SCIENCE

11 October 1974

Vol. 186, No. 4159

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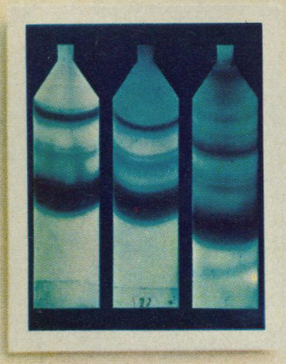

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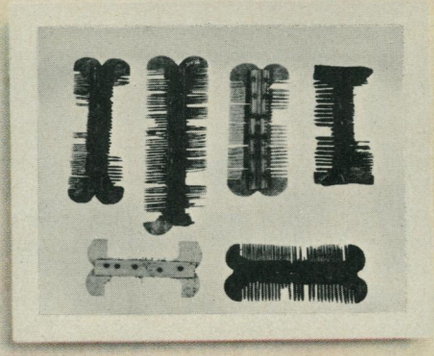

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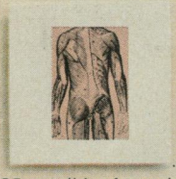

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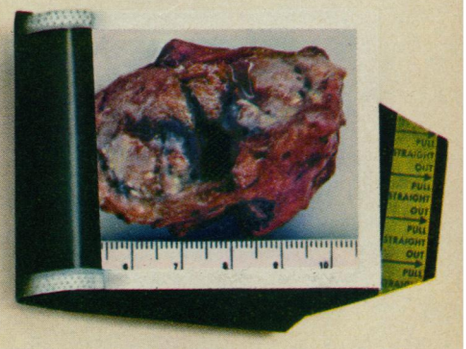

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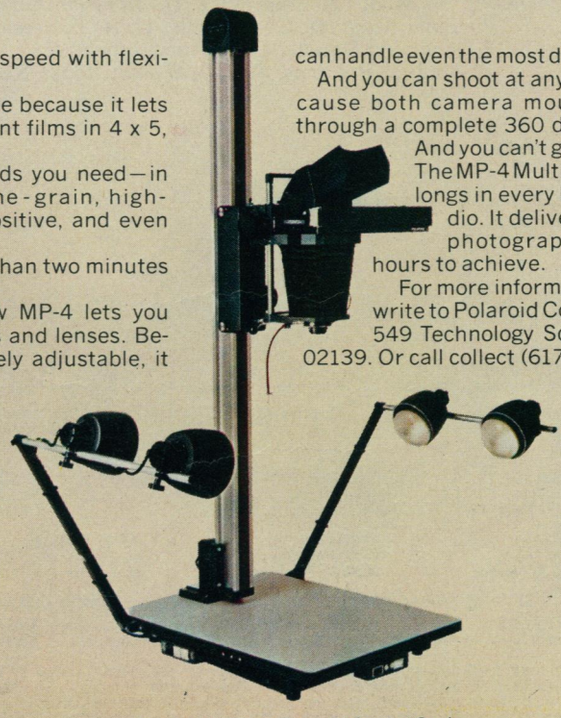

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11 October 1974

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SCIENCE

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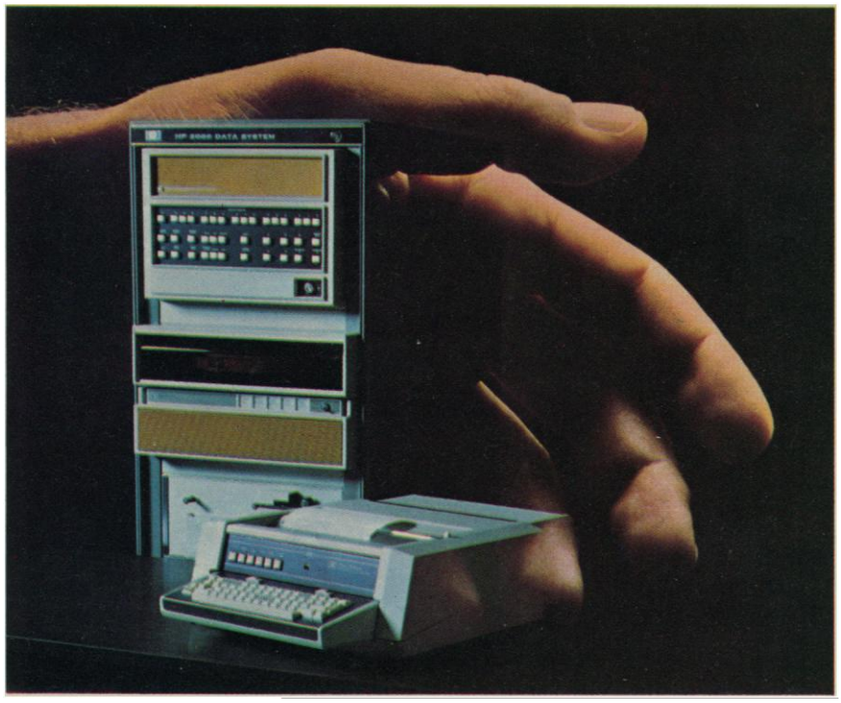

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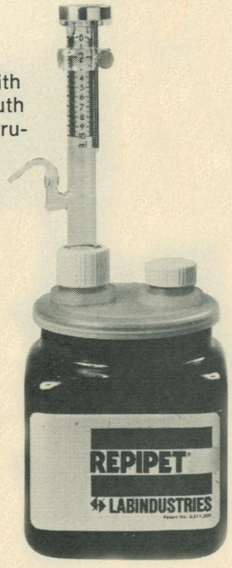

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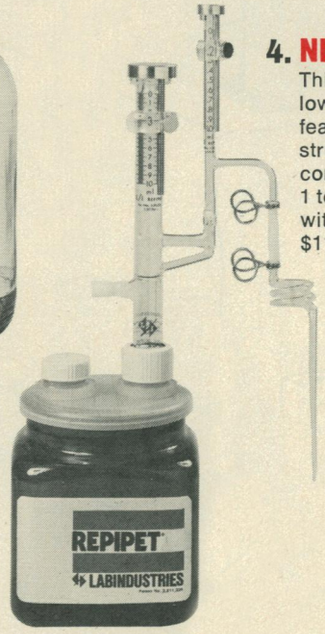

