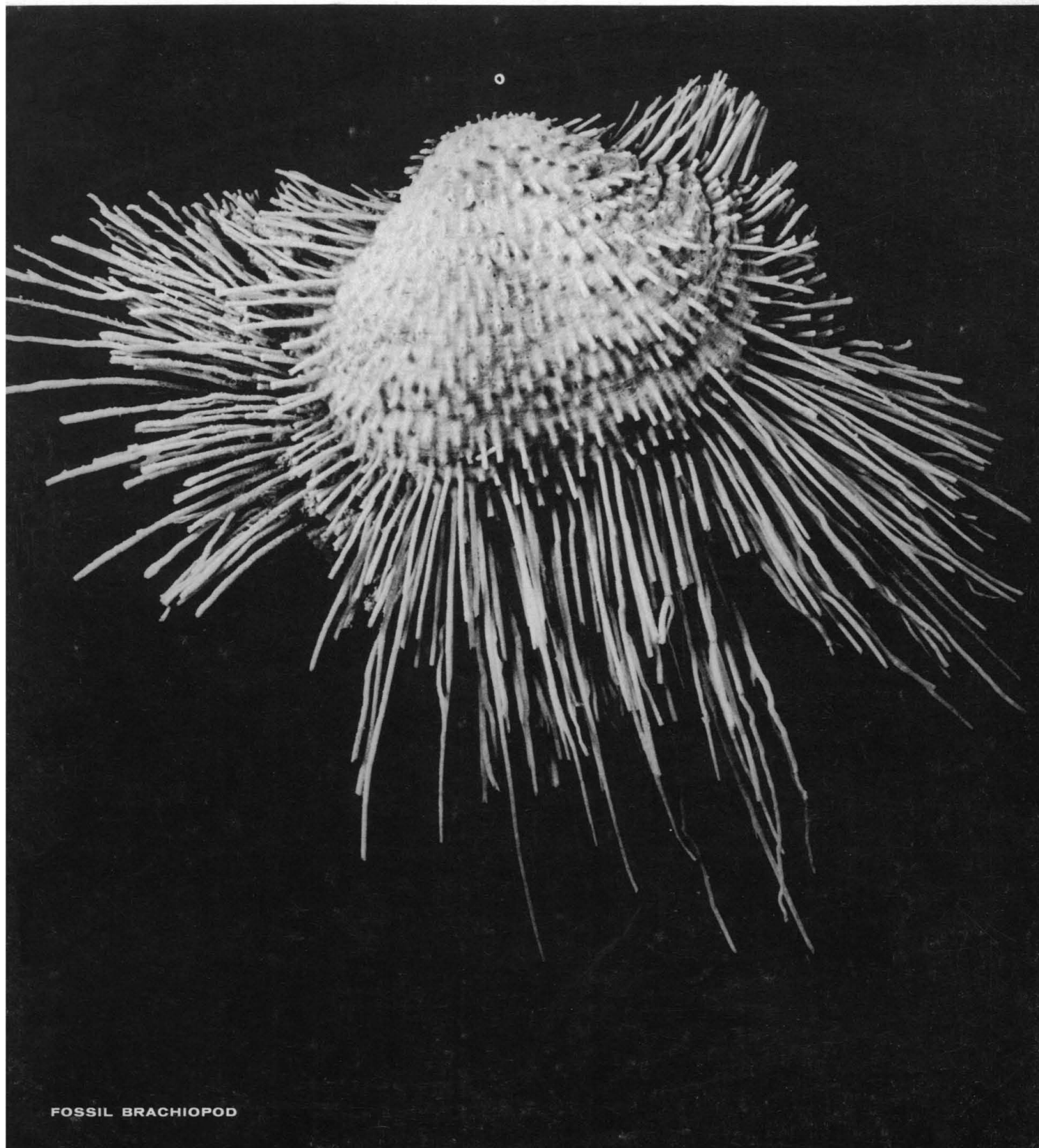


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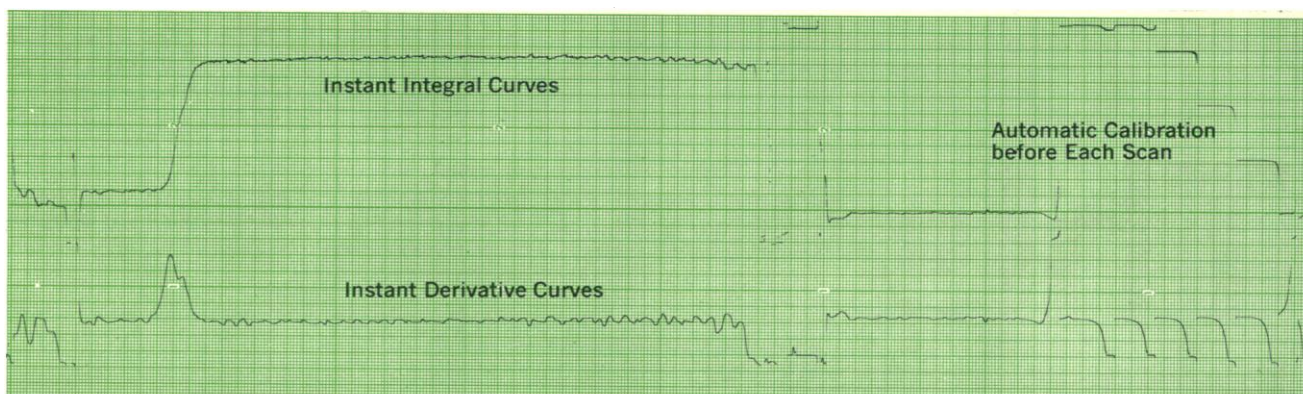
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Vol. 152, No. 3722

