SCIENCE

30 August 1974

Vol. 185, No. 4153

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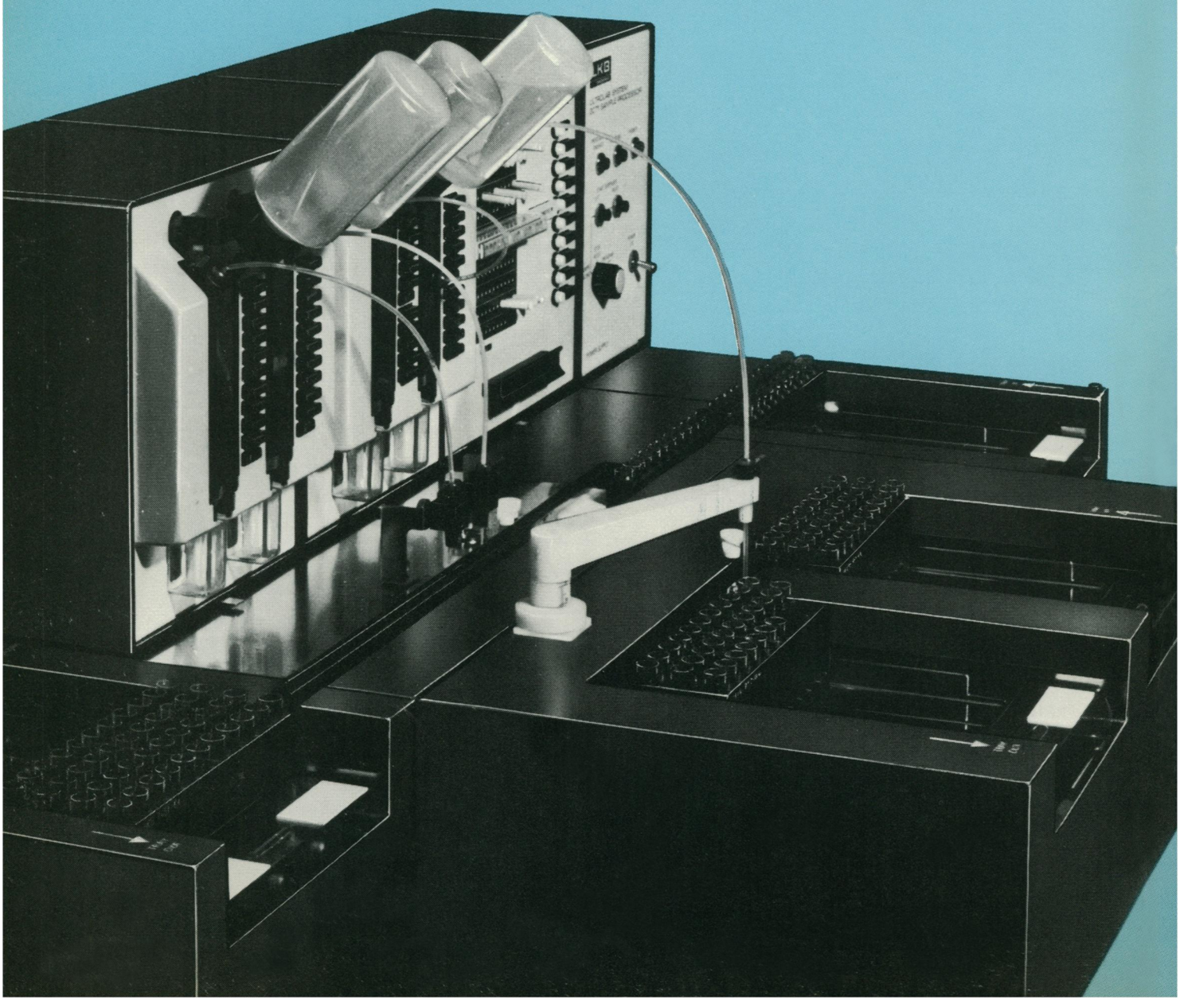

