STENCE NEVS $^{\mathbb{R}}$

A Science Service Publication Volume 117/April 26, 1980/No. 17

OF THE WEEK

Earth Day '80 looks at past, future	260
Naloxone: Shock, paralysis benefits	260
Predicting successful psychotherapy	261
Infant Stegasaurus bones found	261
Cadmium's dangers greatest to mothers	262
"Safe" additives	262
Cautious optimism for sex-change surgery	262
Magnesium deficiency, heart deaths linked	263
Early loving for tropical mantis	263
, , ,	

RESEARCH NOTES

266
271
271

ARTICLES

Bacterial magnetism	267
Extending that Earth Day spirit	269

DEPARTMENTS

Books	258
Letters	259
Science on TV	259

COVER: Earth Day's legacy is a strategy to thwart the environmental degradation and economic deprivation plundering the planet we call home. See pages 260 and 269. (Cover photo courtesy of the U.S. Dept. of Agriculture)

Publisher
Editor
Senior Editor and
Physical Sciences
Behavioral Sciences
Biomedicine
Earth Sciences
Life Sciences
Policy/Technology
Space Sciences

Contributing Editors

E. G. Sherburne Jr. Robert J. Trotter

Dietrick E. Thomsen Joel Greenberg Joan Arehart-Treichel Susan West Julie Ann Miller Janet Raloff Jonathan Eberhart Lynn Arthur Steen (mathematics)

Kendrick Frazier
John H. Douglas
Michael A. Guillen
Linda Garmon
Judy Klein
Dale Appleman
Angela Musick
Jane M. Livermore
Donald Harless
Scherago Associates
1515 Broadway
New York, N.Y. 10036
Fred W. Dieffenbach,

Sales Director

Art Director Assistant to the Editor Books Business Manager Advertising

Science Writer Intern

Assistant Editor

Copyright © 1980 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

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., \$15.50; 2 yrs., \$27.00; 3 yrs., \$37.50 (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

No alternate?

In "Cosmological Communication" (SN: 3/29/80, p. 201) it is suggested that in order to account for the observed homogeneity and isotropy of the universe "one must weaken gravity in the early moments" after the big bang.

The "attractive alternate" hypothesis of gravitational repulsion between matter and antimatter (SN: 4/5/80, p. 211) would predict just such an effect since gravitational attraction between matter and matter, and between antimatter and antimatter, would be offset in the beginning by gravitational repulsion between matter and antimatter in close proximity, until such later time as matter and antimatter became largely separated due to gravitational repulsion

John Blethen San Francisco, Calif.

High I.Q from select seed

Being neither geneticist, psychologist, nor mathematician, and possessed of only very ordinary I.Q., I am awed by the jargon and vast numbers flowing in arguments in SCIENCE News and other publications ridiculing the idea of producing a strain of high I.Q. children.

Although awed, I remain, somehow, unconvinced. Could it be that I detect in the fastidiously structured arguments just a hint of liberal party line smog? None refer to actual studies.

Terman (Stanford) once launched a study of fifteen hundred (1,500) children with I.Q.s in the top 1 percent of the general population. The study has continued now for over half a century, and the children of those children also averaged in the top 1 percent. A division which would reduce environment contribution to nil was faithfully reflected.

Maybe I.Q. as measured isn't what we think it is. In any case, if the gene contribution, per argument, be inevitably lost in the essential randomness of myriad combinations, we seem to be faced with a heroic statistical monstrosity. The probability that the Terman study results were pure chance appears to be about one in a number that sorta looks like the number of electrons in our galaxy.

No doubt I'm missing something, but maybe some geneticists are missing something too.

I'll bet anybody a beer that if Shockley sires 1,000 children from high I.Q. women, about 990 of those kids will have high I.Qs, regardless of environment.

Milton Vordahl Pateros, Wash.

Correction: $1,816 \pm 5$ kilometers is the radius of Io. not. as stated in last week's issue, it's diameter.

SCIENCE ON TV

SCIENCE NEWS prints the latest written word of scientific developments and noteworthy news. We set this space aside each month to inform our readers of programs of scientific interest that are scheduled on television. Check your local listings for exact times.

- May 14 (ABC)—"Mysteries of the Sea" examines the past, present and future of undersea exploration. It traces human attempts to conquer the sea from the time of the human as "diving mammal" (including a look at the ancient ritual of breath-hold diving) to "man the mechanical mammal" (with a segment on Sylvia Earle, marine biologist and ecologist, who dove to a depth of 1,250 feet to walk on the floor of Hawaii's Molokai Channel in an armored one-atmosphere diving suit). Undersea exploration's drama is shown with dives to explore the Civil War ship Monitor and the Spanish galleon Tolosa.
- May 26 (PBS) "Your Future Isn't What it Used to Be" is the first in the new "Cover Story" series (a TV-news magazine produced in association with Newsweek and featuring some of that magazine's correspondents). Segments include an exploration of fission and fusion energy as possible sources for future needs; an examination of space exploration with emphasis on the race between countries to establish supremacy; a profile of Herman Kahn, director of the Hudson Institute and an unabashed believer in the growth technology can bring about; and a look at past predictions of the future—our present.

- May 26 (PBS) National Geographic Society "Gold!" is a rerun examining the history and allure of the precious metal.
- NOVA (PBS) Programs (all reruns) being shown in May include: May 6 "The Green Machine" a look at the complexities and mysteries of plants; May 13 "The Great Wine Revolution" a look beyond the vineyard to the laboratory for the secrets of the grape; May 20 "Life on a Silken Thread" a dazzling look at the much-maligned spider; and May 27 "Light of the 21st Century" an examination of possible uses of the laser in years to come.
- Odyssey (PBS) May 4 "The Incas" an archaeological re-examination of these prosperous 16th century Peruvians; May 11 "Ongka's Big Moka" a look at a New Guinea ceremony in which the giving of gifts (moka) helps determine a man's prestige and authority; May 18 "Other People's Garbage" the document of past life in America in what archaeologists find of day-to-day artifacts; May 25 "Maasai Women" —an exploration of the role of women among the Maasai of Kenya.
- "Science TV News" The American Institute of Physics, with a grant from the National Science Foundation, has prepared a series of 90-second reports on the impact of physics in our lives that are being aired on commercial TV news programs. Past topics have included "Physics in Medicine" and "Energy in the Eighties." Upcoming is a series on astronomy.
- "The World About Us" is a BBC wildlife series that will be available on cable TV in the United States beginning in May.

APRIL 26, 1980 259