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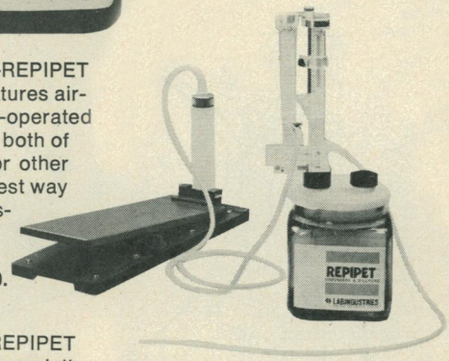

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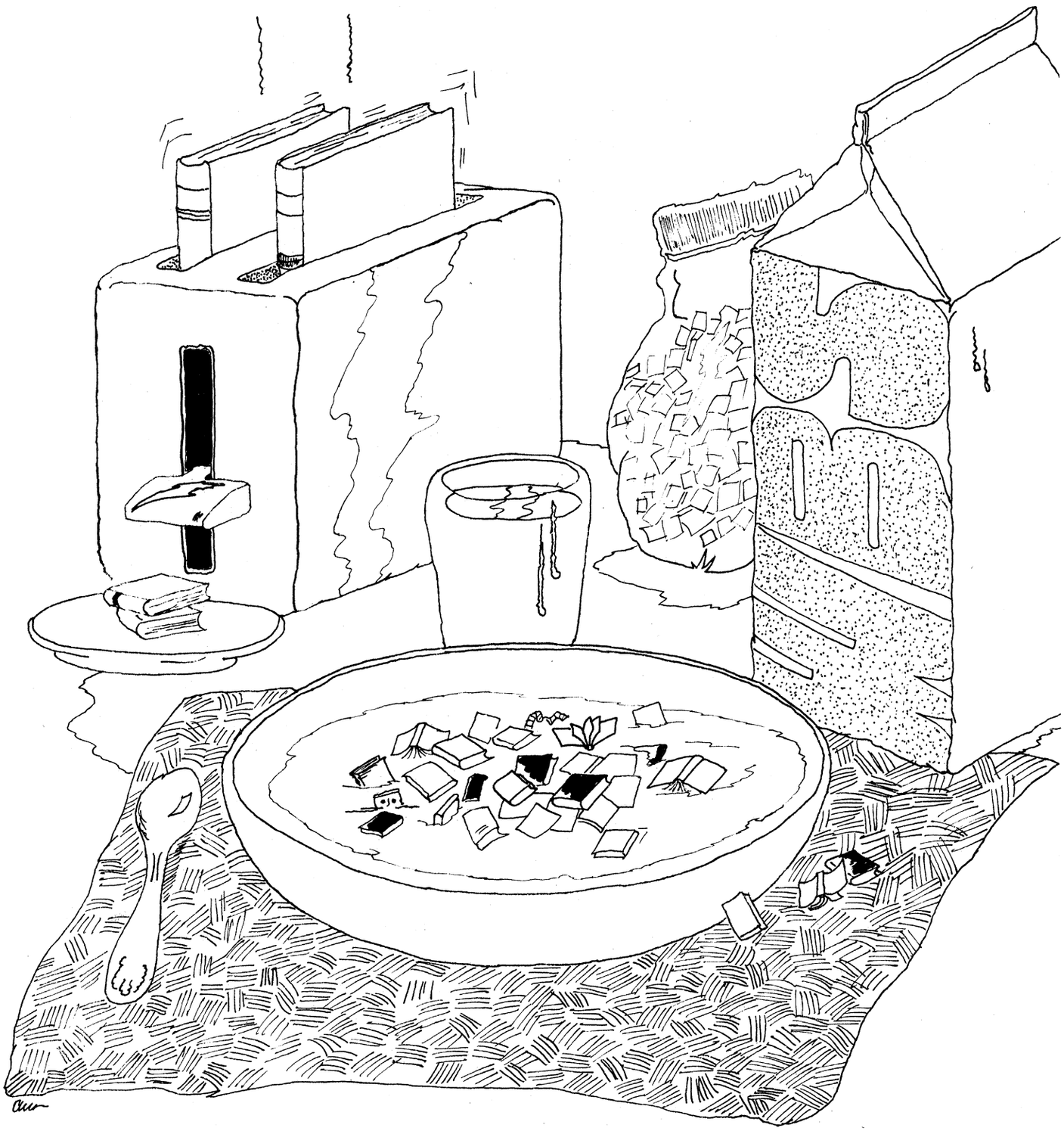

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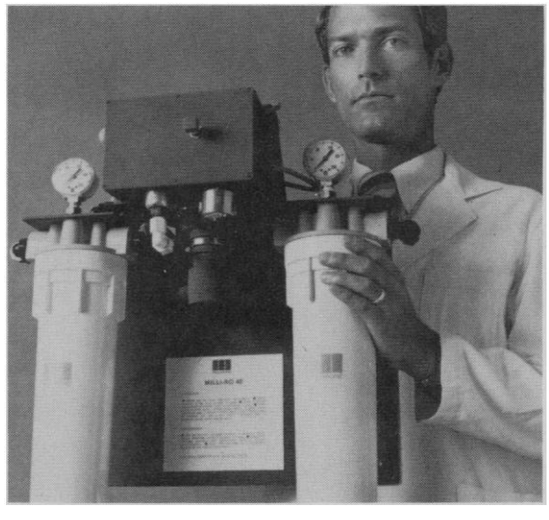

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order lists of their applicants. Both schools and applicants were encouraged to view this as a research project, conducted parallel to the regular application process but having no relationship to actual admissions decisions. These data are now being analyzed, and a computerized "match" is being performed. The results of the match will be compared to the results of the actual admissions process at participating schools, and a final report will be available in November.

As suggested by Marcus and Riggs, matching appears to be a theoretical solution to what has been called the medical school "admissions crisis"; an effort is now being made to determine whether it might be a practical solution as well.

