

## SCIENCE'S COMPASS

proven theories and wild speculation may be useful for formulating "What if?" scenarios, but they should not be canonized prematurely.

Finally, Olshansky *et al.* repeat an important point that I made prominently in my essay. Although death rates continue to fall at most ages in industrialized countries, and sometimes at accelerating rates of decline, the rise in life expectancy has slowed down. This phenomenon is well known to demographers and is due to the upward shift in the distribution of ages at death that resulted from an enormous reduction in infant and child mortality. In brief, saving infants and children adds many more years of life expectancy than saving elderly persons, and thus the historical increase in average life span slowed down once younger deaths became relatively rare.

Two important consequences follow from this observation. First, it motivates the standard practice of extrapolating age-specific death rates rather than life expectancy itself. Again, Olshansky *et al.* set up a straw man, consisting of an extrapolatory method that any informed observer would reject without hesitation, as a means of indicting a general practice that, if applied properly, is quite reasonable. Second, the predominant influence of the decline in infant and child mortality supports a widely shared belief that future gains in life expectancy will proceed more slowly than in the past. Nevertheless, this change does not signal a halt or even a slowdown in the historical progress against mortality, because the risk of dying at individual ages continues to fall, with some exceptions, as noted earlier. Furthermore, among the elderly, where most deaths now occur, observed gains against mortality in industrialized countries during the past few decades have been faster than ever before (7).

John R. Wilmoth

Department of Demography, University of California, Berkeley, CA 94720-2120, USA. E-mail: jrww@demog.berkeley.edu

### References

1. F. Meslé, *Médecine/Sciences* **13**, 1008 (1997).
2. E. Marshall, *Science* **250**, 900 (1990).
3. P. Cole and B. Rodu, *Cancer* **78**, 2045 (1996); F. Levi, C. Lavacchia, E. Negri, F. Lucchini, *Lancet* **349**, 508 (1997); J. R. McLaughlin *et al.*, *Cancer incidence and mortality, 1997* [*Incidence du cancer et mortalité due au cancer, 1997*] (Health Reports/Rapports sur la Santé, Ottawa, Canada, Spring 1997), vol. 8, no. 4, pp. 41-51 (pp. 43-54).
4. G. K. Singh and S. M. Yu, *Am. J. Publ. Health* **86**, 560 (1996).
5. F. J. Palella *et al.*, *N. Engl. J. Med.* **328**, 853 (1998).
6. R. Lee and L. Carter, *J. Am. Stat. Assoc.* **87**, 659 (1992).
7. S. J. Olshansky, B. A. Carnes, C. Cassel, *Science* **250**, 634 (1990).
8. My own calculation based on Social Security Administration data (demog.berkeley.edu/wilmoth/mortality/).

9. V. Kannisto, J. Lauritsen, A. R. Thatcher, J. W. Vaupel, *Pop. Dev. Rev.* **20**, 793 (1994).

### CORRECTIONS AND CLARIFICATIONS

In the issue of 28 August, the following References and Notes should have appeared at the end of the letter "Beetle Juice" (p. 1285).

#### References and Notes

1. See chapters in R. W. Hemingway and J. J. Karchesy, Eds., *Chemistry and Significance of Condensed Tannins* (Plenum, New York, 1989); for typical terpene compositions, structures, and references, see entry no. 6915, Oil of Lemon, and related entries for constituent compounds, as well as other essential oils, entry nos. 6866-6957, in *The Merck Index* (Merck, Whitehouse Station, NJ, ed. 12, 1996).
2. W. G. Glasser and S. S. Kelley, in *Encyclopedia of Polymer Science and Engineering*, H. F. Mark *et al.*, Eds. (Wiley, New York, 1987), vol. 8, p. 795.

A table that accompanied a News of the Week article by Daniel Clery about the research productivity of European cities ("London, Cambridge lead Europe in output," 21 Aug., p. 1127) incorrectly labeled the second of two columns of numbers ranking the publication output of various cities. The correct heading should have been number of papers "per 1000 residents," not "per capita."

In the Table of Contents (p. 877) of the 14 August issue (under Letters, in *Science's* Compass) separate authors should have been differentiated by semicolons.

The NetWatch item "Primal portraits" (7 Aug., p. 747) contained an incorrect image of a (non-grimacing) mandrill. The "grimacing mandrill" can be found at [www.selu.com/~bio/PrimateGallery/new/Lofton/mandrill\\_face01.jpg](http://www.selu.com/~bio/PrimateGallery/new/Lofton/mandrill_face01.jpg)

In the Random Samples item "Green strategy for water flea?" (3 July, p. 39), "blue-green algae" was referred to as a plant. In most classifications today, "blue-green algae" is called "cyanobacteria" and placed in the kingdom Monera.

In the article "Elephantine gift stirs museum debate" by Eliot Marshall (News & Comment, 22 May, p. 1186), the name of the Smithsonian Institution's first benefactor should have been given as James (not John) Smithson.

In the report "Antagonism of central melanocortin receptors in vitro and in vivo by Agouti-related protein" by M. M. Ollmann *et al.* (3 Oct. 1997, p. 135), in the sequences in figure 1A, mature mAGRP and hAGRP should have begun with Val21 and Ala21, respectively, and mature Agouti protein should have begun with His23.

## Apoptosis

### apoTACS™ in situ apoptosis detection kit

- BrdUTP incorporation produces best signal to noise ratio
- Uses proprietary TACS™ technology
- Detection options include DAB and TACS Blue Label™
- Flexible formats from complete systems to basic kits

Also Available from Trevigen:

- Bcl-2 Family Antibodies
- Annexin V-Based Detection Kits
- DNA Laddering Kits
- PARP Products
- TiterTACS™
- 96 Well Microplate Assay Kits
- DNA Damage Detection

## TREVIGEN, INC.

8405 Helgerman Court  
Gaithersburg, MD 20877  
800-873-8443 • 301-216-2800  
Fax: 301-216-2801  
[www.trevigen.com](http://www.trevigen.com)  
[info@trevigen.com](mailto:info@trevigen.com)

## Revealed

Circle No. 64 on Readers' Service Card