SCIENCE NEV

A Science Service Publication Volume 129, No. 8, February 22, 1986

E.G. Sherburne Jr. Joel Greenberg Dietrick E. Thomsen

Publisher Editor Senior Editor/ Physical Sciences Managing Editor

Biomedicine

Earth Sciences

Policy/Technology

Science Writer Intern

Advertising/Business

Space Sciences

Assistant to

the Editor

Books

Manager

Life Sciences

Production/Design Director **Behavioral Sciences**

Wendy McCarren **Bruce Bower** Joanne Silberner Stefi Weisburd Julie Ann Miller Janet Raloff, Ivars Peterson Jonathan Eberhart Susan Welch Gilday

Laurie Jackson

Lisa Davis Jane M. Livermore Donald R. Harless

Copyright © 1986 by Science Service, Inc., Editorial and Business Offices, 1719 N St., N.W., Washington, D.C. 20036. Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

Subscription Department 231 West Center Street, Marion, Ohio 43305

Subscription rate: 1 yr., \$29.50; 2 yrs., \$50.00. (Foreign postage \$5.00 additional per year.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include state exactly now 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., and additional mailing offices. 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

This Week

116 Signs and Sounds of High Blood Pressure

116 Emerging virus infects human 117 Acceleration in radio galaxy lobes Stomach butterflies scramble EGGs 117 Knowing little about how things work 118

This lake is a natural lab 118

119 Challenger effects: Galileo options

119 Europe plans 5 new science satellites

Research Notes

122 Biology 122 **Biomedicine** 123 Earth Sciences Technology 123

Articles

124 lodized Cancer Therapy 126 The Heart and Heredity

Cover: The discoveries made in scientific laboratories may seem a far cry from a true understanding of the human heart. But Bernardo Nadal-Ginard and his co-workers are unveiling one of the heart's secrets—how a single gene in its muscle cells can produce 10 or more proteins.

Departments

114 Science on the Air

114 **Books**

115 Letters

Science Service Institution for the public understanding of science founded 1921; a nonprofit corporation. Board of Trustees — *President*, Glenn T. Seaborg; *Vice President*, Gerald F. Tape; *Treasurer*, Willis Harlow Shapley; *Secretary*, Hilleary F. Hoskinson; Joseph W. Berg Jr.; Edward Bliss Jr.; Bowen C. Dees; David A. Goslin; Milton Harris; Elena O. Nightingale; O.W. Riegel; H. Guyford Stever; John Troan; Deborah P. Wolfe. Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Business Manager: Donald R. Harless

Letters

Fat and the fetus

Before I accept that "there is a genetic factor in obesity" ("Obesity: If the genes fit," SN: 1/25/86, p. 56) I would like to see ruled out the possibility that metabolic influences on a fetus do not differ substantially in obese pregnancies.

> Hans Havermann Weston, Ontario

Quantum physics: What and why

If there is an equivalent of the Nobel Prize for science writers, Dietrick E. Thomsen has earned it many times over, and most particularly for the quantum-pair of articles on the Bohr-Einstein perspectives of physics (SN: 1/11/86, pp. 26, 28). Thanks to these two articles, this reader - who never went beyond elementary algebra and geometry in school, and never studied physics at all - now believes

that he understands the what and why of quantum physics.

If I had to give up all my magazine and newspaper subscriptions except one, SCIENCE NEWS would be the one.

Dick Kovar Arlington, Va.

"As God's Dice Fall" illustrates the intellectual self-deception that we are all capable of engaging in. The argument that something is made actual by being measured is totally nonsensical. An object that is being measured is simply an object that is being known - albeit imprecisely in the mind of the knower. That objects and events are is something that is obvious to the common senses. Only a small mind would argue (as some of the more radical adherents of this view do) that a brick that strikes a man unawares from behind is not a brick until it is known.

Behind the "Is it really real?" argument (convoluted by modern physics) is a hatred of reality. It is much easier to live in darkness when there isn't really any light. Einstein instinctively understood this; Bohr did not.

Sean J. O'Reilly Arlington, Va.

As I understand the results of the experiments of Alain Aspect and his co-workers dealing with John S. Bell's calculations, one need not assume "spooky actions at a distance" if pairs of photons not only have the same spin orientation but also show the same ability to pass through a polarizer having a given angle to the direction of photon spin.

It seems to me that Einstein was right: that quantum mechanics is incomplete. Unfortunately it may never be completed. Probability is inherent, no doubt associated with the properties of empty space itself, its perhaps violently fluctuating small-scale topology and incessant production of virtual particles.

William V. Medlin Houston, Texas

FEBRUARY 22, 1986 115