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COVER: The third ventricle of the human brain is a cavity whose roof is the thalamus and whose floor is the hypothalamus. Some hypothalamic peptides have been found in the cavity. Whether they're on their way to the pituitary gland to influence pituitary hormones or whether they're on their way to other parts of the brain to influence mental states and behavior remains to be determined. See p. 202. (Scanning electron micrograph: David E. Scott, University of Rochester School of Medicine)

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LETTERS

Learning technology

Your story on learning technology (SN: 9/11/76, p. 170) was unnecessarily pessimistic, especially with respect to grade- and high-school education. Mr. Douglas made the not uncommon mistake of supposing that computers will be necessary. Simple self-correcting workbooks keyed to cassette recordings are more than enough to present highly effective instructional programs in such fields as reading and arithmetic. The costs are not "staggering," there is no "natural resistance to a machine" which is no more than a workbook and the by now familiar cassette recorder, and—contrary to the result reported by Mr. Douglas—the disadvantaged child shows a higher relative gain, whether a Chicano in the schools of the Southwest or a Black or Puerto Rican in the Northeast.

A relevant technology of education is to be derived from an analysis of human behavior, not from a consideration of how computers, interactive television, and simulators can be used.

B. F. Skinner
Harvard University
Cambridge, Mass.

Martian biochemistry

While scientific objectivity is a desideratum, the reaction of many biochemists to the unexpected biological results of Viking 1 has been unscientifically dyslogistic. Instead of hailing the experimental data as being indicative of an exciting new biochemistry, these parochial observers seem only able to criticize them for not conforming precisely to conventional terrestrial biochemical niches. As Mars is constituted differently from the earth, biologists should have expected a correspondingly different biochemistry. Confirmation of this diversity should be cause for great excitement, not bemused bewilderment! We now know that there is indeed something new under the sun, after all.

Your recent analysis (SN: 9/4/76, p. 149) of the Viking 1 results was most apropos, yet omitted one crucial observation. Admittedly, the biology experiments can be cited for being too geochauvinistic in nature, yet it would have been virtually impossible to design a test for life tailor-made to the basically unknown Martian milieu. Even now, an appropriate test would be difficult to fashion. Apparently, only a manned expedi-

tion to the Red Planet will be able to adequately answer the question regarding life's presence there. Indeed, the Viking ambiguity has provided the strongest argument to date championing manned space exploration over unmanned investigation.

Franklin R. Ruehl Jr., Ph.D.
Glendale, Calif.

Occam's Razor

The article on Viking and Occam's Razor (SN: 9/4/76, p. 149) deserved the writer's signature, or was it too daring to designate an editorial? For all the "life-force" business of Mars, it displayed the appropriate clear thinking on the subject. Late or soon, please run the article again, lest someone with common sense miss it.

Carl Matthias Wise
Milton, Fla.

(The article was written by space sciences editor Jonathan Eberhart in Pasadena.—Ed.)

Some bees expendable?

Concerning the bee trap article: It was published just before my subscription began but I have been fascinated by the letters to the editor.

What I can't believe is how everyone seems to think that all the "bees" buzzing around picnic tables are honeybees. I have three hives, so there are lots around—but our picnics draw *yellowjackets*. Granted even these wasps have a place in ecology (they pick flies off my cow and fly away with them), but people might not get so emotional over them. Also, *they* all die each fall, except their queen; so especially in late summer and early fall when they are most pesky, there would be *very* little ecological impact from drowning quite a few.

Ann S. Livingston
Oberlin, Ohio

Digital theology

Why is the fine structure constant 1/137 (SN: 9/4/76, p. 157)? The answer should be quite obvious; God must have 137 fingers.

One logical corollary is that the fine structure constant must indeed be unchanging. At least it should remain at 1/137 until God grows another finger.

Bruce A. Knight
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