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COVER: Words that explain, retract and qualify spice speech with personal flair. By tallying the types of words a speaker uses and analyzing syntax, a University of Maryland psychiatrist has developed a new tool for diagnosing personality disorders. See page 235.

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Editorial and Business Offices
1719 N Street, N.W.
Washington, D.C. 20036

Subscription Department
231 West Center Street, Marion, Ohio 43302

Subscription rate: 1 yr., \$22.50; 2 yrs., \$39.00; 3 yrs., \$55.00 (Add \$3 a year for Canada and Mexico, \$4 for all other countries.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code. For new subscriptions only call: (1) 800-247-2160.

Printed in U.S.A. Second class postage paid at Washington, D.C. Title registered as trademark U.S. and Canadian Patent Offices.

Published every Saturday by SCIENCE SERVICE, Inc. 1719 N St., N.W., Washington, D.C. 20036. (202-785-2255) ISSN 0036-8423

LETTERS

Electrostatics and VDTs

I was gratified to see such excellent reportage on the Video Display Terminal symposium at the National Academy of Sciences last month (SN: 8/29/81, p. 137), and Janet Raloff is to be congratulated. It was a great pity, however, to watch such eminent scientists "analyzing the hailstones for the cause of the hail," when they might have been observing the clouds.

The visual and perception problems associated with vdt's have been very well defined, but the headaches, stress, and other discomforts remain because of a basic factor *common to all vdt's* — they change the electroclimate of the operator, thus upsetting certain biochemical systems.

Medical physicists have been vainly trudging up and down the frequency spectrum from 50 Hz to X-ray looking for operator discomfort causes without focusing on the biological effects of the DC potentials basic to vdt operation. Clinical psychologists have likewise been vainly pounding away at the old stimulus/response mechanisms in search of clues, without focusing on the effects of biochemical mediators which link stimulus to response; there was a brief mention of heightened catecholamine levels, but this was generally ignored as irrelevant.

By and large, the panels were excellent (with an unusually small sprinkling of bigots), but regrettably failed to include experts in either electrostatics or biochemistry — a serious omission which I trust will be rectified in the near future.

Charles Wallach
McLean, Va.

Life in the dark

The novel finding of a luminescence from dehydrating clay minerals by Coyne, Lahav and Lawless (SN: 9/12/81, p. 166) is indeed interesting. Its relevance to cyclic wetting and drying in the formation of peptide bonds necessary to the origin of life may be very important. But this can only be significant if currently accepted models of the earth's early atmosphere are changed to permit absorption of short wavelength UV radiation. In the absence of any oxygen (and hence any ozone) this UV radiation would rapidly destroy polypeptides proceeding toward the formation of primitive proteins exposed on the drying clays in evaporating lagoons. Terrestrial life today requires a protective ozone screen. Because of the importance of dehydration to their polymerization, it is likely that early evolving proteins and nucleic acids did also. Life can't be kept in the dark forever.

Kenneth M. Towe
Washington, D. C.

Evolutionary morphine in milk

The Wellcome scientists' discovery of naturally occurring morphine in milk (SN: 9/5/81, p. 149), together with the existence of morphine receptors in mammalian brains, suggests to me a possible evolutionary reason for the development of the latter.

Mammalian infants are very vulnerable, defenseless creatures. Part of their survival strategy consists of behavior which is geared to lessen the chance of detection by predators.

Morphine's calming effect (rather than its analgesic property) in small doses might aid in attaining the placidity needed to achieve this species-preserving behavior in infants. In relation to the small size of mammalian infants, the 200-500 nanograms/l of milk may be enough to suit the purpose.

My proposition would be strengthened if, indeed, "an active concentrating mechanism... in the mammary gland" could be found.

The question would remain, however, why the morphine receptors remain active after the infant has been weaned.

J. F. Leo Sommerfeld
Coon Rapids, Minn.

It's not unique

The excellent article "Breaking the Sound Barrier" by Linda Garmon (SN: 8/8/81, p. 90) leaves the impression that William Washbaugh's observation of Providence Island Sign Language's acceptance by its hearing population as a second language is unique. I call your (and fellow readers') attention to Nora Groce's article "Everyone Here Spoke Sign Language" (Natural History 89(6): 10-16, June 1980), in which Martha's Vineyard is described as a community which accepted its deaf members, their language of signs, and their contributions as equal to any others.

Alan I. Kaplan,
Berkeley, Calif.

Hole-ly large name change

Regarding the article "Hole-ly large accelerations" (SN: 6/20/81, p. 392): I would just like to point out that the work referred to was done by Robert M. Wald, of the University of Chicago, and myself, William G. Unruh of the University of British Columbia, not by Jesse Unruh. The latter I know of only as a Democratic House leader in California in the 60s. As far as I know he has not done any work on black holes.

W. G. Unruh
Vancouver, British Columbia

Correction: Photos illustrating "Colorful Views of Vision" (SN: 10/3/81, p. 221) should have carried the additional credit Copyright 1981 by the American Association for the Advancement of Science.

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1. TITLE OF PUBLICATION	2. PUBLICATION NO.	3. DATE OF FILING
SCIENCE NEWS	6 0 3 6 8 1 2 3	Oct. 1, 1981
4. FREQUENCY OF ISSUE	5. NO. OF ISSUES PUBLISHED ANNUALLY	6. ANNUAL SUBSCRIPTION PRICE
Weekly	52	\$22.50
7. COMPLETE MAILING ADDRESS OF KNOWN OFFICE OF PUBLICATION (Street, City, County, State and ZIP Code) (Not printer)		
1719 N Street, N.W., Washington, D.C. 20036		
8. COMPLETE MAILING ADDRESS OF THE HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHERS (Not printer)		
1719 N Street, N.W., Washington, D.C. 20036		
9. FULL NAME AND COMPLETE MAILING ADDRESS OF PUBLISHER, EDITOR, AND MANAGING EDITOR (For non-profit organizations, the name and address must be stated)		
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10. EDITOR (Name and Complete Mailing Address)		
Joel P. Greenberg, 2447 40th St., N.W., Washington, D.C. 20007		
11. MANAGING EDITOR (Name and Complete Mailing Address)		
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