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## Letters

### Beauty is youth, youth beauty?

In "Facial beauty may lie more than skin deep" (SN: 3/19/94, p.182), you report that British and Japanese researchers found cross-cultural consistencies in judgments of female facial attractiveness. They emphasized the "nonaverage" nature of the preferred facial shapes in their study, rejecting the earlier concept that "attractiveness is averageness."

The faces determined most attractive were deliberately "exaggerated" images. As an orthodontist and child-growth researcher, I recognize their description of these "optimally attractive" faces as consistent with the facial pattern observable normally around puberty and during adolescence: a shorter, less-developed lower face that would make the eyes appear larger in comparison to an "average" adult face.

This observation would support a proposal associating human facial preferences with age-related features signaling youthfulness and, by extension, fecundity. In this model, the facial lineaments for "attractiveness" would be nei-

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Cover: When an immune system chemical called interleukin 12 takes charge, the body can mount a powerful defense against microbial and molecular enemies. Scientists want to use this chemical to fight disease and to stitch back together immune systems devastated by the AIDS virus. (Photo of AIDS Memorial Quilt by Mark Theissen, The Names Project Foundation, San Francisco.)



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Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the *Directory of Student Science Training Programs for Precollege Students*.

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ther exaggerations or population means, but rather the averages of a subset of youthful-looking faces.

I suspect the reported results would have been even more pronounced in the same direction if the judges in the study had been asked to rate the faces on the basis of youthfulness instead of attractiveness.

Sheldon Peck  
Assistant Professor of Orthodontics  
Harvard School of Dental Medicine  
Boston, Mass.

### Miscalculated by miles

I was amused to read the review of Mark Shelton's book *The Next Great Thing* (SN: 6/18/94, p.386), in which it says that one William Beale contends that all of the energy required for the United States can be derived from the sunlight striking 170 acres of land. Does this compute? Alas, no.

An acre is about 4,000 square meters (m<sup>2</sup>), and bright sunlight delivers about 1 kilowatt per m<sup>2</sup>, or an average of less than half of that since the sun shines only half the time. Energy demand totals about 10 kilowatts per person,

so 170 fully utilized acres could supply at the very best only about 30,000 people.

There are about 10,000 times that many people in the United States — and more every minute.

William Beale  
Athens, Ohio

The correct figure is 170 miles square.

— The Editors

### A bust worth 1,000 words?

Contemplating only the busts and the title "Talking Back in Time" (SN: 6/11/94, p.376) while in the optometrist's office with dilated pupils, I made the following connections.

The Neandertal, a clean-shaven fellow, looked content, few words to be nagged by, a nose too short to be in others' business. *Homo erectus* had a positive, forward look, anticipating a better tomorrow. Modern man, in contrast, has much less hair on his chest (feminizing chlorine compounds, no doubt), stressed eyes, and a furrowed brow.

Don Pullum  
Jacksonville, Fla.

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