SUZANNE P. DULCAN
Division of Student Programs, Association of American Medical Colleges, Suite 200, One Dupont Circle, NW, Washington, D.C. 20036

Marcus and Riggs suggest that a medical school admissions matching plan similar to the internship matching program would be preferable to the present system of evaluation of applicants by admissions committees. They imply that the admissions procedure would be accelerated, that the average number of applications per student would be reduced, and that the faculty members would spend less time serving on admissions committees if there were a matching plan. There is no question that the National Internship and Residency Matching Program (NIRMP) for the assignment of first-year, post-M.D. clinical appointments (internships and first-year residencies available to graduating medical students) has proved to be eminently successful over the past 20 years. However, the assumption that the selection of interns or first-year residents by hospitals is similar to the selection of entering students by medical schools is incorrect. In the former instance, there are several thousand more clinical appointments available each year than there are graduating medical students; hence the applicants are buyers in a buyers' market. In the case of medical school admissions, the situation is reversed. At present there are three times as many applicants as there are total numbers of available places in all of the entering medical classes; here the applicant finds himself a seller in a very competitive buyers' market. As a consequence, applicants to medical school understand-

ably apply to an average of eight to ten medical schools to enhance their chances of acceptance. If a matching plan existed, it would be to the applicant's advantage to apply to as many schools as possible, since his chances of getting the best possible match would not be diminished. However, in the process of applying to a larger number of schools, the applicant would increase the number of applications received by each school. The medical schools, in order to establish the rank order of their acceptances in a matching plan, would be obliged to consider seriously a larger number of applicants than they do now, since the schools would have no way of knowing where each stood in the rank order listing of each applicant. The admissions committees, if they wished to interview their prospective students, would have to interview many more than they do now, thereby increasing the time and effort expended by both the members of the admissions committees as well as by the applicants. At present, when a responsible applicant receives an acceptance from one of the schools to which he has applied, he withdraws his applications from the other schools lower on his list and thereby saves both those schools and himself the task of processing these applications further.

The objectives Marcus and Riggs hope to attain could be better accomplished by more widespread use of the Early Decision Plan (EDP). This is a procedure whereby a qualified student may first apply to the medical school of his or her first choice and submit all of the application materials by 15 August. In turn, the medical school will give that applicant a decision no later than 1 October. If accepted, the student need apply to no other school. If not accepted, the student still has ample time to submit other applications. In 1973–74, 51 of the 114 medical schools employed the EDP and in 1974–75 it is expected that an even larger number will do so.

There is no question that additional refinements of the admissions process are needed to alleviate the difficulties that currently confront both applicants and medical school admissions committees. A medical school admissions matching plan similar to the NIRMP, however, is definitely not the answer.

JOSEPH CEITHAML

Office of the Dean of Students,
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Chicago, Illinois 60637

We are pleased to learn of the American Association of Medical Colleges' research project correlating the present system's results with a theoretical matching program. It must be pointed out that their study did not test the value of uniform reply dates, preference lists before the fact, or the mechanics of a "rounding" procedure to fill all available spaces. If the conclusions of that study demonstrate, as we believe, the assumptive simplicity, reliability, and feasibility of admissions matching, we urge immediate adoption of such a plan to facilitate the notification process.

Replying to the criticisms of Ceithaml and Dalrymple requires brief reiteration of several key points stated in our editorial. Matching of accepted applicants is an expedient to medical school admissions; we do not offer it as a replacement for the traditional committee method by which students are selected to attend medical school. The ultimate success of admissions matching is predicated on significant overhauling of advising programs and on firm statements by medical schools concerning minimum qualifications for serious consideration, so that undergraduate students may have the clearest knowledge of how and where to apply, what to expect in terms of acceptances, and even whether they should attempt application to medical school. Thus, until definite action is begun by undergraduate and medical schools to alleviate the ills of current counseling efforts, we think it *impossible* to predict without presumptions what will happen to application-per-student ratios. We are convinced that blind belief in the inevitable increase in these ratios is erroneous and unfounded.

Institution of admissions matching by no means precludes use of the Early Decision Plan (EDP) as it now exists, since "if not accepted [under EDP], the student still has ample time to submit other applications." Should, as Ceithaml suggests, the EDP be held as the panacea for the ails of medical school admissions, we foresee problems at least as grave as those he portends for a matching program. Widespread use of EDP would certainly decrease the number of applications initially each year, as students are allowed to apply to but one school; the subsequent torrent of applications received after 1 October could only delay the admissions process.

We recognize that there are numerous proposals for modifying admissions procedures, and it seems fairly obvious that no single plan is yet sufficiently broad or flexible to afford both uniformity and individuality mandatory in admissions decisions. Our purpose is to present a scheme by which one phase of the process can be expedited. While the perfect solution to accommodate all interests is not apparent, we are encouraged that new ideas are in the offing.

CHARLES E. RIGGS, JR.
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Stanford University School of Medicine, Palo Alto, California 94305

Publishing Costs

Ralph D. Tanz suggests (30 Aug., p. 735) that it is improper for publishers to charge authors for reprints of their own articles, and he supports legal action which would prevent the loss of copyright by authors to publishers.

In fact, we already have mechanisms which allow the author to retain control of his own work. If we accept the notion that the author raises his own funds, does the thinking, does the laboratory work, and does the writing (all this, presumably, on salary), then we must note that the author is free to go to any printer of his choice and arrange to have his work printed.

If he objects to paying the printer, he may write out copies in longhand for distribution to students. If he objects to paying for paper and ink, he may scratch the text into wet clay with a twig.

I cannot, offhand, think of any way around the necessity of paying a small filing fee to the Copyright Office or of spending some cash for postage (greater in the case of clay tablets than in the case of ink on paper), but if the author is willing to bear that expense, it is not difficult under the present rules to obtain a copyright.

The author may then present copies of his article to students if he deems it necessary. If he charges his students or interested colleagues for copies of the article, he may be cursed as a money-grubbing publisher, but those are the breaks.