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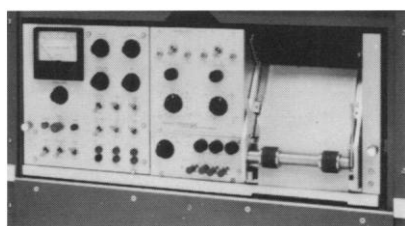
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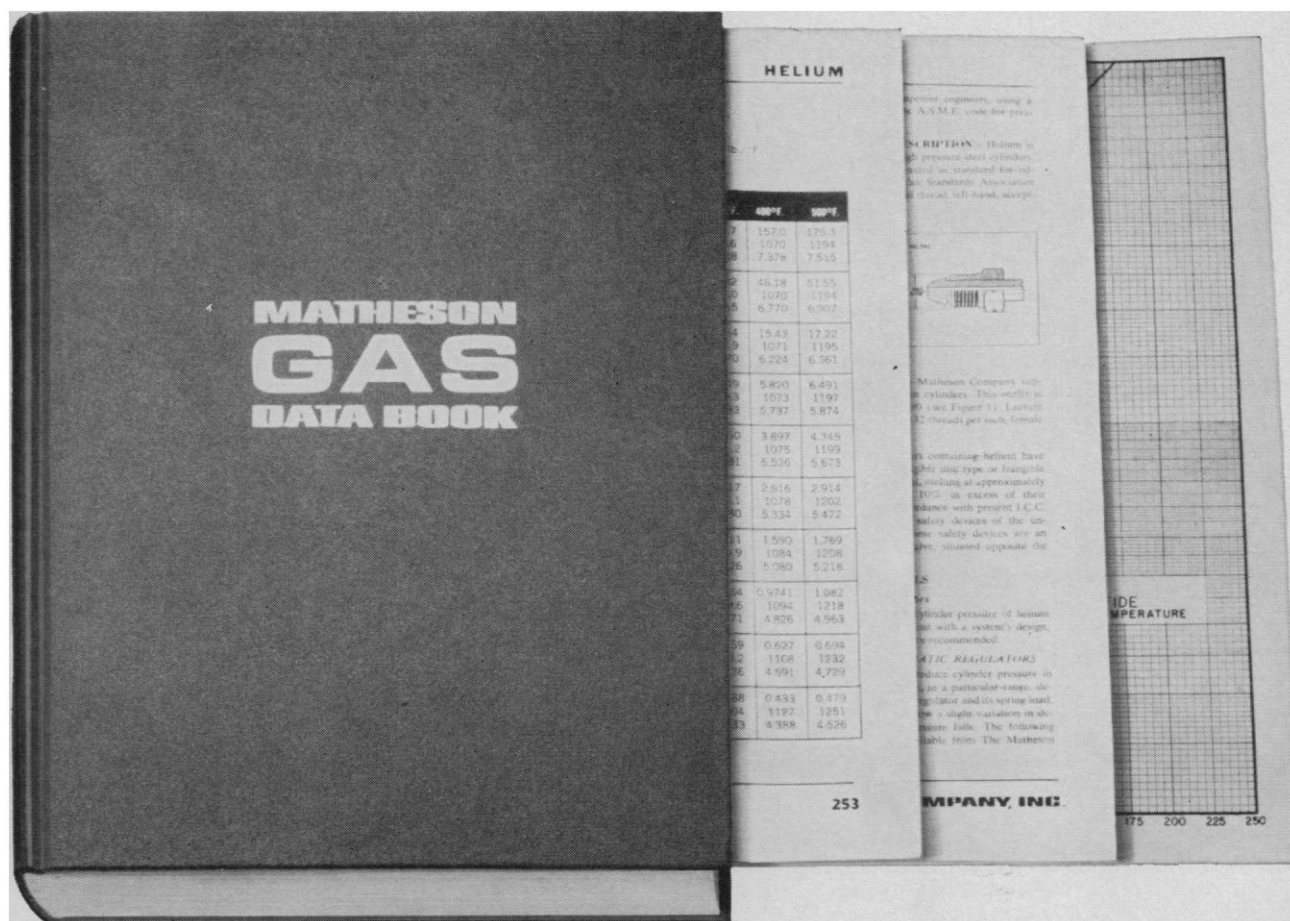
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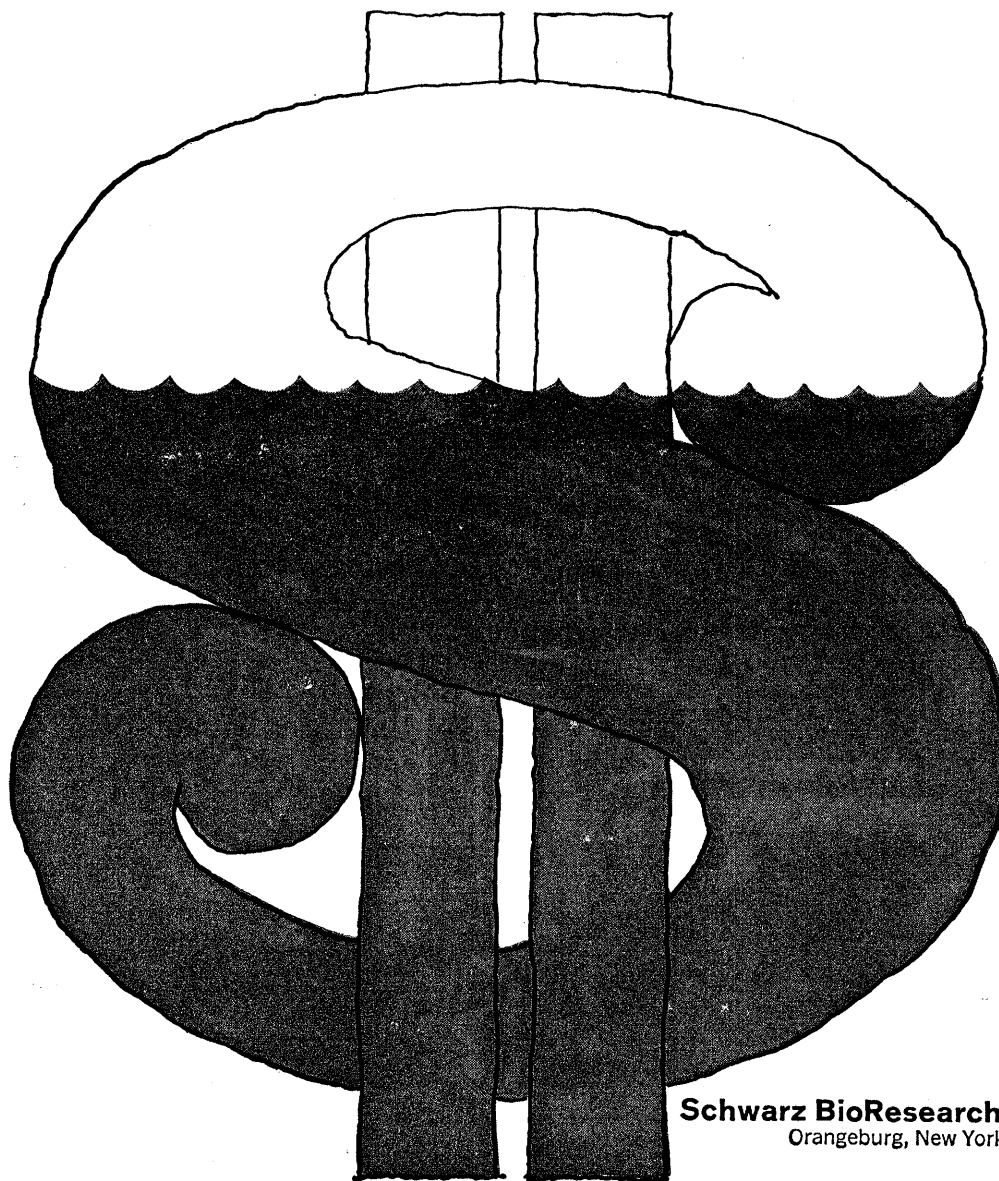
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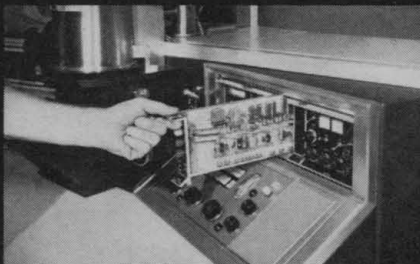
