CORRESPONDENCE

Research thrives on integration of natural and social sciences

Emerging collaborations between social and natural scientists face challenges, as you acknowledge (*Nature* **462,** 825–826, 2009). But, like A. D. Manning and J. Fischer in Correspondence (*Nature* **463,** 425; 2010), you sidestep a practical question that keeps many laboratory doors closed: what if interactions with 'soft' scientists harm the quality of my 'hard' research?

The Center for Nanotechnology in Society at Arizona State University (ASU) has collaborated with natural scientists since 2005. It also hosts the Socio-Technical Integration Research project (http://cns.asu.edu/stir), which embeds social scientists in 20 labs across ten nations on three continents — represented by three authors of this letter, plus the project's coordinator. Social researchers learn the theory and observe the methods of their laboratory counterparts, but they also introduce a protocol that unpacks social and ethical dimensions of the lab science itself in a real-time, hands-on, collaborative manner. The social scientists, their methods and enquiries become embedded in the laboratory during each 12-week engagement study.

We find that such integrative activities can trigger changes in laboratory practices — expanding the values and questions considered, and the alternatives that are perceived as viable. For example, reflections on responsible innovation generated novel ideas for antenna structures and nanoparticle synthesis for researchers at ASU's Center for Single Molecule Biophysics. Such developments often advance research and sometimes advance deliberation on public values. For laboratory scientists, thinking and talking about the broader dimensions of their work in an integrated way need not entail a sacrifice in productivity. Rather, efforts to enhance scientific creativity and societal responsiveness can be mutually reinforcing.

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Rigid animal-rights views not useful to ethics debate

Fern Wickson calls for animal-rights activists to be formally consulted on university animal-research programmes (*Nature* **463,** 293; 2010). The UK practice of including lay members of the public on university animal-ethics committees might be a sounder strategy.

It is true that more productive dialogue ought to exist between scientists and protesters. But for the most vocal and militant activists, no compromise is acceptable. Their adherence to the cause is almost religious. Such rigid views are unlikely to add usefully to the discussion.

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New NMR machines are set to boost biomedical potential

You made some excessively pessimistic assessments in your News Feature about the arrival of the first 1-gigahertz high-resolution nuclear magnetic resonance (NMR) spectrometer at the European Centre for High Field NMR, and its reception by the biological NMR community (*Nature* **463,** 605–606; 2010).

To predict potential benefits from this advance, we should remember NMR's earlier contributions to biology and medicine, and not just focus on it as a structural tool.

By revealing the extent and timescale of conformational fluctuations in proteins, NMR enabled conformational selection to supplant induced fit as a paradigm for biomolecular recognition. Powerful approaches to drug discovery have been launched by protein NMR's ability to pinpoint site-specific interactions very rapidly.

Far from evidence of donor fatigue, there are signs in the United States that federal support for ultra-high-field NMR is growing. As recently as 2007, only about a quarter of such instruments were purchased primarily with federal support. A rise in the cost limit for requests for high-end instrumentation from the US National Science Foundation and National Institutes of Health major-instrumentation programmes extends the reach of such requests to beyond 800-megahertz NMR machines.

Higher magnetic fields will soon be revealing biomedical insights we can scarcely imagine today.

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Skewed assessment values have stifled textbook-writing

I welcome your Editorial encouraging career recognition for writers of science books (*Nature* **463,** 588; 2010). But nothing will change for British scientists unless books are properly valued within the new Research Excellence Framework, which assesses the quality of research in UK higher-education institutions.

Under the previous system, the Research Assessment Exercise, a 400-page peer-reviewed science textbook was allocated the same value as a single journal article. It made no difference if the book was cited hundreds of times and well-reviewed in academic journals. I must declare an interest: I wrote such a book (*Pheromones and Animal Behaviour* Cambridge Univ. Press, 2003). Concerns about the chilling effects on textbook-writing by British academics have been highlighted before, to no avail (see, for example, go.nature.com/nmq3Vq).

The scientists finalizing the new rules have the power to change the criteria and give textbook-writing more recognition. I hope they will.

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Futures perfect — food for thought and welcome light relief

Please do not listen to the likes of Denis Alexander (*Nature* **463,** 425; 2010). Futures provides welcome light relief from the serious stuff preceding it, sometimes offering food for thought and — in the case quoted — such high comedy as to provoke what is colloquially known as a belly laugh, which I never dreamed I would experience in the company of your illustrious journal.

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Contributions may be submitted to correspondence@nature.com. Please see go.nature.com/cMCHno. Published contributions are edited. Comments and debate are also welcomed at our blog Nautilus (http://blogs.nature.com/nautilus).