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30) A. W. Eipper, "Pollution Problems, Resource Policy, and the Scientist," 3 July 1970
313) E. Hirst and J. C. Moyers, "Efficiency of Energy Use in the United States," 30 March 1973
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324) D. J. Rose, "Controlled Nuclear Fusion: Status and Outlook," 21 May 1971
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30 August 1974

Volume 185, No. 4153

SCIENCE

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AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

COVER

Eocene angiosperm flowers from Middle Eocene sediments, approximately 50 million years old. Pollen has been isolated from the anthers of these flowers. Assorted flowers have been collected in Eocene and Cretaceous clay deposits in western Tennessee and Kentucky. See page 781. [W. L. Crepet, D. L. Dilcher, and F. W. Potter, Indiana University, Bloomington]

His body has become bloated, and he is unable to read or write. His wife and others feel that his condition is perilous. Plyushch was mentioned in the statement by Sakharov in connection with the latter's hunger strike during President Nixon's visit. There is no doubt that the committee (*1*) will continue its efforts on behalf of Plyushch.

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Notes

1. A partial list of members of the International Defense Committee of Mathematicians for Shikhanovich and Plyushch includes S. Agmon (Jerusalem); L. V. Ahlfors (Harvard); M. Berger (Paris); L. Bers (Columbia); A. Borel (Institute for Advanced Study); R. Bott (Harvard); R. Brauer (Harvard); M. Broue (Paris); H. Cartan (Paris); C. Chevalley (Paris); G. Choquet (Paris); J. Dieudonne (Nice); A. Douady (Paris); B. Eckmann (Zurich); S. Eilenberg (Columbia); L. Garding (Lunds); I. Halperin (Toronto); H. Hironaka (Harvard); S. Iyanaga (Tokyo); N. Jacobson (Yale); M. Kuranishi (Columbia); E. E. Moise (Queens); C. B. Morrey (Berkeley); M. Morse (Institute for Advanced Study); Louis Nirenberg (Courant); L. Schwartz (Paris); A. Selberg (Institute for Advanced Study); J. P. Serre (Paris); I. M. Singer (MIT); S. Smale (Berkeley); P. A. Smith (Columbia); D. C. Spencer (Princeton); S. Sternberg (Harvard); R. Thom (Paris); J. L. Verdier (Paris); A. Weil (Institute for Advanced Study); and O. Zariski (Harvard).

Monitoring Medical Care

W. Clarke Wescoe (Editorial, 18 Jan., p. 155) complains about the increasing amount of restrictive legislation against the medical profession. He cites "preoccupation with patients" as a major reason why these restrictions were able to be enacted unchallenged. Wescoe is also concerned because he feels there are no valid studies showing improper use of potent medications by the profession.

The medical profession now suffers legal restrictions because it has failed to adequately audit or monitor the quality of medical care it provides. In addition, the misuse of "potent medication" by the medical profession is thoroughly documented (*1*). When medical experts are horrified at the misuse of medication uncovered at university medical centers, we can hardly call such studies unexposed to "critical scrutiny." Yet the myth persists among the profession that we all have great knowledge and skill in "pharmacological therapeutics."

If some spokesmen for organized medicine now oppose professional standards review organizations, they should remember that physicians *have* overutilized hospital care of patients, and that the profession itself should have been performing some monitoring function in this area right along.

The tradition of the professional person insists that we maintain standards of excellence and provide ways of ensuring such standards are maintained. Obviously, we have not done so. Further, one might suggest that an executive of a pharmaceutical firm could be biased on the issue of what is seen as "overmanagement" of medicine.

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1. H. R. Lewis and M. E. Lewis, *The Medical Offenders* (Simon & Schuster, New York, 1970), chaps. 12 and 19; P. Stolley *et al.*, *Ann. Intern. Med.* **76**, 537 (1972); H. F. Dowling, *J. Am. Med. Assoc.* **185**, 233 (1963); P. V. J. Macaroag, L. Lasagna, J. R. Bianchine, *Clin. Pharmacol. Ther.* **12**, 1 (1971); A. Roberts and J. Visconti, *Am. J. Hosp. Pharm.* **29**, 828 (1972); D. Dunlop, *Med. Times* **100**, 285 (1972); Department of Health, Education, and Welfare, *The Task Force on Prescription Drugs: Final Report* (Government Printing Office, Washington, D.C., 1968); H. Faigel, *Clin. Pediatr.* **9**, 1 (1970); R. Duff *et al.*, *Pediatrics* **49**, 169 (1972).

