in the average range or better (11).

Proving the absence of harm is difficult, but these studies support the probable long-term safety of MRI. If evidence can be found for an adverse effect, scientists using MRI as a tool to study brain development in healthy children must pause to consider the implica-

tions. Meanwhile, it is not factually correct to state that “no study to date has shown that CT [x-ray computed tomography] increases cancer risk” as Prato *et al.* have done; drawing such parallels between MRI and x-ray exposure is inappropriate and may foment unfounded fear (12).

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Letters (~300 words) discuss material published in *Science* in the previous 3 months or issues of general interest. They can be submitted through the Web (www.submit2science.org) or by regular mail (1200 New York Ave., NW, Washington, DC 20005, USA). Letters are not acknowledged upon receipt, nor are authors generally consulted before publication. Whether published in full or in part, letters are subject to editing for clarity and space.

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