News of Science

Commission on Mental Illness

A Joint Commission on Mental Illness and Health has been organized to carry out the provisions of the Mental Health Study Act of 1955 (Public Law 182). Leo H. Bartemeier, psychiatrist of Baltimore, Md., is chairman of the trustees of the new organization. The act calls for a nation-wide "analysis and reevaluation of the human and economic problems of mental illness," to be carried out by one or more qualified nongovernmental organizations. The Congress passed the act this past session without a dissenting vote in either house.

The act authorizes appropriations of $1.25 million over 3 years, of which $250,000 has been appropriated for the first year. The money is assigned to the Surgeon General of the U.S. Public Health Service, who may grant it to nongovernmental organizations to carry out the study. Private monies may also be used. The act requires that such organizations file annual reports and a final report with the Congress, the Surgeon General, and state governors.

Bartemeier has expressed the hope that the Surgeon General would at the proper time approve the application of the Joint Commission on Mental Illness and Health as the qualified organization to execute the provisions of the Mental Health Study Act. He has pointed out that the joint commission is comprised of representatives of the leading national organizations and agencies that have a primary interest in the mental health field. Many other organizations with related interests will also be asked to participate in the work.

There has never been a thoroughgoing national study and report on all aspects of the resources, methods, and practices for diagnosing, treating, caring for, and rehabilitating the mentally ill. The joint commission was incorporated in August in the District of Columbia by a small group comprised of representatives of the American Association of Psychiatric Social Workers, American Hospital Association, American Medical Association, American Nurses Association and the National League for Nursing, American Psychiatric Association, American Psychological Association, and the National Education Association. Daniel Blain, medical director of the American Psychiatric Association, Washington, D.C., is acting executive director for the commission, and Richard J. Plunkett, secretary of the Council on Mental Health of the American Medical Association, Chicago, Ill., is acting deputy executive director.

The following have also been invited to serve as initial organizational members of the commission: American Association on Mental Deficiency, American Association of Psychiatric Clinics for Children, American Bar Association, American Occupational Therapy Association, American Public Health Association, Council of State Governments, Joint Commission on Accreditation of Hospitals, National Association for Mental Health, National Institute of Mental Health, National Rehabilitation Association, Social Science Research Council, the U.S. Children's Bureau and the Office of Vocational Rehabilitation of the Department of Health, Education, and Welfare, and the Veterans Administration. Still others will be asked as plans develop.

The first official meeting of the commission as a whole will be held in Washington, D.C., on 8 Oct. to elect officers and complete other organizational details. Shortly thereafter, an application for the grant will be submitted to the Surgeon General. If the latter acts favorably on the application, the joint commission will get the study underway before the end of the year.

News Briefs

■ The National Bureau of Standards recently developed a method for closely packing digital pulses on magnetic tape. This method promises future useful application in the field of electronic computers. Such high-density storage can greatly reduce problem solution time by providing more rapid access to information recorded on external magnetic tape units.

In a series of experiments performed by J. R. Sorrells of the data-processing laboratory, both continuous-current and pulse techniques were investigated to achieve densities in the range of 500 to 700 pulses per inch. Recording and reading circuitry was also developed to provide large-amplitude playback signals with error-free differentiation between binary *ones* and *zeroes*.

An integral part of many large high-speed electronic computers is some type of magnetic tape or wire storage system that serves as an input-output means, as an external low-speed memory, or in some cases as both. Many types of mathematical problems require extensive external storage. In solving these problems relatively little actual computation is performed, but a great many data must be handled and assimilated by the computer. Ideally, a magnetic tape system should supply or receive data from the machine fast enough so that the computer can proceed with the problem solution at its usual rate.

In reality, however, the maximum rate at which the tape can accommodate information is usually very slow compared with the machine's internal speed, because tape velocity is limited and information is commonly stored on the tape at comparatively low density. As a consequence, the majority of problem-solution time is not spent in computation but in the performance of input-output or tape storage operations.

The bureau's investigation has been directed toward improving magnetic tape storage techniques. Such developments would permit more rapid transmission of information to the computer by increasing the number of digital pulses recorded on each inch of the tape, thereby increasing the over-all efficiency of the machine. Already in operation with the NBS electronic computer, SEAC, are tape drive units that provide high-speed starting, stopping, and reversing of magnetic tapes, together with maximum practical tape speeds.

■ The first half of the July number of *Reviews of Modern Physics*, vol. 27, No. 3, is devoted to the memorial symposium held in honor of Enrico Fermi at the Washington meeting of the American Physical Society, 29 Apr. 1955, with H. A. Bethe presiding. The paper by F. Seitz deals with Fermi statistics and its applications. E. J. Konopinski discusses "Fermi's theory of beta decay"; Emilio Segrè gives a vivid and fascinating account of Fermi's Rome period in "Fermi and neutron physics"; Walter H. Zinn, one of Fermi's collaborators in reactor development, writes on "Fermi and atomic energy"; and H. L. Anderson describes some of Fermi's later experimental work in the final paper, "Meson experiments with Enrico Fermi." Although most of the papers are addressed to an audience of physicists, nonphysicists may also read with interest the articles by Segrè and Zinn.

