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COVER: A tantalizing theory suggests that the moon's flight from the earth can be read in the fossils of the chambered nautilus. Could it be true? See page 426. (Photo: A. M. Irvin, Colorado State University)

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The valuable non-T cell

As you correctly pointed out (SN: 11/18/78, p. 342), the inconsistent therapeutic activity with BCG may result from an indiscriminate stimulation of lymphoreticular cells activating both helper and suppressor components within the immunological network of cells. The net outcome of such stimulation would depend on the relative activation of these regulatory arms, which, at the present time, is very difficult to predict.

For the sake of accurate records, I must inform you that the BCG-activated suppressor cell described in our article was not a T cell but rather an adherent, non-T cell that can develop independent of thymus influence. We are further characterizing this cell, and we plan to publish these results in the very near future. Although T suppressor cells are very important regulatory components within the immune system, it is clear that other types of suppressor cells operate as well to modulate immunological reactivity.

James A. Bennett, Ph.D.
New Haven, Conn.

An innovative alternative

Dietrick Thomsen should be commended for his unusually frank appraisal of the troubled state of affairs in astrophysics brought about by the discovery of the quasars (SN: 11/11/78, p. 329). The "carpentry of the model makers" is being carried to extremes that are unequaled anywhere in the realm of physical science with perhaps the exception of the efforts being expended in the field of elementary particles. Those waiting for a theoretical revolution to occur should take note that it may already have happened.

In *The Structure of the Physical Universe*, published in 1959, D. B. Larson theoretically discovered quasars and predicted that they would be found through radio astronomy. In 1971 he published a volume (*Quasars and Pulsars*, North Pacific Publishers) in which he brings the quasar phenomenon firmly within his theoretical structure. He is not only able to account for the seemingly fantastic energy generated, but is also able to reconcile the excess redshift of the quasars with that of the associated "peculiar" galaxies as given in the data of H. C. Arp. Larson's ideas present an innovative alternative to the present state of affairs and offer a substantial opportunity for extending theoretical knowledge beyond current observational limits.

Rainer Huck, Ph.D.
Salt Lake City, Utah

Mental skills: Practice makes perfect

Marcia Bartusiak's point about calculatoritis (SN: 11/18/78, p. 347) is well taken. Even gifted mental calculators suffer from reliance on thinking machines.

A. C. Aitken, who was able to express 4/47 as a decimal carried out to 46 places in a matter of seconds—and without pencil and paper—first used a calculator in 1923. "Almost automatically," he wrote, "I cut down my ability in that direction. . . . I am convinced that my ability deteriorated after that first encounter."

Unfortunately, one of the things mental skills have in common with other skills is that they require practice. If you think that means I'm giving up my calculator, you're crazy.

Paul Chance, Ph.D.
San Luis Obispo, Calif.

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