Wine Capital

According to the short report "The wine industry of California" published before the 1974 AAAS Annual Meeting, San Francisco is the "wine capital of the Western Hemisphere." It should be noted that in the Argentine Republic—which is also in the Western Hemisphere—22,646,629 hectoliters (493 million gallons) of wine were produced in 1973 and that Argentina is currently the fourth largest wine producer in the world.

Mendoza, a western state of Argentina, yields 65 percent of the wine produced in this country, that is, about 320 million gallons per year. Only 240 million gallons are produced annually in California.

Thus, to be fair, Mendoza City, capital of the state that produces annually from 300 to 350 million gallons of wine, should be designated as the wine capital of the Western Hemisphere.

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30 August 1974, Volume 185, Number 4153

SCIENCE

Technology as a Deterrent to Dehumanization

Technology, particularly the newer technologies such as those of computers, automation, and communications, are often cited as principal causes of dehumanization. This is unfortunate but understandable. It is unfortunate in its short-sightedness and the harm it does to any real progress in utilizing the new technologies in a personalized way to improve the lot of the individual. It is understandable in that we have assigned to computers, in particular, such varying and contradictory roles that honest confusion, mistrust, and fear surrounds them in most people's minds. Students, for example, feel dehumanized when assigned numbers with their records keyed to these numbers for computer processing. "I'm not an individual, I'm just a number," is a favorite lament.

And yet, these same computers are making some deprived, underprivileged students feel human and happy perhaps for the first time. Surveys have shown that inner-city minority and female students prefer computer-aided instruction to the traditional human teacher. They feel that they are treated like everyone else when computers are the "teacher." Certainly, we have never been able to program prejudice into a computer so that it can differentiate its output on the basis of concern or lack of concern with human values.

The confusion with respect to the causal or curative features of these new technologies is especially apparent in dehumanization characterized by tedious, repetitive, and boring jobs. Examples of jobs cited by people themselves that fit this description include "waiting-on-other-people" jobs such as are performed by waiters, store clerks, and garbage collectors; they include assembly-line jobs, clerical jobs, and mailroom jobs. Because of dislike for the job, people do poorly in such tasks; they see themselves as "inferior," they affiliate themselves with the dehumanized set, their productivity decreases, and customers pay more and get less.

At the same time and under the same banner of dehumanization, the assembly-line workers at the Lordstown (Ohio) Vega plant sabotaged the automated assembly line being installed to help decrease the tediousness of their jobs. Consumer groups are protesting the introduction of automated check-out counters in supermarkets and threatening boycotts of the stores. This action is occurring in spite of the better service and more accurate pricing possible through automation as contrasted with clerks not liking their work. It is happening because the consumer groups and their interests were not accorded consideration during the planning stages of supermarket automation.

Is technology the real culprit in making the automobile workers, the students, and the supermarket shoppers feel dehumanized? Emphatically no! Technology is neutral. It does not come with a label specifying its end product or intended use.

A first step in ensuring humane applications of the new technologies is to distinguish between instances when technology is threatening individual rights by abetting dehumanization and instances when technology is being made the scapegoat for failures in human ethics. To make sure that this first step is indeed taken, scientists and technologists familiar with the newer technologies of computers, automation, and communications must invade the ranks of senior scientific advisers: The proper perspective and potential of these technologies in making headway against today's problems, highlighted by the prominent role of the needs of the individual, needs to be provided to policy-makers. It is not presently and will not be until the ranks of scientific spokesmen are appropriately augmented.—RUTH DAVIS, *Director, Institute for Computer Sciences and Technology, National Bureau of Standards, Washington, D.C. 20234*

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