THIS WEEK

Ariane: Back in the space race	404
NIH's Fredrickson resigns	404
Foot and mouth vaccine from gene-splice	405
Denis Hayes resigns as SERI head	406
Bendectin, birth defect link weakened	406
Solar Max: Few rescue possibilities	406
'Selective birth' of one twin	406

RESEARCH NOTES

Biology	407
Biomedicine	410
Space Sciences	410

ARTICLES

408 Setting sight on sail

DEPARTMENTS

Letters	403
Semiannual Index	411

COVER: Germany's 1902 construction of the Preussen—a five-masted, full-rigged ship—was part of the peak in development of commercial sailing ships. While construction of other sailing ships continued after the majestic Preussen wrecked at Dover in 1910, there was little organized effort to apply modern technological advances to sailing. Now, in light of rising fuel costs, some researchers feel it is time to do just that. See page 408. (Photo courtesy of Peabody Museum of Salem)

Editor Senior Editor and **Behavioral Sciences Biomedicine** Chemistry Life Sciences Policy/Technology **Space Sciences Contributing Editors**

Publisher E. G. Sherburne Ir. Robert I. Trotter

Physical Sciences Dietrick E. Thomsen loel Greenberg Joan Arehart-Treichel Linda Garmon Julie Ann Miller Janet Raloff Jonathan Eberhart Lynn Arthur Steen (mathematics) Kendrick Frazier John H. Douglas Michael A. Guillen Judy Klein Elizabeth G. Clark Betsy Gordon Jane M. Livermore Donald Harless Scherago Associates 1515 Broadway New York, N.Y. 10036 Fred W. Dieffenbach, Sales Director

Assistant Editor Art Director Assistant to the Editor **Books Business Manager** Advertising

Copyright © 1981 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., \$19.50; 2 yrs., \$34.00; 3 yrs., \$47.50 (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

I believe that recent scandals in the scientific community (SN: 5/23/81, p. 331) are the symptoms of a self-inflicted disease --- science has become a business which has virtually eliminated creativity and instead promotes reductionism and highly fragmented specializations. I have serious doubts that anvone who studies the effect of mX on nY and produces unlimited data should be automatically a scientist. This has serious consequences, particularly in view of a shortage of money for a support of the scientific endeavor. Another problem is that researchers themselves have very little influence on the science policy. Those who are heard often control means of communication (journals, societies, etc.) and funding agencies

In 1979 I ran a poll among a small group of life scientists and requested their opinion on the role of primary journals in the scientific information exchange. Ninety five percent of responders agreed that the present system is inadequate. In connection with this, the prospect of having to tighten review procedures will not only fail to improve the situation, but it will make it much worse. The ultimate judge of a scientific value is the scientific community and not the selected group of reviewers. I have suggested a new system of information exchange which would allow for publication of practically all useful data in the form of a journal of abstracts. About 50 percent of those who were polled expressed their willingness to try this new system.

In conclusion, I suggest that ailing science can be cured provided the entire scientific community, and not just policy makers, will be involved. According to my experience, the use of polls and questionnaires is a very effective way of learning the problems of science and thus might contribute to a much needed improvement of the health of the country's scientific research enterprise. Boguslaw Lipinski

Psychiatry: Not just drugs, analysis

The otherwise excellent article by Robert Trotter, "Psychiatry for the 80s" (SN: 5/30/81, p. 348), is marred by the sentence: "Is psychiatry just drugs, or is analysis worthwhile," thus equating psychological intervention with psychoanalysis. Two psychological modes, cognitive therapy (A. T. Beck and Albert Ellis) and behavior modification (Joseph Wolpe and B. F. Skinner), have been proved more effective, also cheaper and quicker than either classical psychoanalysis or its modifications, and are being used with a far greater proportion of patients than is analysis. It is extremely misleading to identify all "non-drug" approaches with Freud, as the article does.

Paul E. Meehl Minneapolis, Minn.

Boston, Mass.

Potency vs. efficacy

Your article "Heroin and Cancer Pain" (SN: 5/16/81, p. 312) reports a recent study confirming that heroin is approximately two and a half times as potent a pain reliever as morphine. This has been well known for years. You further state that heroin is "more effective in relieving pain" - this is probably not true. Potency should not be confused with efficacy. Potency is pain relief per milligram of drug. Efficacy is a narcotic's maximum ability to relieve pain and is approximately the same for all narcotics regardless of their large differences in potency.

You also state, "Because morphine is a less potent narcotic than heroin, it is available to U.S. cancer patients." There seems to be a common misconception that patients with painful conditions are being denied better analgesics by FDA regulation. There are currently several commonly used drugs that are more potent than heroin. Dilaudid, for example, is twice as potent. Fentanyl, a drug used in anesthesia, is one hundred times as potent as morphine, but even this drug has no greater ability to relieve pain. Addition of heroin to the currently available group of pain medications would probably not be significantly helpful. Hopefully more efficacious drugs will be available in the future as a result of current endorphin research.

Scott A. Riley, M.D. Augusta, Ga.

Media static on mother's milk

Sometimes one wonders if the fragile attribute of reasoning has been fleeing the planet!

The media static concerning the subject embodied in your "The Controversial Code for Mother's Milk" (SN: 5/30/81, p. 340) has been overwhelming. The 118 to 1 vote, with the United States being the only "1," has been held up as an example that the United States doesn't care for people, especially infants; Uncle Sam is merely a W. C. Fields in disguise.

Irrespective of the merits of what and how mothers in the Third World countries should feed their babies, the fact remains that these 118 countries have the sovereign power to prohibit or regulate the sale and use of infant formula and its advertising without consultation with any nation if it menaces the health of their people. One might say, they have the duty to do

Those countries that believe the use of the formulas is dangerous and have not taken any independent action only give credence to the thought that some hypocritical charade, not necessarily oriented toward infant health, was being staged.

R. L. Barkley Palo Alto, Calif.

Address communications to Editor Science News, 1719 N Street, N.W. Washington, D. C. 20036 Please limit letters to 250 words.

Institution for the public understanding of science founded 1921; a nonprofit corporation.

Board of Trustees—Allen V. Astin, Bethesda, MD; Joseph W. Berg Jr., National Research Council, Washington, DC; Edward Bliss Jr., Newburyport, MA; Bowen C. Dees, The Franklin Institute, Philadelphia, PA; Julius Duscha (Secretary), Washington Journalism Center, Washington, DC; David A. Goslin, National Research Council, Washington, DC; Milton Harris (Treasurer), Washington, DC; Edward W. Scripps III, Edward W. Scripps Trust, Carson City, NY; Glenn T. Seaborg (President), University of California, Berkeley, CA; Gerald F. Tape (Vice President), Associated Universities, Washington, DC; John Troan, Pittsburgh Press, Pittsburgh, PA; Deborah P. Wolfe, Queens College of City University of New York Flything LL, NY York, Flushing, L.I., NY

Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Business Manager: Donald R. Harless.