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Cover: For some, solving the structure of the ribosome, the cell's protein factory, has proved a lifelong puzzle. This complicated computer-generated model shows just part of the small subunit of the ribosome's RNA (blue) as it lies surrounded by proteins (stippled spheres) and linked to transfer RNA (red). (Image from Harry F. Noller, University of California, Santa Cruz)

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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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Letters

Sounds heard in the womb

We would like to clarify several points with regard to our neural net model of early speech perception development ("Speech lessons in *computero*," SN: 8/13/94, p.111).

Empirical studies have established that the auditory system is functioning prenatally and that the prenatal auditory environment carries significant amounts of speech information, the mother being a primary source. The most basic features, hence those likely to be learned first, may be features of speech common to all human languages. It is one of these features, *place of articulation*, that we show may be learned in a manner consistent with prenatal auditory experience.

The assumption that the fetal auditory system works poorly relative to the adult system is an important part of our model. Because this has the effect of removing some complexity, it may actually be of help in learning elementary distinctions. One also might expect a postnatal

period of transition in the perception of speech features learned in the womb. Development of finer distinctions (including the preference for native language) may need to wait until after birth, when elementary distinctions have been learned, auditory centers of the brain are more mature, and the infant's auditory experience becomes much richer. The learning mechanism we propose may continue to be active during this postnatal period.

Bradley S. Seebach
Stony Brook, N.Y.

Nathan Intrator
Tel Aviv, Israel

Philip Lieberman
Leon N. Cooper
Providence, R.I.

Irreproducible results?

"The high cost of having some babies gets higher by the numbers" (SN: 8/6/94, p.95) raises some interesting questions. First, if

infertility is a heritable trait, those using in vitro fertilization techniques would be more likely to produce infertile offspring. Thus, we could be creating a generation that depends on modern medicine to reproduce.

And second, since these treatments are unnecessary, should they be covered by a health care system?

Tim Ziesmer
Healdsburg, Calif.

Fishy fish feet?

I was surprised to see *Hynerpeton bassetti* displaying six digits on its front feet as it emerged from the Devonian swamps ("Walking away from a fish-eat-fish world," SN: 7/30/94, p.70). I was under the impression that early tetrapods had five digits on both their front and back feet.

Daris R. Swindler
Edmonds, Wash.

Actually, the oldest known tetrapods had seven toes, and another early tetrapod had six (SN: 9/22/90, p.191).
— R. Monastersky

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