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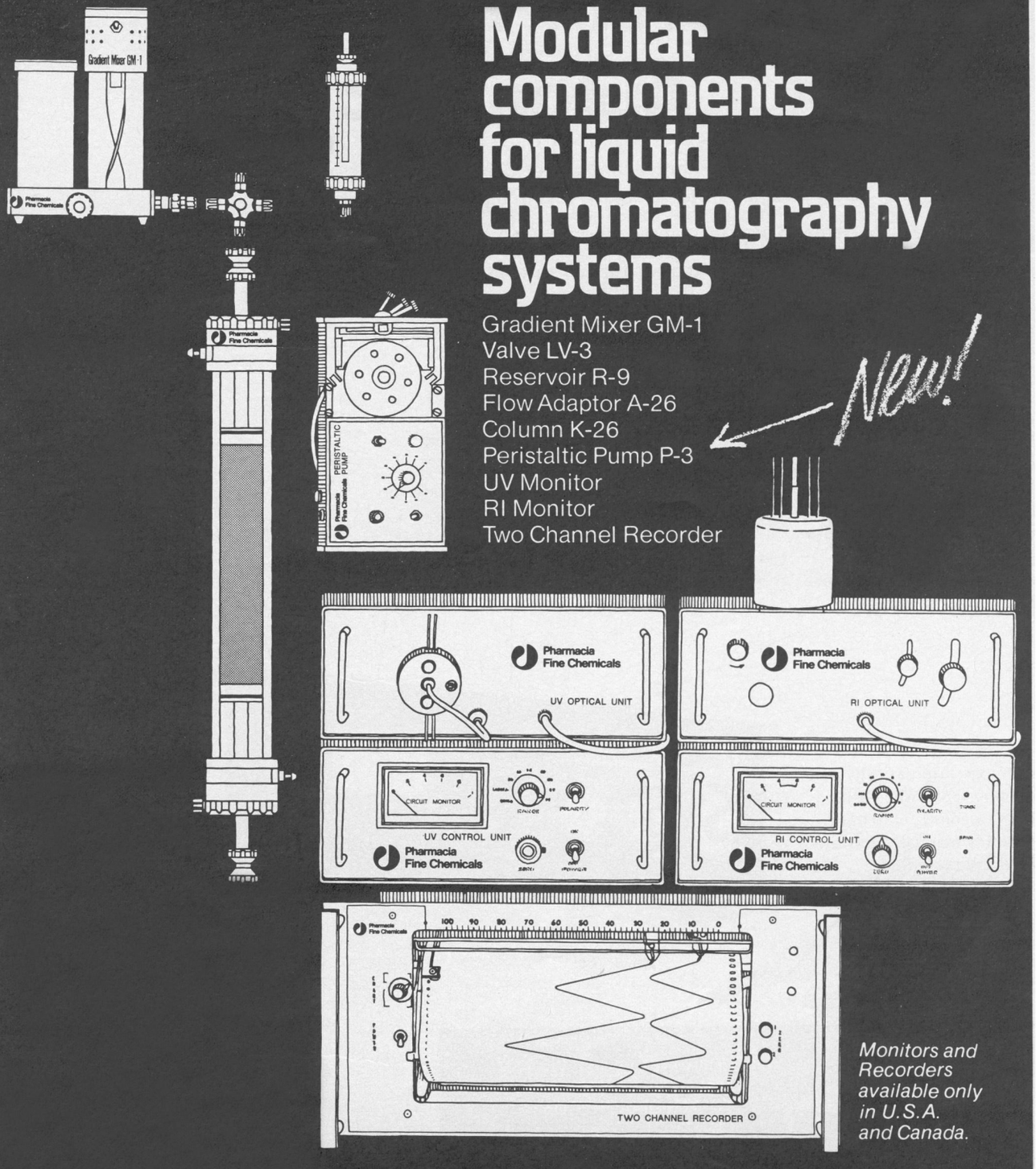

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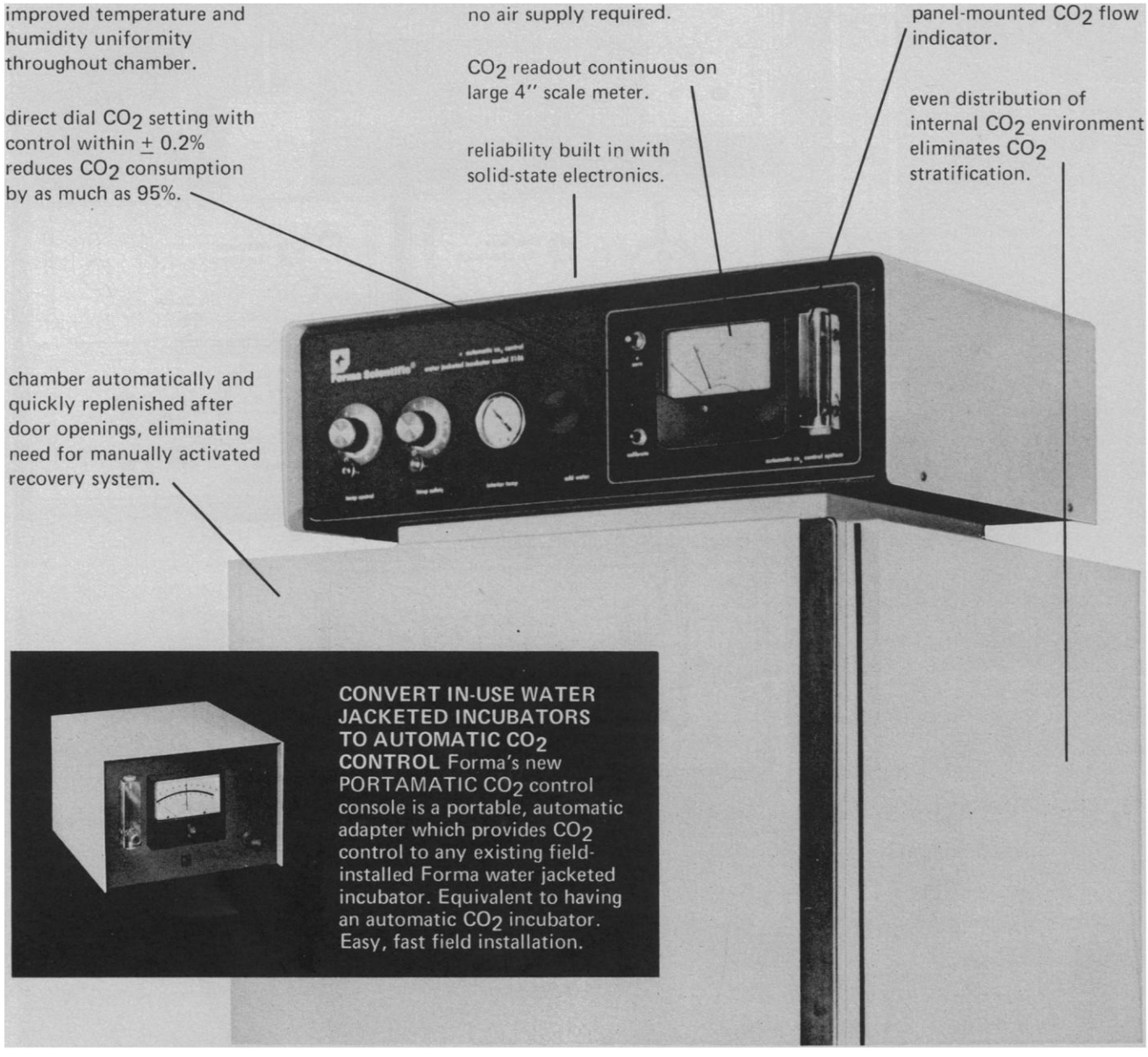

Circle No. 269 on Readers' Service Card

11 October 1974, Volume 186, Number 4159 **SCIENCE**

Impermanent Balance between Man and Computer

The sciences and technologies of computers, automation, and electronics are comparatively new. They differ in many respects from older sciences. Major confrontations can be expected—and are already occurring—as the domain of these new sciences overlaps that of individuals.

