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COVER: Weightlifting is not for men only. Women are playing an increasingly active role in athletics. They are breaking formerly male-held records, and there is evidence that women may be the physical equals of men in some ways. See p. 172. (Photo: Jack H. Wilmore, Univ. of Ariz.)

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LETTERS

Social smiling

On reading Joel Greenberg's article "The Brain and Emotions" (SN: 7/30/77, p. 74), I was surprised to read that Konner was puzzled by the late emergence of an infant's smile, which "should occur almost instantaneously because it is the infants' most powerful and valuable tool for eliciting parental love." He then concluded its development was probably tied to nerve maturation. A little over a year ago, SCIENCE NEWS carried a feature article on an extremely gentle means of natural delivery and included a picture of a recently emerged infant. His expression was definitely a smile. The article stated that parents who participated in this delivery mode practiced a larger than average degree of interaction with the child than did parents who had "ordinary" delivery-room treatment. Also, the children seemed more intelligent even years later.

*Fran Tabor
Kalispell, Mont.*

(Konner is referring to "social smiling," which—as opposed to an undifferentiated instinctual action—constitutes a reaction to another person or stimulus. The social smile, as he puts it, "is the infant's most . . . valuable tool for eliciting parental love."—Ed.)

Space shuttle

In your brief "First Firing of Space Shuttle Rocket" you stated that the solid rocket boosters "will be detached when the shuttle reaches orbital velocity." The fact is, they will be jettisoned at an altitude of 43 kilometers (well below the minimum for a long-lasting orbit of at least 150 km), and at a speed of only 5,170 km/hr. Since a normal orbit will carry the shuttle along at 28,300 km/hr; this is short of orbital velocity by approximately 23,130 clicks. This remaining speed will be attained through use of the shuttle's three main engines, with propellants coming from the external fuel tank. I hate to be a nit-picker, but *someone* has to pick the nits!

*Timothy James Jenkins
Long Beach, Calif.*

Fasting and emotional state

The discovery reported in SCIENCE NEWS (7/2/77, p. 10) that decreased sympathetic nerve activity is associated with fasting, is related to a field that fascinates me—the short-term effects of eating on the eater's mental and emotional state. I discovered rather early as a college student that, when under stress,

my anxiety level manifested regular diurnal patterns, being highest immediately after eating and lowest immediately prior to meals. Fasting is associated with meditation and prayer in both traditional Christian and in Eastern religious practice, probably indicating that the disruptive effects of food on calmness, serenity, and clear thought were known in antiquity. Practitioners of transcendental meditation have found that deep meditation is difficult to achieve for a few hours following the consumption of food. My own experiences with TM and fasting have convinced me that the two practices produce rather similar mental states—serenity, relaxation and passivity.

Further studies will probably show that the level of sympathetic nerve activity is affected not only by the amount of food consumed, but also by the type. Diet may eventually be used to treat such problems as hyperactivity and depression. The fact that rats on low-calorie diets live significantly longer than rats allowed to eat freely may be accounted for in part by the greater equanimity of underfed rats. It seems likely that further studies of the effects of diet on emotional state will uncover some interesting and useful relationships.

*Paul Lyrene
Fruit Crops Department
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IQ and the brain

I'm glad with P. Murtagh (SN: 7/30/77, p. 67) that Arthur Jensen is no longer so ready to say that IQ depends on racial heritage. However, Murtagh made an oversimplified statement that needs correction: "IQ is totally environmentally determined." This is to divorce the quality of thinking from the quality of the brain it comes from. Obviously, some people, at one end of the bell-shaped curve, are dull normals, and the progression downward from there is into increasing mental retardation to the profound point. Many, though not all, of these inherit brain defect from forebears.

Similarly, brilliant people and geniuses usually, though perhaps not in all cases, inherit those superior organizations of neurons that make outstanding organs of thought. Given this inherited biological basis, *then* we can say that environment impinges on brains and, working in combination with their lesser or greater biological quality, determines their IQ.

*Edward Lindemann
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