LETTERS

EDITORIAL New Directions for AAAS .................................................. 539

ARTICLES
Star Dust: E. P. Ney ................................................................. 541
Mathematics Underlying the Rate-Dependency Hypothesis: F. A. Gonzalez and L. D. Byrd ............................................................... 546
The Economic Issues of the Fast Breeder Reactor Program: B. G. Chow ................................................................. 551

NEWS AND COMMENT
Kennedy, GAO Criticize NSF; Grant Renewal Is Rejected ............................................................. 556
Gene-Splicing: At Grass-Roots Level a Hundred Flowers Bloom .................................................. 558
Carter Appointments: Fresh Moves on Sea Law, Arms Control .................................................. 560
Congress: House Redistributes Jurisdiction over Energy .................................................. 562

RESEARCH NEWS Alcohol: A Brazilian Answer to the Energy Crisis .................................................. 564
Energy: Brazil Seeks a Strategy Among Many Options .................................................. 566

BOOK REVIEWS
The Patronage of Science in the Nineteenth Century, reviewed by R. Kargon; Building Scientific Institutions in India: Saha and Bhabha, A. M. Moyal; Animal Communication by Pheromones, E. O. Wilson; Neuronal Recognition, M. Dennis and R. B. Kelly; Books Received and Book Order Service .................................................. 568
Release of Particles Containing Metals from Vegetation into the Atmosphere:  
W. Beauford, J. Barber, A. R. Barringer  
Excitation of the Venus Night Airglow:  
G. M. Lawrence, C. A. Barth, V. Argabright  
Phenolic Plant Compounds Functioning as Reproductive Inhibitors in Microtus montanus:  
P. J. Berger et al.  
Concomitant Elevation in Serum Sialyltransferase Activity and Sialic Acid Content in Rats with Metastasizing Mammary Tumors:  
R. J. Bernacki and U. Kim  
Visual Detection of Cryptic Prey by Blue Jays (Cyanocitta cristata):  
A. T. Pietrewicz and A. C. Kamil  
Lithium:  Effects on Subjective Functioning and Morphine-Induced Euphoria:  
D. R. Jasinski et al.  
Basal Ganglia Cooling Disables Learned Arm Movements of Monkeys in the Absence of Visual Guidance:  
J. Hore, J. Meyer-Lohmann, V. B. Brooks  
Circadian Organization in Lizards:  The Role of the Pineal Organ:  
H. Underwood  
Intravenous Self-Feeding:  Long-Term Regulation of Energy Balance in Rats:  
S. Nicolaidis and N. Rowland  
Evolution in a Time-Varying Environment:  
R. A. Armstrong and M. E. Gilpin  
Terrestrial Locomotion in Penguins:  It Costs More to Waddle:  
M. A. Fedak, K. Schmidt-Nielsen  

Image Analysis Cursor; Explosion-Proof Freezers and Refrigerators; Circulator Baths; Safety Enclosure; Homogenizer; Hydrogen Purifiers; Water Bath Shaker; Literature  

American Association for the Advancement of Science was founded in and incorporated in 1874. Its objects are to promote the work of scientists, to facilitate cooperation among them, to improve the effectiveness of science in the promotion of human welfare, and to increase public understanding and appreciation of the importance and promise of the odds of science in human progress.
New Directions for AAAS

Last year the AAAS Board of Directors appointed a Committee on New Directions, chaired by Leonard Rieser. The Committee was asked to look ahead to 1980 and beyond, to anticipate the climate for science and technology in the United States and suggest new and meaningful roles and missions for AAAS.

The Committee has been holding spirited meetings, and in October its chairman made a progress report to the Board. The Committee has avoided both the trap of reinventing the objectives of the Association and the itch to spend its time reevaluating ongoing programs. What concerned it was the future and how AAAS could make the best of it.

A number of ideas have come to light which have the flavor of innovation and hint at a more rapid pulsebeat in the performance of AAAS. Each responds to the question of how AAAS can anticipate the needs of science and society and contribute to making a difference in how things turn out. Two broad priorities stand out thus far in the Committee's thinking. One concerns the role of AAAS in relation to public choices that have strong scientific or technological components or that carry strong implications for the future direction of science and technology. The other focuses on steps that AAAS could take to see that science and technology are presented accurately to the public, including informed commentary on borderline science.

Two of the Committee's proposals concern the style of AAAS behavior. One emphasizes the leverage that the Association has as a convener of sectors and groups which now go their separate ways but which have strong voices in decisions that affect science policy. An example of the use of this role was the colloquium held by AAAS in Washington last summer on the federal R & D budget, in which representatives of Congress, the White House, industry, and academia took an active part. The second proposal of the Committee urges the Association to move increasingly toward collaborative relationships with other professional associations, following the precedent of the National Conference of Lawyers and Scientists, a joint venture of AAAS and the American Bar Association. The possibilities here are for similar joint relationships with groups representing such professions as journalism and industrial management.

Going beyond the area of style into that of substance, the Committee is suggesting two major departures. One would take AAAS closer to policy controversy, through selective publication of panel reports on disputed questions involving science or technology with public policy, with the aim not of throwing weight on one side or the other but of injecting clarification from a respected quarter. The second significant proposal would involve strengthening and extending AAAS efforts in public communication, including Science and the annual meetings, but with the addition of concern for improving science programming in commercial television and motion pictures. In the age of electronics, AAAS can no longer fail to take into account the influence, for better or worse, of commercial television and films in shaping social attitudes toward science and technology.

These ideas are timely and stimulating. They seem compatible with our character and objectives, and they suggest the development of momentum in the affairs of the AAAS. Putting them in the context of initiatives that AAAS is already taking—active concern for problems of scientific freedom and responsibility; new departures in the field of science and public policy; regional forums on the impacts of science on society; programs to improve the status of women, minorities, and the handicapped in science; congressional fellowships; outreach to international science; and the strengthening of Science as a preeminent journal—it all points to a lively design for the future.—WILLIAM D. CAREY