Except for medicine, science and technology has previously been rather aloof and removed from the individual. The atom bomb killed people, but in a depersonalized massive way. The machines of the industrial revolution replaced people to a considerable extent, but they were replacements of their muscle power, not their brains and control power.

For good reason, man has always zealously guarded his rights to intellect, control, and power. As individuals we have always wanted to increase our intelligence, our ability to control our environment, and our ability to use power for our own ends.

Thus, it is not surprising that people have always wanted to understand these phenomena, to produce artifacts that would increase their own intelligence, control, and power, and to create artifacts in their own image which would themselves exhibit these traits.

Significantly, man's attempts to understand such phenomena have led to many important inventions. These include telescopes, cameras, the printing press, the gun, television, and the computer. Man's attempts to produce artifacts in his own image that possess intelligence, power, and control capabilities have resulted in prosthetic sensors, mechanical limbs, robots, and the computer.

Thus, man has attempted to use the computer to help him understand himself, to help him gain more intelligence and power, and to replace himself in performing tasks demanding intelligence and the capability to control. It is this varying and contradictory role that we have ourselves assigned to computers that results in the honest confusion, mistrust, and fear surrounding them. And there is presently no balance between man and computer that possesses any permanence because of the changing roles man is assigning both to himself and to computers.

Experience tells us that the balance of power and the ratio of intelligence between man and computer is still indeterminate. Further, it is not entirely under man's control. In particular, as computers increase their capacities to perform more of the tasks formerly considered only within man's intellectual province, man must equip himself for other functions or his survival will seem less important to himself, leading to a physical and intellectual ennui.

There is already a societal schism in the growing gap between those with access to a computer and those without. The balance of power and intelligence is tipped in favor of the man-computer partnership. It is apparent in the comparative efficiencies of handling paper work in companies with and without computers. Chemical companies employing process-control computers operate much more efficiently than those without. And finally, the individual with a computer at his command is favored in his intellectual endeavors.

The increasing imbalance is also suggested by the observation that man appears to be increasing the number of "intelligent" tasks for computers faster than he is for himself.

Nonetheless, two positive predictions are offered which promise a more comfortable balance between man and computer. They are that computers will make possible the realization of intelligent behavior that is essentially limitless, transcending man and computer taken separately, and that computers will confer on the individual more control over his personal environment that he has ever before been able to exercise.

It is a future worth awaiting.—RUTH DAVIS, *Director, Institute for Computer Sciences and Technology, National Bureau of Standards, Washington, D.C. 20234*

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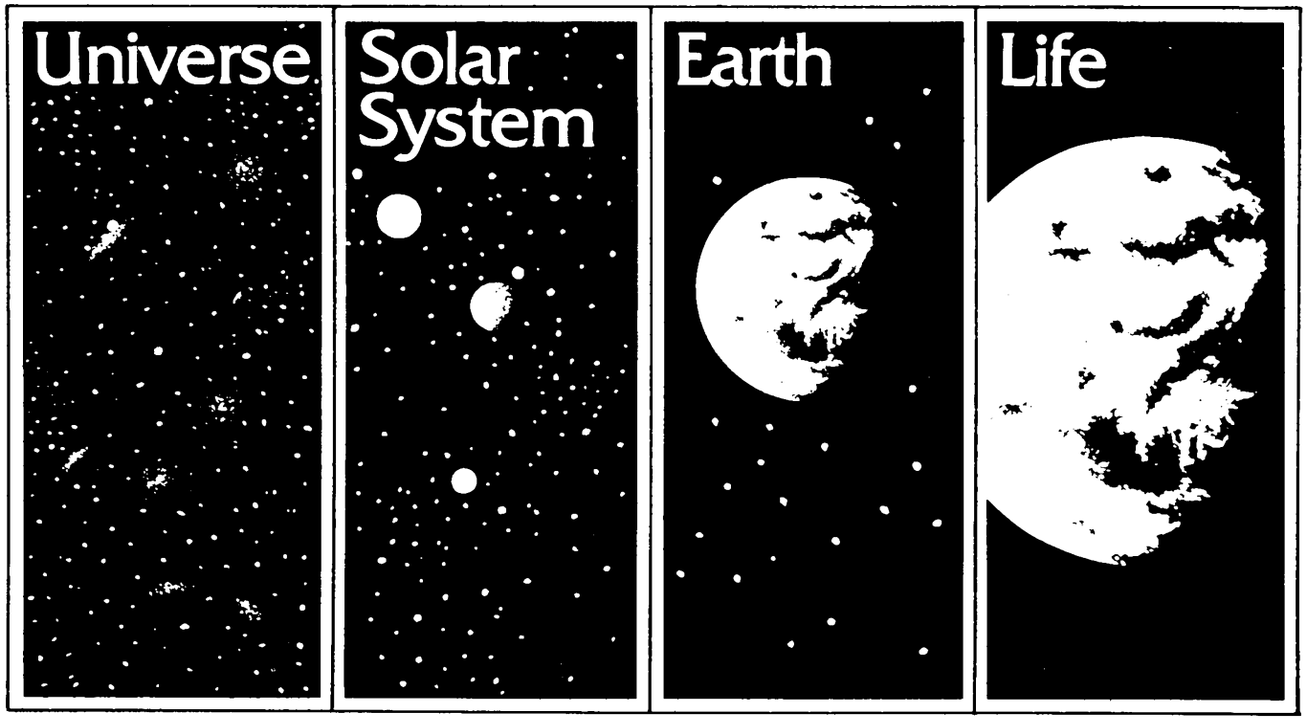
Origins:

Speculations and facts on the sources of planets, Earth, and life by Robert Jastrow, Philip Morrison, Cyril Ponnamperuma, George Wald.