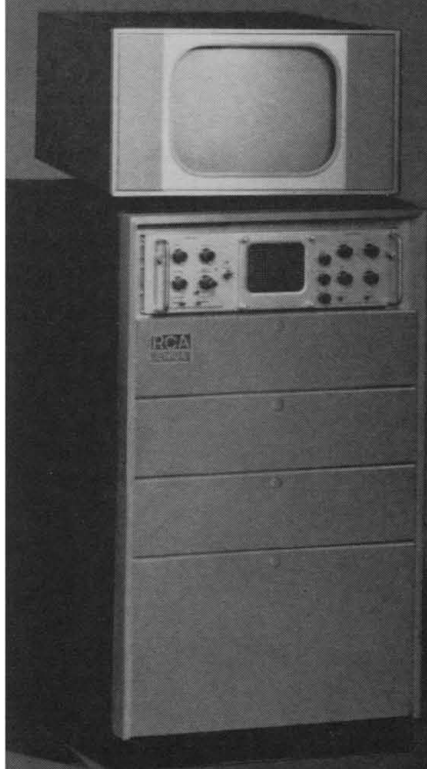
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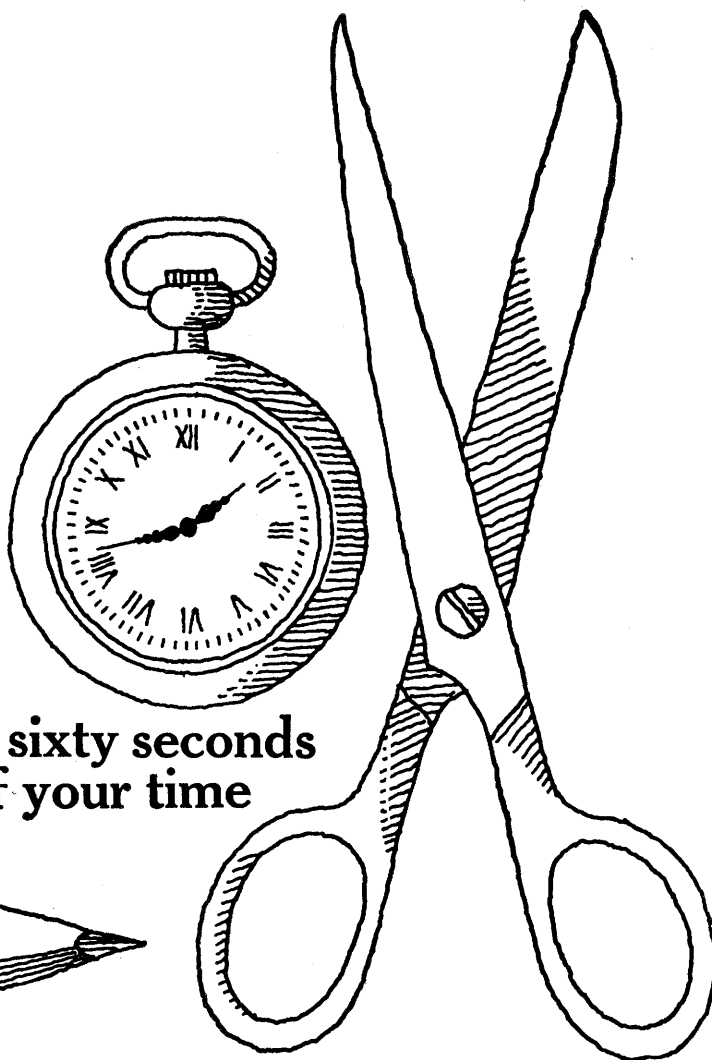
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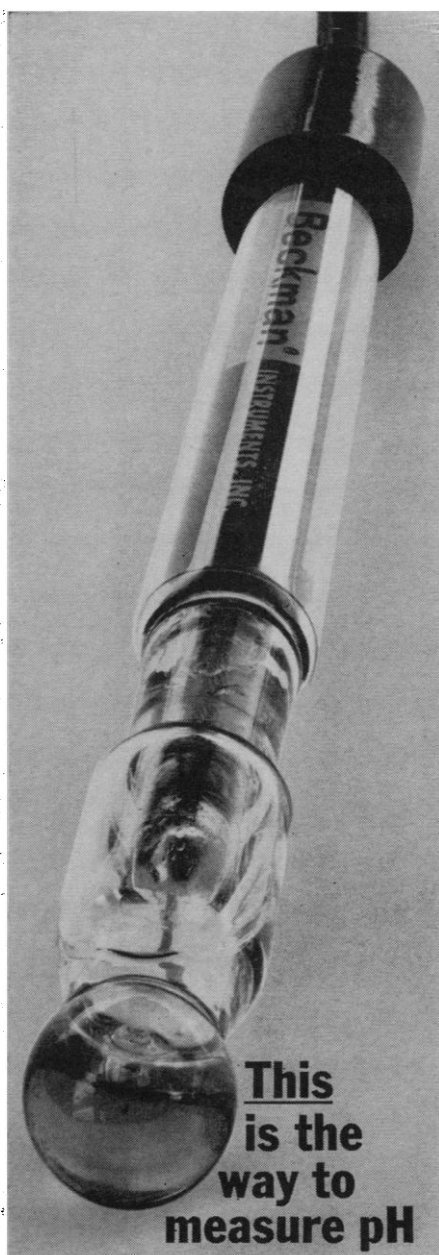
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sibility would be for agencies to add a fixed percentage to each grant, similar to the overhead allowance, for direct support of computer facilities. A third possibility would be to include computing facilities directly in overhead and increase the overhead rate accordingly. For those who believe that computing centers should be considered a necessary campus-wide service, analogous to libraries, this last solution seems logical.

