

LETTERS

Edited by Jennifer Sills

HIV cover ill-advised

I AM CHAIR OF THE Board of Directors of the National Organization of Gay and Lesbian Scientists and Technical Professionals (NOGLSTP) that encompasses lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ) people in science, technology, engineering, and mathematics. On behalf of NOGLSTP, an AAAS affiliate since 1994, I wish to register our indignation with the 11 July cover of *Science* showing transgender sex workers from Jakarta. The cover, a misguided attempt to pique interest in reading the special section on HIV/AIDS, has provoked many readers, including many members of our organization, to express their dismay at *Science's* lack of decorum and lack of sensitivity to a much maligned and misunderstood community. The scant attention the magazine paid to the transgender sex worker community makes these omissions all the more important. With one inappropriate picture, you have managed to stereotype all transgender women as sex workers and vectors of disease, as well as hyper-sexualize women of color in general. NOGLSTP applauds the articles presented in this issue, but we question why the cover explicitly shows transgender sex workers when there is no actual content in the articles about HIV prevention, care, or treatment efforts in these transgender communities.

To avoid the kind of hurtful misunderstanding and atmosphere of disrespect that has been generated by this dehumanizing and insensitive decision, NOGLSTP leadership would have been happy to facilitate discussion between science and engineering leaders in the trans community and the editorial staff of *Science* regarding appropriate content as it relates to transgender sex workers and the struggles they face, of which HIV infection is but one.

This incident should be used as a teachable moment to correct the prejudices of those who are insufficiently familiar with LGBTQ communities and their concerns. We exist in all cultures, ethnicities, and walks of life. We are proud scientists, engineers, mathematicians, doctors, and technologists who are part of the *Science* readership. The cover photo is unworthy of *Science* and AAAS. The LGBTQ communities, including in particular the trans community in this instance, deserve more respect than you have offered. The ethic of

science demands that we regard all minds and people equally. Prejudice has no place in our endeavors.

Rochelle Diamond

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Response

WE DEEPLY REGRET the harm done by the ill-considered choice of cover. Dr. Diamond, in her letter, has made constructive suggestions to help our organization prevent further misunderstandings with the LBGTQ communities, become more sensitive to their issues, and repair damaged relations. We are already in discussions on how to follow up on those recommendations. Many thanks to other leaders in the LBGTQ and other communities who have also graciously stepped forward with offers of help.

Marcia McNutt

Editor-in-Chief



Climate change: Time to navigate

THANK YOU FOR the enlightening 4 July Policy Forum set exploring how the Intergovernmental Panel on Climate Change's (IPCC's) AR5 WGIII "Summary for Policymakers" (SPM) reached its final version ("IPCC lessons from Berlin," B. Wible, p. 34). With scientists as the "mapmakers" and policy-makers as the "navigators" ("Mapmakers and navigators, facts and values," p. 37), O. Edenhofer and J. Minx describe how the former had to acquiesce to the latter's demands that certain data depictions and analyses in the original SPM be removed, allegedly because they were politically "toxic" ("Getting serious about

categorizing countries," D. G. Victor *et al.*, p. 34). Yet if the SPM is to provide an accurate if abbreviated map for the navigators to guide us to a low-carbon future, how is it that the navigators also get to modify this influential map by deleting the mapmakers' work? Shall we also allow judges to change the testimony of witnesses, or doctors to modify the charts of patients?

In any case, thanks to the exemplary work by the IPCC and many other scientific organizations, maps of where we've been and depictions of the landscape that we now face regarding climate change (and in parallel, ocean acidification) are not what is lacking. Rather, it is now time for the "navigators" to act on this information and finally do their job.

