

Correspondence

Arab science to turn spring into summer

For Arab scientists, the social revolution of the past year could be the light at the end of a long tunnel of hopelessness. To transform this optimistic mood into action, we must consider what we need to do to integrate science and technology into post-revolution development models, and what we can realistically accomplish.

The issue of governance is high on the agenda: it should be rooted in democracy and merit from now on. Innovative national systems are needed that reject trade-offs between educational reform and investment in education, research and design.

It is important that new science and technology development models are adapted to the socioeconomic environment and resist the temptation to enter into blind competition with developed countries.

Because scientific expertise will be needed to inspire these plans, it is imperative that models include strategies to reverse the scientific diaspora and to prevent the brain drain from Arab countries.

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Climate results for public vetting

Your discussion of the media's interest in the Berkeley Earth Surface Temperature (BEST) study — which released its results before peer review — implicitly acknowledges a change in the public authorization of scientific knowledge (*Nature* **478**, 428; 2011). Yet few scientists would accept your branding of them as “purist” or “renegade” for their stance on the study's approach.

BEST members seek to promote a progressive image of science in a demanding, open and transparent society. Stimulated by an erosion of public trust

in science, the publication of research before peer review aims to satisfy calls for greater public engagement with science.

Peer review after publication won't just confirm, adjust or correct the BEST results: it will demarcate soberly vetted scientific knowledge from the sometimes glib inferences an emotionally charged public makes through ‘unruly’ media that do not always report as scientists might want them to.

The progressive publication strategy of the BEST study exemplifies the emergence of a double-truth approach to the authorization of scientific knowledge on climate change.
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Control the bonanza for research eggs

The demand for women's eggs for research could soar alarmingly following news of a cloning technique that uses human oocytes to reprogram somatic cells to a state of pluripotency (S. Noggle *et al.* *Nature* **478**, 70–75; 2011).

The mean number of eggs given by each woman during the study was 16.9, with one donating 26 eggs. This is more than many fertility doctors would consider optimal and increases the risk of ovarian hyperstimulation syndrome. The researchers do not say that they halted hormone treatment in cases of over-response, although they did stop it in under-responsive women.

Noggle *et al.* rightly anticipated concerns that payment for eggs could encourage financially disadvantaged women to take risks they might otherwise avoid. But US\$8,000, the amount paid by Noggle and colleagues, would be a temptation even to the well-off in these difficult economic times.

Some argue that women should evaluate for themselves the risks and benefits of providing eggs for

research. But informed consent depends on provision of accurate information. Even after years of egg harvesting for fertility treatment, the risks to women — especially from some of the drugs and hormones used — remain undercharacterized and poorly assessed, with inadequate follow-up and data collection.

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Food security: a role for Europe

The European Union (EU) could contribute considerably to sustainable global food security because of its wealth of productive farmland (J. A. Foley *et al.* *Nature* **478**, 337–342; 2011). Both production growth and increased sustainability therefore need to be at the heart of the Common Agricultural Policy.

As one of the largest global importers and exporters of food, the EU has significant leverage in, and responsibility for, the global food and nutrition agenda. Although the biggest impact on global food security will result from increased production in developing countries, the EU must play its part. It needs to protect and maintain its agricultural lands and increase food production.

This will mean producing more food with fewer resources, while minimizing environmental impacts at multiple spatial and temporal scales (called ‘sustainable intensification’). Biotechnology will have a role in global food security, but it is unlikely to be the main solution. New approaches to managing farming systems and agricultural landscapes in an environmentally sensitive way could instead be more productive.

We therefore welcome the European Commission's proposals to increase the budget for agricultural research and innovation that is targeted at productive and ecological systems.

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On behalf of the other 6 authors of the Warsaw Consensus Statement (see go.nature.com/jzuytm).

Food security: close crop yield gap

Crop yields are rising more slowly than they were several decades ago (J. A. Foley *et al.* *Nature* **478**, 337–342; 2011). This is especially evident in Europe, and has serious implications for its responsibilities in global food production.

In Denmark, France, Finland and Switzerland (see, for example, R. Finger *Food Policy* **35**, 175–182; 2010), the ‘yield gap’ has increased: the rate of growth in crop yields has declined, even though yield potential has risen over the past few decades owing to technological advances such as crop breeding.

Markets are one contributory factor: lower prices caused by reduced market support have decreased the incentive for investment in equipment, fertilizer, and so on. Also, by restricting the use of pesticides, for example, agricultural policies aimed at reducing environmental damage have hindered growth in crop yields.

Closing these yield gaps will ensure sufficient global food production and help towards food security. More incentives are needed, particularly as low-income countries are also confronted by sizeable yield gaps, for different reasons.

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