ANTHONY RALSTON
*Computing Center, State University
of New York, Buffalo*

Krebiozen and Faith

The Krebiozen case (News and Comment, 4 Mar., p. 1061) illustrates both the benefits and the hazards of human faith. When people in distress have a tremendous need to believe in something or somebody, then the forces of society seem powerless to effect an unmasking of the inconsistencies involved in that faith. Such vigor of faith no doubt is a necessity to many people in their times of crisis. When a truly effective anticancer agent is developed, Krebiozen will be instantly forgotten.

One of the collorary hazards of faith is that constant repetition of unsubstantiated statements eventually produces the appearance of truth. The history of science is cluttered with unsubstantiated "truths," and some professional reputations rest more upon brashness and persistence in repeating such statements than upon brains and the careful pursuit of knowledge. . . .

JOHN T. FLYNN
*Beekman-Downtown Hospital,
170 William Street, New York 10038*

Lesson of Pittsburgh

I am inclined, from *Science's* recent account of developments at the University of Pittsburgh (News and Comment, 4, 11, and 18 Feb.), to regard ex-Chancellor Litchfield with far more esteem than I did. . . . Speaking as an administrator, I should like to say that the role is an unenviable one. One is a servant to those one administers as well as to those one has to account to. One doesn't take such a job out of altruism, but perhaps the chief reward is the achievement of goals that one believes one has a particular capacity to push

through. I use the verb "push," because the administrator must have and maintain authority to enable him to do his job.

The era of Litchfield may be over for Pitt. It would be well, however, for the community and the trustees to recognize the debt they owe him, as brought out in the *Science* account. One aspect of Pitt's situation not brought out in that account is the proximity of Carnegie Tech, a strong academic institution to try to compete with. Yet Litchfield did so successfully, instilling an *esprit de corps* at the university that is not easily come by.

This is my expression of thanks to him for what he tried to do to strengthen higher education in one small sector of our country. I do not view the debacle that resulted as his personal failure, but as a lesson to us all in the requirements for establishing and operating a major academic institution. May we learn and benefit from it.

ROWENA W. SWANSON
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Samuel Johnson on Dermo-optical Perception

Readers of Martin Gardner's article on dermo-optical perception (11 Feb. p. 654) may be interested in how Johnson dismissed the matter. In the 19 April 1772 entry in *Boswell for the Defense* [W. K. Wimsatt, Jr., and F. A. Pottle, Eds. (Heinemann, London, 1960), p. 134], Boswell records:

We talked of the blind being able to distinguish colours by the touch. Mr. Johnson said that the great Saunderson mentions his having attempted to do it; but that he found he was aiming at an impossibility. That, to be sure, a difference in the surface makes the difference of colours. "But that difference," observed Mr. Johnson, "is so fine that it is not sensible to the touch." The General [Pasquale de Paoli] mentioned gamesters and jugglers who could know cards by the touch. Mr. Johnson said that those cards must not have been so well polished as ours are.

The editors add in a footnote:

Nicholas Saunderson, blinded by smallpox at the age of twelve months, became in 1711 fourth Lucasian Professor of Mathematics at Cambridge. His *Elements of Algebra*, 1740, contains the disclaimer to which Johnson refers.