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Forthcoming Events

November

10–15. **Coal Mining and Processing Legislation and Regulation** Conf., Engineering Foundation, Uniontown, Pa. (EF, 345 47 St., New York 10017)

11–13. Association for **Computing Machinery**, San Diego, Calif. (J. F. Cunningham, ACM, 1133 Ave. of the Americas, New York 10036)

11–13. **Ultrasonics** Symp., Inst. of Electrical and Electronics Engineers, Milwaukee, Wis. (M. Levy, Univ. of Wisconsin, Milwaukee 53201)

11–15. Conference on **Plasma Physics and Controlled Nuclear Fusion Research**, 5th, Intern. Atomic Energy Agency, Tokyo, Japan. (J. H. Kane, Div. of Technical Information, Atomic Energy Commission, Washington, D.C. 20545)

12–14. Conference on **Aerospace and Aeronautical Meteorology**, American Meteorological Soc. and American Inst. of Aeronautics and Astronautics, El Paso, Tex. (AIAA, 1290 Ave. of the Americas, New York 10019)

12–14. Mid-Atlantic **Industrial Waste** Conf., 7th, Philadelphia, Pa. (M. D. LaGrega, Inst. of Environmental Studies, Drexel Univ., Philadelphia 19104)

12–14. Society of **Plastics Engineers**, Detroit, Mich. (SPE, 656 W. Putnam Ave., Greenwich, Conn. 06830)

12–14. **Reactive Pollutant Program** Symp., Coordinating Research Council, Santa Barbara, Calif. (T. Redington, CRC, 30 Rockefeller Pl., New York 10020)

12–14. Symposium on **Science and Research in the Zoological Garden**, 100th, Philadelpnia, Pa. (R. L. Snyder, Philadelphia Zoological Garden, 34th St. and Girard Ave., Philadelphia 19104)

13. American College of **Physicians**, New Jersey regional mtg., Piscataway. (H. E. Nussbaum, 120 Millburn Ave., Millburn, N.J. 07041)

13–15. **Origin and Evolution of the Lunar Regolith**, Lunar Science Inst., Houston, Tex. (LSI, 3303 NASA Rd. 1, Houston 77058)

14. American **Geographical** Soc., New York, N.Y. (R. B. McNee, AGS, Broadway at W. 156 St., New York 10032)

14–15. **Evolution of Communicative Behavior**, Wayne, N.J. (M. Hahn, Dept. of Biology, William Paterson College, Wayne 07470

14–16. **Science Teachers** Assoc. of Ontario, Toronto, Canada. (STAO, Univ. of Waterloo, Waterloo, Ont., Canada)

16–17. Oklahoma **Acad. of Science**, Durant. (J. F. Lovell, Dept. of Biological Sciences, Southwestern State College, Weatherford, Okla. 73096)

16–17. American Assoc. of **Electromyography and Electrodiagnosis**, San Francisco, Calif. (W. C. Wiederholt, AAEE, 7010 Via Valverde, La Jolla, Calif. 92037)

16–17. National Conf. on **Methods of Venereal Disease Prevention**, Chicago, Ill. (J. Lama, Mid-West Assoc. for the Study of Human Sexuality, 100 E. Ohio St., Chicago 60611)

17–20. Southern **Medical** Assoc., Atlanta, Ga. (R. F. Butts, 2601 Highland Ave., Birmingham, Ala. 35205)

17–21. International **Food-Drugs from the Sea** Conf., Marine Technology Soc., Mayaguez, P.R. (G. Greene, D-590, Oceanographic Liaison, Abbott Labs., North Chicago, Ill. 60064)

17–21. Academy of **Psychosomatic Medicine**, Scottsdale, Ariz. (K. Shannon, APM, 813 River Rd., Shreveport, La. 71105)

17–22. American Acad. for **Cerebral Palsy**, Denver, Colo. (J. E. Bryan, AACP, 1255 New Hampshire Ave., NW, Washington, D.C. 20009)

17–22. American Soc. of **Mechanical Engineers**, New York, N.Y. (R. B. Finch, ASME, 345 E. 47 St., New York 10017)

17–22. American Acad. of **Physical Medicine and Rehabilitation**, San Francisco, Calif. (C. C. Herold, AAPMR, 30 N. Michigan Ave., Chicago, Ill. 60602)

18–19. International Symp. on the **Supply of Natural Uranium**, Deutsches Atomforum e.V. and the Specialist Group on Fuel Elements of the Nuclear Technology Soc., Mainz, West Germany. (Deutsches Atomforum e.V., Haus X, Allianzplatz, 53 Bonn 1, FRG)

18–20. **Geochemical** Soc., Miami Beach, Fla. (E. E. Angino, Dept. of Geology, Univ. of Kansas, Lawrence 66044)

18–20. **Geological** Soc. of America, Miami Beach, Fla. (E. B. Eckel, GSA, 3300 Penrose Pl., Boulder, Colo. 80301)

18–20. **Paleontological** Soc., Miami, Fla. (W. O. Addicott, U.S. Geological Survey, 345 Middlefield Rd., Menlo Park, Calif. 94025)

18–20. International **Semiconductor Laser** Conf., 4th, Inst. of Electrical and Electronics Engineers, Atlanta, Ga. (IEEE, 345 E. 47 St., New York 10017)

18–21. National **Fire Protection** Assoc., Seattle, Wash. (A. B. Sears, Jr., 470 Atlanta Ave., Boston, Mass. 02210)

18–21. American **Heart** Assoc., 47th annual, Dallas, Tex. (A. Salerno, Public Relations Div., AHA, 44 E. 23 St., New York 10010)

18–22. American **Chemical** Soc., Atlantic City, N.J. (J. G. Grasselli, Standard Oil Co., 4440 Warrensville Center Rd., Cleveland, Ohio 44128)

18–22. Symposium on **Isotope Ratios as Pollutant Source and Behaviour Indicators**, Food and Agriculture Organization, and Intern. Atomic Energy Agency, Vienna, Austria. (J. H. Kane, Office of Information Services, Atomic Energy Commission, Washington, D.C. 20545)

18–22. International **Lead** Conf., 5th, Lead Development Assoc., Paris, France. (LDA, 34 Berkeley Sq., London W.1, England)

