



LETTERS

edited by Jennifer Sills

Smokers Respond to Pictorial Health Warnings

IN THE NEWS & ANALYSIS STORY “ANTISMOKING DRIVE TRIES CIGARETTE ads, in reverse” (S. Reardon, 1 July, p. 23), social psychologist Carol Tavris expressed doubts about the effectiveness of pictorial health warnings on tobacco packaging. However, there is extensive evidence supporting the effectiveness of this strategy (1). Survey results show that whether a smoker notices the warnings and how he or she reacts to them are consistent prospective predictors of making quit attempts (2). Studies also report increased use of telephone-based smoking cessation (quitline) services in response to the introduction of such pictorial warnings in Australia (3), Brazil (4), and New Zealand [short term (5) and longer term (6)]. Similar responses have been reported when new



text-based health warnings, which also featured a quitline number, were introduced in the Netherlands (7) and the United Kingdom (8). There is little doubt that pictorial health warnings are effective, but there is still a need for ongoing research to identify the most effective images and wording in different countries and the optimal frequency at which pictures should be replaced with new images. Research should also explore cost-effectiveness, which is likely to be high.

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Restoring Tigers to the Caspian Region

EFFORTS TO SAVE TIGERS IN THEIR NATIVE habitat are faring badly (1–3). Although counts of living tigers have been contested (e.g., “Counting India’s wild tigers reliably,” K. U. Karanth *et al.*, Letters, 13 May, p. 791), it is clear that four of nine recognized tiger subspecies are extinct, and the census of wild tigers has plummeted from 100,000 a century ago to less than 3500 today. At the November 2010 Tiger Summit in St. Petersburg, 13 Tiger Range States pledged to reverse the extinction process and set a goal of doubling wild tiger numbers by 2022, the next Chinese Year of the Tiger (4).

Despite intense interest, resolve, expertise, and expenditure in the realm of millions of U.S. dollars, traditional conser-

vation approaches are proving insufficient. It is time to consider new approaches.

One provocative proposal is to reintroduce tigers into selected habitat within the historic range of the now-extinct Caspian tigers (5). Tigers disappeared from the region 40 years ago, but detailed ecological assessments have identified over one million square kilometers of potentially suitable habitat in a Caspian region as large as the continental United States (2, 6). Recent genetic analyses found the difference between the living Amur tigers and the extinct Caspians to be negligible (7). There are 500 genetically healthy Amur-Caspian tigers in managed zoo collections and up to a few thousand more among the roughly 15,000 captive generic tigers—i.e., those with unknown subspecies ancestry—worldwide (8, 9). These tigers can be a source for reintroduction once they are sufficiently acclimated and the habitats in question have been appropriately prepared (preparation

may include fostering natural habitats, boosting the prey base, supporting antipoaching law enforcement, relocating human settlements, and stabilizing freshwater resources).

Specialists from the 13 current Tiger Range States alongside the 12 central Asian countries where Caspian tigers roamed a generation ago, particularly the Republic of Kazakhstan, should evaluate the prospects for identifying suitable habitat and planned reintroduction in the Caspian areas (5). In March 2011, the Prime Minister of Kazakhstan pledged government support and funds for preparation of territories of future release (5).

The tiger is an apex predator; the entire habitat is affected by its absence. We suggest restoring former landscapes to be as biologically full, diverse, productive, and interesting as they once were.

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Male or female?

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Why help?

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## Battery Vehicles Reduce CO<sub>2</sub> Emissions

R. F. SERVICE'S "BATTERY FAQs" (NEWS FOCUS, 24 June, p. 1495) attempts to answer the question "How will widespread adoption of electric vehicles affect CO<sub>2</sub> emissions and possible climate change?" The answer Service provides—that CO<sub>2</sub> emissions will not be affected unless renewable energy sources generate the electricity that powers the cars—is inaccurate.

Even in the U.S. mid-Atlantic region, with a large percentage of electric power generated by coal, switching 10% of the fleet from gasoline vehicles to electric would cause the net CO<sub>2</sub> emissions (including emissions from power generation) per switched vehicle to drop by about 5%; in less coal-heavy New York state, net CO<sub>2</sub> emissions per switched vehicle would drop by about 12% (1). The

decrease would occur because an electric motor is more efficient than an internal combustion engine (2) and because the electric vehicle recycles some of its energy by using regenerative braking.

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## Courts Complicate Industry-Academia Ties

THE U.S. SUPREME COURT HAS THROWN A wrench into the Innovation Toolkit described by R. S. Williams and S. Desmond-Hellmann in their Editorial about industry/academia partnerships ("Making translation work," 17 June, p. 1359). The authors encouraged new methods for sharing and profiting from intellectual property, and they suggested that "[c]onfidentiality provisions of industry/academia partnerships can be adjusted" for mutual benefit. The recent Court decision allowed an industry confidentiality agreement to trump a prior academic employment agreement (1).

This decision was based on a dispute between the pharmaceutical and diagnostics company Roche and Stanford University over rights to the work of a Research Fellow who had been sent by Stanford to Roche (then Cetus) to learn the technique of PCR amplification. The U.S. Court of Appeals for the Federal Circuit found that the Fellow's agreement with Stanford ("agrees to assign" to Stanford "right, title, and interest" in inventions resulting from his employment at the University) was a mere promise, whereas his Roche (then Cetus) agreement ("does hereby assign" to Cetus "his right, title, and interest in each of the ideas, inventions, and improvements" made "as a consequence of [his] access" to Cetus) was an actual assignment and superseded the Stanford agreement as a matter of contract law.

This decision could lead to difficulties for the academic-industry relationships supported by Williams and Desmond-Hellmann. The employment contracts used by many academic institutions, including Stanford and the University of California—major biomedical patent holders—still contain the language deemed weak by the Court. Modifying existing contracts retroactively presents a formidable legal and practical task. Although many academics might agree to such modifications of existing contracts, some may not, especially those who have a substantial interest in a company. Furthermore, outside agreements by faculty are often contained in confidentiality agreements, which administrators may not see; requiring disclosure here could be challenging. In addition, companies who want to shed licensing and royalty arrangements with academia can now challenge the intellectual property rights of academic institutions. With the conclusion of this dispute, the patent court system's ability to navigate this issue as Williams and Desmond-Hellmann envisioned has been exhausted. Other agreement approaches are now needed for "delivering the promising results of academic research to industry."

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## CORRECTIONS AND CLARIFICATIONS

**News Focus:** "Possible sighting of dark matter fires up search and tempers" by Y. Bhattacharjee (3 June, p. 1144). The story referred to the site of the CoGeNT experiment as an "abandoned mine." To clarify, mining is no longer conducted at the site but it is still in active use as a science park and underground lab.

**Perspectives:** "Revealing the gamma-ray jet in a black hole binary" by M. J. Hardcastle (22 April, p. 429). Due to an editorial error, the first sentence of the second paragraph misstated the distance between the binary pair and the distance from Earth. The sentence should read, "Cygnus X-1 is a binary pair formed of a massive star (~20 times the mass of the Sun) and a black hole approximately 10 times the mass of the Sun (6), separated by about 0.2 astronomical units and located about 6000 light years from Earth (7)."

## Letters to the Editor

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