F. A. BREWER
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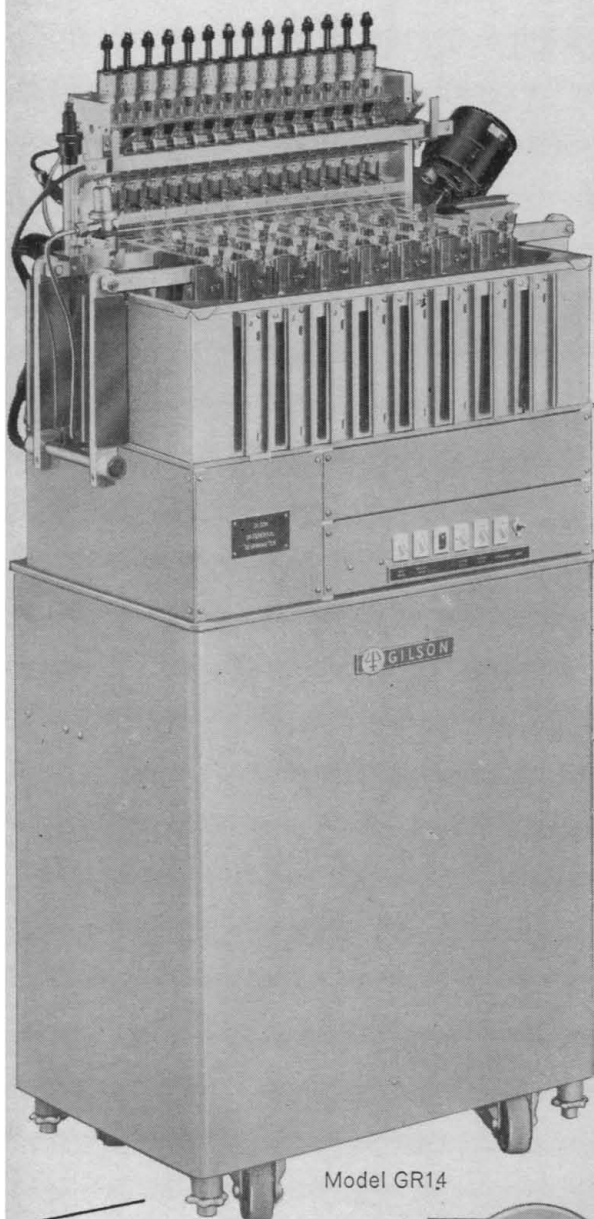

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Environmental Sciences

One of the newest fads in Washington—and elsewhere—is "environmental science." The term has political potency even if its meaning is vague and questionable. Lacking specific definition, it embraces every science—physical, natural, social—for all of them deal with man's surroundings and their influence and impact upon him.

An observer of the Government scene gets the impression that the title of a new agency in the Department of Commerce may be an astute response to the flexibility and hence the promotional value of the term "environmental science" in building a new empire in science and technology. The acronym ESSA, easily pronounced and remembered, and already imprinted on two orbiting satellites, stands for "Environmental Science Services Administration," truly a ponderous, hard-to-remember, and hard-to-define title, of puzzling import.

ESSA is within the Department of Commerce, presumably because the Weather Bureau was its nucleus. But, assuming the possibility of unlimited expansion, is Commerce logically the trustee and guardian of all human environment? Will ESSA's service extend to influencing all the phenomena with which science deals—in the heavens, beneath the sea, and upon and under the dry land—to protect man and, hopefully, to benefit him? Can one escape visualizing a vast rising tide of dollars deemed essential for guarding man against the threats of nature or for assuring him of nature's benign contributions to his well-being?

The various Government agencies with well-understood functions have, on the whole, performed creditably. They have taken seriously their responsibilities to the public. They have been doing research and development in scientific and technological areas to improve their competence in public services. Basic research in all fields is being well supported and well administered in NIH, NSF, AEC, ARPA, and other agencies. It seems reasonable to believe that all the agencies, with appropriations commensurate with needs, will continue creditably to perform their respective services.

What assurance is there that an agency put together out of parts heretofore existing and functioning in other agencies will provide more and better services? At least one consequence is assured: in an organization so vast within the possible interpretation of its name, the cost will be immeasurably greater.

The answers to the questions posed are not obvious, nor can they be deduced from observable events. One answer which may be proffered is that the purpose was "better coordination" among the component agencies. This, as may be recalled, was an objective in the creation of the Federal Council of Science and Technology, and of Interdepartmental Committees.

ESSA's establishment is a *fait accompli*. Fortunately its direction is in most capable hands. Its director has our best wishes for success in his difficult task. At the same time, the citizenry comprised of the scientists and technologists merits being told what "environmental science" means, and assured that ESSA is not to assume responsibility for all of science and technology in Government. Without such assurance, vigorous and sustained opposition to such unlimited expansion as is implied in "environmental science" is strongly indicated.

—PAUL E. KLOPSTEG

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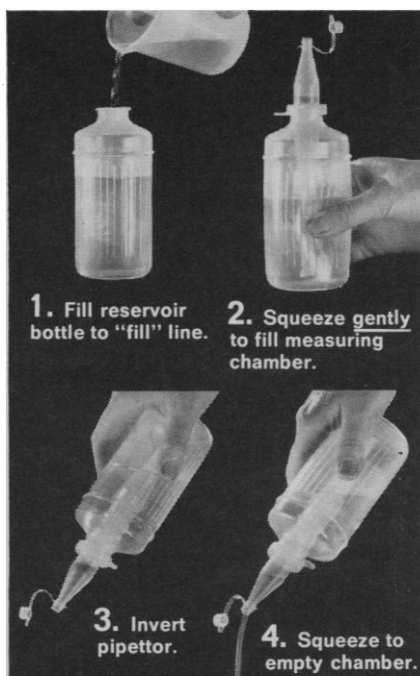
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While no neurophysiologists or sensory information processing specialists spoke at the conference, brief reference was made to the possibility of a nearly all-encompassing ultimate solution to the reading problems of the blind—development of substitute organs to replace defective parts of the visual system, and then conveying the visual information directly to appropriate parts of the central nervous system. Some participants considered this approach very difficult and expensive, but not completely impossible.