18–22. American **Water Resources** Assoc., 10th, San Juan, P.R. (AWRA, 206 E. University Ave., Urbana, Ill. 61801)

19–21. **Quality Control and Nondestructive Testing in Welding**, intern. conf., London, England. (J. G. Young, Standards and Quality Control, Welding Inst., Abington Hall, Abington, Cambridge, CB1 6AL, England)

19–23. **Education in the Health Sciences**, 2nd intern. conf., Montreux, Switzerland. (Secretary, 80 Jan van Nassaustraat, Box 9058, The Hague, Netherlands)

20–21. **Technology of Electroluminescent Diodes** Conf., Inst. of Electrical and

Electronics Engineers, Electron Devices Group, Atlanta, Ga. (IEEE, 345 E. 47 St., New York 10017)

20–23. **Neuroelectric** Soc., 7th annual conf., New Orleans, La. (J. G. Llaurado, Wing D-12N, VA Centers, Wood, Wis. 53193)

20–23. Western **Surgical** Assoc., San Francisco, Calif. (W. P. Mikkelson, 1127 Wilshire Boulevard, Los Angeles, Calif. 90017)

20–24. American **Anthropological** Assoc., Mexico City. (E. J. Lehman, AAA, 1703 New Hampshire Ave., NW, Washington, D.C. 20009)

20–24. American Assoc. of **Psychiatric Services for Children**, New York, N.Y. (R. Greene, AAPSC, 1701 18th St., NW, Washington, D.C. 20009)

20–25. Symposium on **Fetal Antigen Expression in Cancer**, Isawa, Japan. (E. Alpert, Harvard Medical School Massachusetts General Hospital, Boston, Mass. 02114)

21. **Pipeline Hydrogen—The Fuel for the Nuclear Age**, 33rd annual, Inst. of Gas Technology, Chicago, Ill. (H. R. Linden, IGT, 3424 S. State St., IIT Center, Chicago 60616)

21–22. American **Bankers** Assoc., Western regional, Scottsdale, Ariz. (W. R. Moroney, ABA, 1120 Connecticut Ave., NW, Washington, D.C. 20036)

21–22. Symposium on **Nutrition and Aging**, New York, N.Y. (Director, Inst. of Human Nutrition, Columbia Univ., 511 W. 166 St., New York 10032)

21–23. American Soc. for **Cell Biology**, San Diego, Calif. (N. L. R. Bucher, Huntington Labs., Massachusetts General Hospital, Boston 02114)

21–23. National **Science Teachers** Assoc., Washington, D.C. (R. L. Silber, NSTA, 1742 Connecticut Ave., NW, Washington, D.C. 20036)

21–25. American Assoc. of **Gynecological Laparoscopists**, Anaheim, Calif. (J. M. Phillips, 11239 S. Lakewood Blvd., Downey, Calif. 90241)

22–23. Tennessee **Acad. of Science**, Inc., Memphis. (J. D. Caponetti, Dept. of Botany, Univ. of Tennessee, Knoxville 37916)

25–27. National Conf. on **Advances in Cancer Management**, American Cancer Soc. and Natl. Cancer Inst., New York, N.Y. (S. L. Arje, ACS, 219 E. 42 St., New York 10017)

25–27. American **Physical** Soc., Fluid Dynamics Div., Pasadena, Calif. (W. W. Havens, Jr., 335 E. 45 St., New York 10017)

26–30. World **Safety and Accident Prevention** Congr., Makati, Rizal, Philippines. (Safety Organization of the Philippines, Inc., P.O. Box 1, Pasay City)

27–3. **Radiological Soc. of North America**, Chicago, Ill. (H. L. Baker, Jr., 200 First St., SW, Rochester, Minn. 55901)

28–30. National Council for **Geographic Education**, Chicago, Ill. (W. W. Elam, NCGE, 115 N. Marion St., Oak Park, Ill. 60301)

28–30. National Council of **Teachers of English**, 64th annual, New Orleans, La. (NCTE, Advertising Dept., 1111 Kenyon Rd., Urbana, Ill. 61801)

30–1. National Federation of **Catholic Physicians Guilds**, Portland, Ore. (R. H.

Herzog, NFCPG, 2825 N. Mayfair Rd., Milwaukee, Wis. 53222)

31–2. American **Physical** Soc., Nuclear Physics Div., Pittsburgh, Pa. (W. W. Havens, Jr., 335 E. 45 St., New York 10017)

December

1–4. American **Medical** Assoc., Portland, Ore. (E. B. Howard, AMA, 535 N. Dearborn St., Chicago, Ill. 60610)

1–4. American **Medical Women's** Assoc., Houston, Texas. (G. F. Conroy, 1740 Broadway, New York 10019)

1–5. American Inst. of **Chemical Engineers**, Washington, D.C. (F. J. Van Antwerpen, AICE, 345 E. 47 St., New York 10017)

1–5. **Leukocyte Culture,** 9th conf., Williamsburg, Va. (Secretary, 9th Conf. on Leukocyte Culture, 9650 Rockville Pike, Bethesda, Md. 20014)

1–5. American Assoc. of **Physicists in Medicine**, Chicago, Ill. (L. Lanzl, Dept. of Radiology, Argonne Cancer Research Hospital, 950 E. 59 St., Univ. of Chicago, Chicago 60637)

1–6. **Radiological** Soc. of North America, Chicago, Ill. (H. L. Baker, Jr., RSNA, 713 E. Genesee St., Syracuse, N.Y. 13210)

1–15. American **Psychoanalytic** Assoc., New York, N.Y. (H. Fischer, APA, 1 E. 57 St., New York 10022)

2–3. Society of **Photo-Optical Instrumentation Engineers**, Ann Arbor, Mich. (SPIE, 338 Tejon Place, P.O. Box 1146, Palos Verdes Estates, Calif. 90274)

2–4. Symposium on New **Chemistry of Genetic Diseases and Genetic Medicine**, Intra-Science Foundation, Santa Monica, Calif. (ISF, P.O. Box 430, Santa Monica 90406)

2–4. American **Concrete Paving** Assoc., 11th annual, Dallas, Texas. (H. H. Halm, ACPA, 1211 W. 32 St., Oak Brook, Ill. 60523)

2–4. International Conf. on **Effluent Variability from Waste-Water Treatment Processes and Its Control**, Intern. Assoc. on Water Pollution Research, New Orleans, La. (A. J. Englande, Jr., Dept. of Environmental Health, Tulane Riverside Research Labs., Belle Chasse, La. 70037)

