

# SCIENCE NEWS®

A Science Service Publication  
Vol. 108/September 20, 1975/No. 12  
Incorporating Science News Letter

## OF THE WEEK

Modular super bug	180
Two new particles?	180
Ancient life-forms	181
Infrared mirror cracks	181
Scientists as statisticians	181
The mind-body connection	182
Encephalitis outbreak subsides	182
Neutron star weigh-in	182
3-D holographic images	183
Heavy leptons found?	183

## RESEARCH NOTES

Space Sciences	184
Medicine	185
Physical Sciences	185
Technology	191

## ARTICLES

Geometry of soap bubble clusters	186
Prostaglandin drug potential	188

## DEPARTMENTS

Books	178
Letters	179

**COVER:** For over two centuries mathematicians and physicists have struggled unsuccessfully to explain the geometric structure of soap bubble clusters, a problem with diverse applications. Now new mathematical insights have made possible a complete solution to this outstanding problem. See p. 186.

<b>Publisher</b>	E. G. Sherburne Jr.
<b>Editor</b>	Kendrick Frazier
<b>Senior Editor and Physical Sciences</b>	Dietrick E. Thomsen
<b>Senior Editor and Behavioral Sciences</b>	Robert J. Trotter
<b>Biomedical Sciences</b>	Joan Arehart-Treichel
<b>Biology/Chemistry</b>	Janet Hopson Weinberg
<b>Science and Society</b>	John H. Douglas
<b>Space Sciences</b>	Jonathan Eberhart
<b>Contributing Editor/ Mathematics</b>	Lynn Arthur Steen
<b>Copy Editor</b>	Michelle Galler Riegel
<b>Art Director</b>	Dale Appleman
<b>Assistant to the Editor</b>	Esther Gilgoff
<b>Books</b>	Margit Friedrich
<b>Advertising</b>	Scherago Associates, Inc. 11 W. 42nd St. New York, N.Y. 10036 Fred W. Dieffenbach Sales Director

Copyright © 1975 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Republication of any portion of SCIENCE NEWS is strictly 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., \$10; 2 yrs., \$18; 3 yrs., \$25. (Add \$2 a year for Canada and Mexico, \$3 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.

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). Cable SCIENSERV. Telex 64227.

SEPTEMBER 20, 1975

# LETTERS

## Mother-child bond

Thank you for giving cover story space to "The Mother-Child Bond" (SN: 8/16/75, p. 106.) As a newsletter editor and president of a Fairfield County (Conn.) childbirth education organization, I have read many times the information reported on Marshall H. Klaus's research. And, Leboyer's "Birth Without Violence" has been, of course, the subject of much publicity in childbirth education circles.

Parent organizations around the country, individually and in conjunction with the work of nationwide programs under the direction of groups such as the International Childbirth Education Association and the American Society for Psychoprophylaxis in Obstetrics, have been striving for the past decade and longer to return dignity and humanity to the childbearing process. In a workshop on the Hospital and Family-Centered Maternity Care sponsored by Connecticut CALM (Childbirth Association of the Lamaze Method), Sister Clarice McCready told of Dr. Klaus's work, expressing dismay that a \$20,000 research grant was necessary to discover what has been known 'since man,' that it is good for mother and baby to be together. The maternity units of our hospitals are a prime source for family life education, yet in so many departments, the family is deliberately separated. How many mothers, for instance, don't see their babies again after birth until they are 12 hours old? And do the fathers get to even touch them?—Yet, think: we are so careful not to separate kittens or puppies from their mothers. To at last see recognition given to the importance of parent-child contact as a vital part of human development, in a publication such as SCIENCE NEWS, is encouraging indeed.

*Barbara Lyon  
Past President  
Connecticut CALM, Inc.  
Westport, Conn.*

## Classical/quantum mix

In his article "Odd Particles Out," on classical physics and quantum theories, Dietrick E. Thomsen's remark, "Mixing classical and quantum theories raises hell," assumes that the correct classical model has been used. There is a very strong case that can be made to the contrary. The classical assumption that the heavy particles in the

atom have velocity ( $M_e V_0 = h/2\pi r_0$ ) can be reversed and a completely rational physical system emerges; and there is no conflict between quantum theory and a classical explanation. A field in motion complementing the symmetrical distribution of the heavy particles leads to a total accountability of the known properties of the atom, the nuclear forces, and the mass-energy equivalence. The heavy particles have spin whose inertia is opposed by the field. The properties of this field are in complete agreement with quantum theory. The "classical velocity term" applies to the field which can be identified in the mass-equivalence equation.

*Marshall C. Freerks  
Ignatius Schumacher  
Monsanto Industrial Chemicals Co.  
St. Louis, Mo.*

## Preventing psychopathology

I enjoyed reading the article on Preventing Psychopathology (SN: 8/9/75, p. 90). I am convinced that adult disturbances can be related to childhood experiences. In industrial nations many working mothers have to leave their children with someone else and, therefore, the children do not get the love and care needed for developing a sound and secure personality. No matter how successful one may become as an adult, the childhood insecurities are still reflected in one's attitude and behavior. Children who receive maximum care and love from their parents in a happy home atmosphere are more likely to become adults with a positive view of themselves and the outside world.

*M. A. Ijaz  
Blacksburg, Va.*

## Eugenics abortion

I must object to your use of the term "therapeutic" abortion, in regard to "defective" fetuses. (SN: 8/30/75, p. 121).

A therapeutic abortion is performed to preserve the life or health of the mother, such as in the case of a tubal pregnancy. The abortion mentioned in your article is not medically indicated or necessary for the mother's health. Thus it is not therapeutic for her and it is certainly not therapeutic for the fetus.

A more accurate term for the destruction of a "defective" or imperfect fetus would be a "eugenics" abortion.

*Kelley Dickinson  
New York State Right to Life Committee  
Albany, N.Y.*

*Address communications to Editor,  
Science News, 1719 N Street, N.W.  
Washington, D.C. 20036*

## SCIENCE SERVICE

Institution for the Popularization of Science founded 1921; a nonprofit corporation

**Board of Trustees**—Nominated by the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE: **Deborah P. Wolfe**, Queens College of City University of New York; **Bowen C. Dees**, The Franklin Institute; **Atheistan Spilhaus**, National Oceanic and Atmospheric Administration. Nominated by the NATIONAL ACADEMY OF SCIENCES: **Gerald F. Tape**, Associated Universities; **Allen V. Astin**, Bethesda, Md.; **Glenn T. Seaborg** (President), University of California, Berkeley. Nominated by the NATIONAL RESEARCH COUNCIL: **Gerald Holton**, Harvard University; **Joseph W. Berg Jr.**, National Research Council; **Aaron Rosenthal**, National Academy of Sciences. Nominated by the JOURNALISTIC PROFESSION: **Edward Bliss Jr.**, American University; **Julius Duscha**, Washington Journalism Center; **O. W. Riegel** (Secretary), Washington and Lee University. Nominated by E. W. Scripps Trust: **Milton Harris** (Treasurer), Washington, D.C.; **Edward W. Scripps II** (Vice President and Chairman of the Executive Committee), Edward W. Scripps Trust; **John Troan**, Pittsburgh Press.

Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Business Manager: Donald R. Harless; Things of Science: Ruby Yoshioka.