The conference was organized by the Veterans Administration.

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Forthcoming Events

May

3-5. **Industrial Waste**, 21st conf., Purdue Univ., Lafayette, Ind. (D. E. Bloodgood, School of Civil Engineering, Purdue Univ., Lafayette 47907)

3-6. American Chemical Soc., Div. of **Rubber Chemistry**, San Francisco, Calif. (G. N. Vacca, Bell Telephone Laboratories, Murray Hill, N.J.)

3-8. Mechanism of Action of **Fungicides and Antibiotics**, intern. symp., Biological Soc. of the GDR, Reinhardtbrunn, East Germany. (H. Lyr, Inst. für Forstwissenschaften, Alfred-Möllerstr., 13 Eberswalde die Berlin)

4. Society for **Analytical Chemistry**, mtg., Bristol, England. (The Society, 14 Belgrave Sq., London, England)

4-6. **Genetics** Soc. of Canada, 11th annual mtg., Banff, Alberta. (C. O. Person, Dept. of Genetics, Univ. of Alberta, Edmonton, Canada)

4-6. Society for Experimental **Stress Analysis**, spring mtg., Detroit, Mich. (B. E. Rossi, 21 Bridge Sq., Westport, Conn. 06882)

4-7. **Virginia Acad. of Science**, Madison College, Harrisonburg. (R. C. Berry, Virginia Acad. of Science, P.O. Box 8203, Richmond 23226)

4-8. **Laboratory Medicine**, 12th congr., Bad Kissengen, West Germany. (W. Altbath, Katharinengasse 3, 87 Würzburg, Germany)

4-11. **Instability Phenomena in Galaxies**, symp., Armenian SSR. (A. N. Hakopian, Acad. of Sciences of the Armenian SSR, Erevan)

5-6. **Human Factors in Electronics**, 7th symp., Minneapolis, Minn. (C. A. Baker, Honeywell, Inc., 2700 Ridgeway Rd., Minneapolis)

5-6. **Rabies**, natl. symp., Atlanta, Ga. (J. R. Ray, American Veterinary Medical Assoc., Chicago, Ill.)

5-6. **Strontium Metabolism**, intern. symp., Annan, Scotland. (J. H. Martin, United Kingdom Atomic Energy Agency, Chapelcross Works, Annan, Dumfriesshire, Scotland)

5-7. Society for American **Archaeology**, 31st annual mtg., Univ. of Nevada, Reno. (D. D. Fowler, Dept. of Anthropology, Univ. of Nevada, Reno 89507)

5-7. New Jersey Soc. of **Professional Engineers**, 42nd annual conf. and exhibition, Atlantic City. (K. G. Stanley, The Society, 495 West State St., Trenton, N.J. 08618)

5-7. **Midwestern Psychological Assoc.**, Chicago, Ill. (F. A. Mote, Psychology Dept., Univ. of Wisconsin, Madison)

5-8. **Protides of the Biological Fluids**, 14th annual colloquium, Bruges, Belgium. (P.O. Box 71, Bruges)

6-7. Institute on **Lake Superior Geology/Mineralogical Soc. of America/Soc. of Economic Geologists**, mtg., Michigan Technological Univ., Saulte Ste. Marie. (A. K. Snelgrove, Michigan Technological Univ., Houghton 49931)

6-7. **North Carolina Acad. of Science**, Catawba College, Salisbury. (J. A. Yarbrough, Meredith College, Raleigh, N.C.)

6-7. **North Dakota Acad. of Science**, North Dakota State Univ., Fargo. (B. G. Gustafson, Univ. of North Dakota, Grand Forks)

6-8. Society for Applied **Anthropology**, 25th annual mtg., Milwaukee, Wis. (The Society, Rand Hall, Cornell Univ., Ithaca, N.Y.)

6-8. **Wisconsin Acad. of Sciences, Arts, and Letters**, Lawrence Univ., Appleton, Wis. (D. J. Behling, 720 Wisconsin Ave., Milwaukee 53202)

6-9. American **Psychoanalytic Assoc.**, Atlantic City, N.J. (H. Fischer, 1 E. 57th St., New York, N.Y.)

