goal of this xenograft was to demonstrate suturability and short-term (1-week) mechanical stability under arterial pressure, but not blood compatibility. As mentioned in the article, 50% of the first six human TEBVs implanted were still functional after 7 days, which, when put in context, is quite an accomplishment. What were described as "blood leaks" were likely artifacts resulting from the aggressive anticoagulation protocol necessary in this setting. Although we could have seeded an autologous (canine) endothelium to increase the xenograft survival rate, we decided against it because the results would not have been relevant to the clinical setting, where, of course, only endothelialized autologous human TEBVs will be grafted. Our rationale appears to be supported by the paper by Niklason *et al.*, where a synthetic biodegradable graft seeded with bovine smooth muscle cells and lined with a porcine endothelium was implanted in a porcine model. The hybrid graft remained functional for 4 weeks, but the xenogeneic tissue was visibly rejected. Considering the different objectives, it seems inappropriate to compare graft longevity observed in the study by Niklason *et al.* with the longevity we observed.

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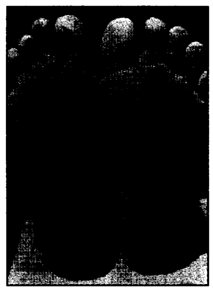
Testing of Water for Arsenic in Bangladesh

The discovery of arsenic in drinking water in Bangladesh has been described as "the biggest mass poisoning in history" (*1*). More than 80% of the population in the country now have access to drinking water supplied from hand-pumps dug over the previous two decades, and the discovery of arsenic in such water has dealt a direct blow to this "success story," threatening the lives of millions of Bangladeshis. Two challenges confront the government and other development agencies working in the country: testing the water supplied by hand-pumps for arsenic and identifying an effective, affordable, and sustainable mitigation procedure.



Arsenic victim

The testing of water supplied by hand-pumps, of which there are more than 2.5 million, is itself a formidable job. BRAC, a local nongovernmental organization, has tested a method for large-scale, field-level arsenic testing by training village-based community health workers (CHWs) (*2*) using a field kit. The kit, developed by the Asian Arsenic Network of Japan, determines the presence of arsenic in water through chemical reactions and works in the following manner: in groundwater, arsenic usually occurs as arsenite (As-III) and arsenate (As-V), and the kit reduces arsenate to arsenite by potassium iodide (KI) and stannous chloride ($SnCl_2$). The As-III is then reacted with zinc and hydrochloric acid (HCl) to produce arsenic gas. A color change from light-yellow to reddish-brown on bromide paper indicates the presence of arsenic in the water. Forty CHWs in a subdistrict previously known to be arsenic-affected were trained to use the kit. They then tested water from all 11,954 hand-pumps in 156 villages. Results showed that water from 93% of the hand-pumps was contaminated. A subsample of the water samples simultaneously tested in a government laboratory using a spectrophotometer confirmed the field testing in 92% of the cases. The cost of the testing was less than 50 cents per water sample, which is only a fraction of what it costs in a laboratory. This mass testing at the field level also aroused enormous awareness among the villagers about the arsenic problem. On the basis of this experience, BRAC is now working with the government and UNICEF to test the water supplied by all the 18,000 hand-pumps installed in the country in 1998.

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Limits of Scientific Growth

As one of the organizers of the International Forum of Young Scientists (a satellite of the World Congress of Science on 23 and 24 June in Budapest, Hungary), I hear more and more complaints from fellow researchers from all over the world about the increasing fragmentation of scientific knowledge. There is only a limited effort to achieve the appropriate balance between the discovery of new facts and finding their proper place and importance in the framework of science (*1*). Science itself is not self-integrating, and there are fewer and fewer people taking responsibility for "netmaking." Undergraduates are forced to learn entire telephone books (disguised as textbooks), and graduate students often jump into the middle of a scientific problem having no one around to explain to them the place of their study in the whole of science. "Discussions" in papers relate new findings only to their "nearest neighbor"; review papers often list existing knowledge instead of structuring it; and scientific conferences have turned into information "stock exchanges" instead of places for evaluation and discussion. Grant applications follow one other almost uninterrupted; we are told it is better to publish daily than to perish; and a never-ending stream of technically correct, but shallow, papers make excellent technicians out of our Ph.D. students instead of true scientists.

Although databases, the Internet, and novel tools of information management help the synthesis of knowledge, they do not provide integration. We have no excuse. Using all the help around, we must keep up with the increasing information flow and meet the growing challenge of integration. Integration needs time and patience; it cannot be achieved in the hurry of our modern data factories, in the present frustrated scientific world, where "competitor" has replaced the old words "fellow," "trusted colleague," and "scholar." We should limit our competition. Groups working on parallel projects should seek joint publications instead of the duplicate, or even triplicate, articles appearing in several journals, including *Science*. The scientific community should slow down and observe the "limits of growth." More self-constraints should be exercised, and much greater credit should be given to those who make serious attempts to integrate their findings into the whole of human knowledge.

How can we give better support to this so-much-needed integration? Grant-giving agencies and bodies should set up more long-term (5- to 10-year) grants providing generous support to younger (age 35 to 45) researchers who have already proved their excellence. Such a system would give greater freedom to the best scientists in their most prolific period to open new research areas and to make fundamental discoveries. Grant peer-reviews should be restructured: more reviewers should be sought from fields not directly related to the exact discipline of the applications. A review from an open-minded colleague working in a distant field would give precedence to those applications that are clear and far-sighted enough to make sense to even the "alien" referee. More conferences should be organized where the 20-minute lecture plus 5-minute discussion scheme is changed to a 5-minute lecture (with a detailed summary obtained through the Internet before the meeting) plus a 20-minute discussion protocol (*2*).

I agree with Mott T. Greene (*1*) that "the compelling vision of the whole of science is crucial in maintaining cultural, political, and financial support for science." Moreover, to maintain science itself, it is crucial to maintain its sanity. In many respects, we should go back to the lifestyle of a 19th-century scientist to be able to respond to the challenges of the 21st century.

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CORRECTIONS AND CLARIFICATIONS

In the report "*Australopithecus garhi*: A new species of early hominid from Ethiopia" by B. Asfaw *et al.* (23 Apr., p. 629), under the paragraph entitled "**Holotype**," in the third column on page 630, the first sentence should have begun, "BOU-VP-12/130 is an associated set of cranial fragments...."

In the Table of Contents for the issue of 23 April (p. 548), the image at the lower right (p. 549), from the report by M. E. Ballestas *et al.* (p. 641), was incorrectly given a caption meant to accompany an image from the report by S. Karpinski *et al.* (p. 654).