Supplement to *Nuove Cimento*, vol. 2,

ser. 10, summer 1955, is also dedicated to Fermi. The part, "Physics of elementary particles," contains lectures on "Pions and nucleons" given by Fermi at a meeting in Varenna, July–August 1954.

■ The Canadian Government has offered an NRX atomic reactor to India under the Colombo Plan; the offer has been accepted. A team of Indian scientists, including H. J. Bhabha, head of the Indian Department of Atomic Energy, will soon visit Canada for discussions with Canadian scientists and government officials. A bilateral agreement will be worked out covering arrangements for the project.

In accepting the reactor, Prime Minister Nehru indicated that his government would be prepared to allow accredited foreign scientists, including those from other Colombo Plan countries in south and southeast Asia, to use the facilities that will be available at the atomic energy center in India where the reactor will be located.

■ Perspiration when it first appears on the skin has no odor and is sterile. In a recent report to the Society of Cosmetic Chemists, Walter B. Shelley of the University of Pennsylvania stated that contamination of sweat with the bacteria ordinarily found on the skin gives it "the distinctive apocrine odor of the axilla." Recent discovery of a way to collect relatively pure perspiration made these findings possible.

Association Finances

Condensed statements of Association finances for the year 1954, prepared by the auditing firm of G. P. Graham & Company, are published herewith, in order that the entire membership may be fully informed regarding the financial operations, obligations, and resources of the AAAS.

The first two statements summarize operating receipts and expenditures. The final annuity payments to the Cattell estates for *Science* were drawn from the excess of receipts over expenditures in the operating account. Total annuity and inflation clause payments amounted to $269,832.82.

The last two statements summarize the status of investment and trust funds. The value of investments and the amount of investment income both increased in 1954, thanks to sound investment policies and management, but the total endowment is still meager in comparison with the magnitude of the responsibility the Association should assume in advancing science.

HANS NUSSBAUM
Business Manager, AAAS

Washington 5, D.C., May 26, 1955

To the Council of the American Association for the Advancement of Science
Washington, D.C.

We have examined the balance sheet of the Operating Fund of the American Association for the Advancement of Science as at December 31, 1954, and the statement of revenue and expenditures for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying statements present fairly the financial position of the Operating Fund of the American Association for the Advancement of Science as at December 31, 1954, and the results of its operations for the year then ended.

G. P. GRAHAM & COMPANY
By G. R. Bowers

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE OPERATING FUND
BALANCE SHEET AS AT DECEMBER 31, 1954

Assets

Current assets		
Cash in banks	$220,146.70	
Accounts receivable	16,170.11	
U.S. Treasury bills	483,856.85	
Certificates of deposit	250,000.00	$970,173.66
Other assets		
Deposit with airline		425.00
		$970,598.66

Liabilities

Current liabilities		
Accounts payable	$ 57,298.73	
Due to the Treasurer's account—AAAS	26,636.94	
Balance of grant—Arid Lands Symposium	6,833.48	$ 90,769.15
Deferred income		
Prepaid dues and fees	$218,752.58	
Prepaid journal subscriptions	50.967.71	269,720.29
Reserve fund		250,000.00
Unallocated funds		
Balance January 1, 1954	$315,459.41	
Add: Excess of revenue over expenditures	44,649.81	
Balance December 31, 1954		360,109.22
		$970,598.66

STATEMENT OF REVENUE AND EXPENDITURES FOR THE YEAR ENDED DECEMBER 31, 1954

Revenue			
Dues and entrance fees			$284,466.51
Journals			
Subscriptions			
From Treasurer's accounts (Life, 50-year and emeritus members)	$ 3,339.00		
Members special subscriptions	18,858.20		
Nonmembers subscriptions	62,086.57	$ 84,283.77	
Advertising		153,513.07	
Miscellaneous sales		2,730.76	240,527.60
Publications			
Binders		$ 1,878.25	
Symposium volumes		14,990.43	16,868.68
Berkeley meeting and exhibit			43,271.88
Rental income			6,107.48
Income from investments			12,448.89
Miscellaneous			6,701.55
			$610,392.59
Expenditures			
Administrative and general expense		$ 79,508.30	
Building expense		9,232.67	
Board of directors		8,752.43	
Other committees		2,526.66	
Allowance to divisions		7,279.00	
Section expense		7,720.28	
Circularization—new members		10,117.19	
Meetings and exhibits		38,596.69	
Journals		364,954.79	
Publications		27,662.22	
Employees' retirement plan		5,101.87	
Social security		2,184.32	
Miscellaneous		339.23	
Annuity			
1954 Science annuity	$ 924.91		
Inflation allowance on annuity	842.22	1,767.13	565,742.78
Excess of revenue over expenditures			$ 44,649.81