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Fossil fuels' future

THE 27 JUNE SPECIAL SECTION on The Great Gas Boom ("The gas surge," D. Malakoff, p. 1464) about natural gas from hydraulic fracturing provided a useful update on a range of important environmental, social, and economic issues, with the exception of the elephant in the room: Natural gas is a fossil fuel. While a natural gas-fired power station has fewer CO₂ emissions per unit energy produced compared with a coal-fired power station (up to 50% if fugitive emissions are captured or ignored) ("Hunting a climate fugitive," News, E. Kintisch, p. 1472), this is largely irrelevant to solving the climate change problem. What matters is the long-term accumulated stock of carbon in the atmosphere, not the short-term rate of emissions (1).

The relationship between cumulative emissions and peak warming is insensitive to timing of emissions or peak emission rate (2). The lifetime of the airborne fraction of a pulse of fossil fuel-derived CO₂ is much longer than the centuries some authors still believe (as stated in the News story by Kintisch). Modeling reveals that 20 to 35% of the CO₂ emitted now will still be in the atmosphere after 2 to 20 millennia (3). To have a greater than 66% chance of limiting global warming to less than 2°C above the pre-industrial average surface temperature (4), humanity can emit only a further 275 Gt C, or about 34 years of "business-as-usual" emissions (5). The harsh reality is that CO₂ emissions must decrease to zero before the end of this century or we will likely exceed the 2°C guard rail. In these circumstances, it is difficult

to envisage a future where both the climate change problem is resolved and today's fossil fuel industry persists.

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Sharing ideas too soon

THE IN DEPTH ARTICLE "A radical change in peer review" (J. Mervis, 18 July, p. 248) suggests asking grant applicants to review their competitors. This initiative from the National Science Foundation (NSF) may save time and money, and the NSF's "novel scoring system aimed at dissuading a reviewer from downgrading a competitor's proposal in order to boost their own" may represent an advance in the peer-review procedures. However, this "radical alternative" to the traditional peer review system raises questions about intellectual property.

In the new peer-review system, grant applicants will share their novel ideas, which have not yet been scientifically tested, with their competitors for the grant. Although the "reviewers of grant applications are expected to maintain confidentiality and avoid using ideas in those applications without permission in their own research and for their own gain" (1), stealing ideas occurs in the research field (2). This unethical behavior might increase with the proposed system. The peer-review process certainly needs to evolve, but changes should be accompanied by mechanisms that minimize the risk of unethical behavior.

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Workshop in Nablus (An-Najah National University, West Bank).

OUTSIDE THE TOWER

Kids' questions transcend conflict

"Are nails growing at the same speed on each finger?"
"Is there a volcano in our land?"
"Why does the moon walk with us at night, while stars stay still?"

These questions were asked by children last November, during the Science Days of Palestine, an event we initiated in 2010. This time, in several Palestinian cities in the West Bank and Gaza, we introduced 300 kids aged 8 to 12 to the questioning process of scientific research.

First, to their surprise, instead of the gray-haired men they expected, the children met young scientists, both men and women. We explained the role of questions in science. Then, through games and observation of their environment, pupils raised a hundred questions, genuine, profound, poetic, and meaningful to their lives (1). Their surprise grew when we did not provide answers. Instead, we invited them to ask peers, teachers, and parents to search books and Web sites, or to set up simple observations and experiments. Kids were thus left positively frustrated, keen to learn and explore further.

Outside the Tower is an occasional feature highlighting science advocacy projects led by scientists and citizen scientists. How do you advocate for science? Tell us at submit2science.org.

We held similar activities in Israel, Egypt, former Yugoslavia, and impoverished suburbs of Western cities (2–4). These costless activities (a pen and a paper suffice) can substantially change the attitude of students, and indirectly, teachers. They are encouraged to collectively explore the unknown, in close connection with their daily experience, thereby allowing them to find unexpected solutions. We hope more scientists will join us in sharing with children the very first step of their research practice, which is to ask open questions. In particular, in difficult situations where conflict lies too close, curiosity may spark enthusiasm, divert from violence, and lead toward innovative and pragmatic answers, which may eventually contribute to peace.

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