2–4. American **Physical** Soc., Electron and Atomic Physics Div., Chicago, Ill. (O. E. Reynolds, APS, 9650 Rockville Pike, Bethesda, Md. 20014)

2–4. **Radioisotopes and Radiation Effects** Conf., American Soc. for Testing and Materials, San Diego, Calif. (ASTM, 1916 Race St., Philadelphia, Pa. 19103)

2–4. **Remote Sensing Applied to Energy Related Problems** Symp., Clean Energy Research Inst., Univ. of Miami, Coral Gables, Fla. (T. N. Veziroglu, School of Engineering and Environmental Design, CERI, Univ. of Miami, Coral Gables 33124)

2–4. **Telecommunications** Conf., Institute of Electrical and Electronics Engineers, Communications Soc., Geoscience Electronics Group, Aerospace and Electronic Systems Soc., San Diego Section, San Diego, Calif. (IEEE, 345 E. 47 St., New York 10017)

2–5. **Entomological** Soc. of America, Minneapolis, Minn. (W. P. Murdoch,

ESA, 4603 Calvert Rd., College Park, Md. 20740)

3–5. European Conf. on **Irradiation Behaviour of Fuel Cladding and Core Component Materials**, Kerntechnische Gesellschaft im Deutschen Atomforum, British Nuclear Energy Soc., and Gesellschaft fur Kernforschung, Karlsruhe, West Germany. (W. Hopken, Gesellschaft fur Kernforshung, Inst. fur Material- und Geskoperforschung, Postfach 3640, D-7500 Karlsruhe, W. Germany)

3–5. Conference on **Power Electronics–Power Semiconductors and Their Applications**, Institution of Electrical Engineers and Inst. of Electrical and Electronics Engineers, London, England (IEE, Savoy Place, London WC2R OBL)

3–6. Conference on **Magnetism and Magnetic Materials**, 20th, American Inst. of Physics and Magnetic Soc., Inst. of Electrical and Electronics Engineers, San Francisco, Calif. (J. L. Lommel, General Electric R & D Center, Box 8, Schenectady, N.Y. 12301)

4–7. New Ideas in **Genetic Disease with Special Reference to Membrane Structure**, 8th symp., Intra-Science Research Foundation, Santa Monica, Calif. (M. Cheung, ISRF, P.O. Box 430, Santa Monica 90406)

4–11. International **Geographical** Union, Palmerston North, N.Z. (Secretariat Regional Conf., Massey Univ., Palmerston North)

5–6. **Air Pollution Medical Research** Conf., American Medical Assoc., San Francisco, Calif. (Dept. of Environmental, Public, and Occupational Health, AMA, 535 N. Dearborn St., Chicago, Ill. 60610)

5–6. New England **Endocrinology** Conf., 2nd annual, Storrs, Conn. (T. F. Hopkins, Biological Sciences Group, Univ. of Connecticut, Storrs 06268)

5–8. American Acad. of **Psychoanalysis**, Kingston, Jamaica. (J. Barnett, AAP, 40 Gramercy Park N, New York 10010)

6. American College of **Chemosurgery**, Chicago, Ill. (R. Moraites, 7721 Montgomery Rd., Kenwood, Cincinnati, Ohio 45236)

6–7. Swiss **Cancer** Congr., Geneva, Switzerland. Cancer Congr., Viktoriastrasse 94, 3013 Bern, Switzerland)

7. American **Alpine** Club, New York, N.Y. (J. Wickwire, AAC, 113 E. 90 St., New York 10028)

7–11. American Acad. of **Dermatology**, Chicago, Ill. (J. M. Shaw, 1116 S. Fifth, P.O. Box 5368, Tacoma, Wash. 98405)

7–11. American Soc. of **Hospital Pharmacists**, 9th annual mid-year clinical, Bal Harbor, Fla. (J. A. Oddis, ASHP, 4630 Montgomery Ave., Bethesda, Md. 20014)

8–10. American **Astronomical** Soc., Div. on Dynamical Astronomy, Tampa, Fla. (P. K. Seidelmann, U.S. Naval Observatory, Washington, D.C. 20390)

8–11. American **Ceramic** Soc., 7th biennial Polymer Group, St. Petersburg, Fla. (J. K. Stille, Dept. of Chemistry, Univ. of Iowa, Iowa City 52243)

8–11. American Soc. of **Hematology**, Atlanta, Ga. (S. Robinson, Beth Israel Hospital, 330 Brookline Ave., Boston, Mass. 02215)

8–13. **Earthquakes and Lifelines** Conf., Engineering Foundation, Pacific Grove, Calif. (EF, 345 E. 47 St., New York 10017)

8–13. **Petroleum Products and Lubricants** Conf., American Soc. for Testing and Materials, Atlanta, Ga. (ASTM, 1916 Race St., Philadelphia, Pa. 19103)

9. American **Chinese Medical** Soc., New York, N.Y. (W.-P. Loh, 600 Grant St., Gary, Ind. 46402)

9–11. American **Ceramic** Soc., 30th Southwest regional, Houston, Tex. (Clapp and Poliak Inc., 245 Park Ave., New York 10017)

9–11. International **Electron Devices** mtg., Inst. of Electrical and Electronics Engineers, Washington, D.C. (W. C. Holton, Texas Instruments, Inc., M/S 145, Post Office Box 5936, Dallas 75222)

9–12. Southern **Surgical** Assoc., Boca Raton, Fla. (W. D. Warren, 1364 Clifton Rd., NW, Atlanta, Ga. 30322)

9–13. Symposium on **Ionizing Radiation for Sterilization of Medical Products and Biological Tissues**, Intern. Atomic Energy Agency, Bombay, India. (J. H. Kane, Office of Information Service, Atomic Energy Commission, Washington, D.C. 20545)

9–13. Symposium on the **Siting of Nuclear Facilities**, Intern. Atomic Energy Agency and the Organization for Economic Co-operation and Development Nuclear Energy Agency; Vienna, Austria. (J. D. McCullen, Div. of Nuclear Safety and Environmental Protection, IAEA, P.O. Box 590, Karntner Ring 11, A-1011 Vienna)

10–11. American Medical Soc. on **Alcoholism**, San Francisco, Calif. (S. S. Greenberg, 6 E. 96 St., New York 10028)