7-8. Academy of **Psychoanalysis**, Atlantic City, N.J. (A. H. Rifkin, 125 E. 65 St., New York 10021)

7-12. American **Ceramic Soc.**, 68th annual mtg., Washington, D.C. (The Society, 4055 N. High St., Columbus, Ohio 43214)

8-10. Society of the **Plastics Industry**, Canadian section, 24th annual mtg., Montreal, P.Q. (The Society, 250 Park Ave., New York 10017)

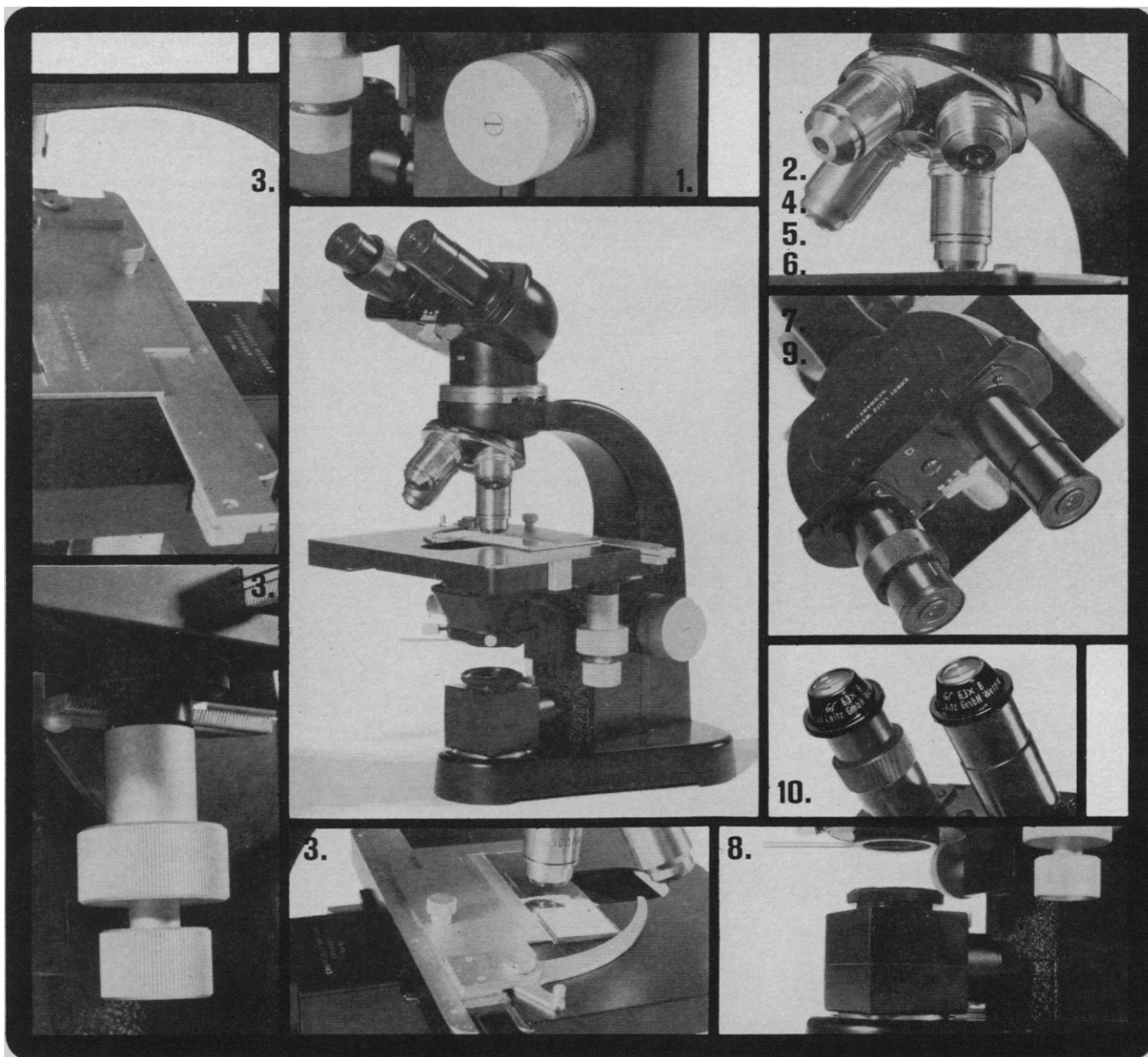
8-11. **Administrative Management Soc.**, 47th intern. conf., Boston, Mass. (W. H. Latham, Willow Grove, Pa. 19090)

8-12. Association of American State **Geologists**, annual mtg., Univ. of Indiana, Bloomington. (W. C. Hayes, Missouri Geological Survey, P.O. Box 250, Rolla 65401)

8-12. **Organic Sulphur Compounds**, symp., Univ. of Groningen, Groningen, Netherlands. (M. J. Janssen, Dept. of Organic Chemistry, Univ. of Groningen, Groningen)

8-15. **Stereochemistry**, conf., Bürgenstock, Switzerland. (D. Arigoni, Dept. of Organic Chemistry, Univ. of Zurich, Zurich, Switzerland)

9-10. **Circuit Theory**, 9th midwestern symp., Oklahoma State Univ., Stillwater. (D. R. Wilson, School of Electrical Engineering, Oklahoma State Univ., Stillwater 74045)



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