

MINUTES OF MEETINGS

of the

BOARD OF REGENTS

NATIONAL LIBRARY OF MEDICINE

First meeting, FY 1959 November 7, 1958

Second meeting, FY 1959 May 1, 1959

First meeting, FY 1960 November 13, 1959

Second meeting, FY 1960 April 11, 1960

First meeting, FY 1961 November 5, 1960

Second meeting, FY 1961 April 7, 1961

First meeting, FY 1962 December 14, 1961

Second meeting, FY 1962 April 13, 1962

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November 1959

BOARD OF REGENTS

NATIONAL LIBRARY OF MEDICINE

List of Members and Brief Biographical Data

- BEAN, William B.
b. Philippine Islands, 1909
B. A., University of Virginia, 1932
M. D., University of Virginia, 1935
Professor of Medicine and Head, Department of Internal Medicine,
State University of Iowa College of Medicine, 1948-
Address: University Hospitals
State University of Iowa
Iowa City, Iowa
- BURNEY, Leroy E.
b. Indiana, 1906
B. S., Indiana University, 1928
M. D., Indiana University, 1930
M. P. H., Johns Hopkins University, 1932
State Health Commissioner, Indiana, 1945-54
Surgeon General, U. S. Public Health Service, 1956-
Address: U. S. Public Health Service
Washington 25, D. C.
- DAVIE, EUGENIE M. (Mrs. Preston Davie)
b. New York, 1895
Trustee, Adelphi College, 1945-51
Past Vice President, American Heart Association
Past Vice President, New York Heart Association
Past Director, Women's National Republican Club
Address: 71 East 71st Street
New York 21, New York
- DeBAKEY, Michael E.
b. Louisiana, 1908
B. S., Tulane University, 1930
M. D., Tulane University, 1932
M. S., Tulane University, 1935
Professor of Surgery, Baylor University College of Medicine, 1948-
Address: Texas Medical Center
Houston 25, Texas
- FRANCIS, Thomas, Jr.
b. Indiana, 1900
B. S., Alleghany College, 1921
M. D., Yale University, 1925
Professor of Epidemiology, University of Michigan School of
Public Health, 1941-
Address: School of Public Health
University of Michigan
Ann Arbor, Michigan

HEATON, Leonard D.

b. West Virginia, 1902

M. D., University of Louisville, 1926

Commanding General, Walter Reed Army Medical Center, 1952-59

Surgeon General, U. S. Army, 1959-

Address: Department of the Army
Washington 25, D. C.

HINE, Maynard K.

b. Indiana, 1907

D. D. S., University of Illinois, 1930

Dean, Indiana University School of Dentistry, 1945-

Editor, Journal of Periodontology, 1950-

Address: School of Dentistry, Indiana University
1121 West Michigan Street
Indianapolis 2, Indiana

HOGAN, Bartholomew W.

b. Massachusetts, 1901

M. D. Tufts College, 1925

Surgeon General, U. S. Navy, 1955-

Address: Bureau of Medicine and Surgery
Department of the Navy
Washington 25, D. C.

KEYS, Thomas E.

b. Mississippi, 1908

A. B., Beloit College, 1931

M. A., University of Chicago, 1934

Librarian, Mayo Clinic, 1946-

Address: Mayo Clinic Library
Rochester, Minnesota

MIDDLETON, William S.

b. Pennsylvania, 1890

M. D., University of Pennsylvania, 1911

Dean of Medicine, University of Wisconsin, 1935-54

Chief Medical Director, Veterans Administration, 1954-

Address: Veterans Administration
Washington 25, D. C.

MUMFORD, L. Quincy

b. North Carolina, 1903

A. B., Duke University, 1925

A. M., Duke University, 1928

B. S., Columbia University, 1929

Director, Cleveland Public Library, 1950-54

Librarian of Congress, 1954-

Address: The Library of Congress
Washington 25, D. C.

NIESS, Oliver K.

b. Illinois, 1903

B. S., Washington University, St. Louis, 1925

M. D., Washington University, St. Louis, 1927

Command Surgeon, Pacific Air Forces, Hawaii, 1954-58

Surgeon General, U. S. Air Force, 1958-

Address: Department of the Air Force

Washington 25, D. C.

STADEL, William W.

b. Kansas, 1912

A. B., University of Kansas, 1933

M. D., University of Kansas, 1936

Superintendent, San Diego County Hospital, 1948-55

Director, San Diego County Department of Medical Institutions, 1955-

Address: San Diego County General Hospital

San Diego 3, California

VAN DELLEN, Theodore R.

b. Illinois, 1911

B. S., Northwestern University, 1933

M. D., Northwestern University, 1936

M. S., Northwestern University, 1939

Associate Professor of Medicine and Assistant Dean, Medical School,

Northwestern University, 1949-

Address: 435 North Michigan Boulevard

Chicago 11, Illinois

VOLWILER, Ernest H.

b. Ohio, 1893

A. B., Miami University, 1914

Ph.D., University of Illinois, 1918

President, Abbott Laboratories, 1950-59

Chairman of the Board, Abbott Laboratories International Company, 1959-

Address: Abbott Laboratories International Company

North Chicago, Illinois

WELLS, Warner L.

b. North Carolina, 1913

A. B., Duke University, 1934

M. D., Duke University, 1938

Assistant Professor of Surgery, University of North Carolina, 1952-

Address: Department of Surgery

University of North Carolina

Chapel Hill, North Carolina

WILSON, John T.

b. Pennsylvania, 1914

A. B., George Washington University, 1941

M. A., State University of Iowa, 1942

Ph.D., Stanford University, 1948

Assistant Director for Biological and Medical Sciences, National Science

Foundation, 1955-

Address: National Science Foundation

Washington 25, D. C.

November 1959

BOARD OF REGENTS

NATIONAL LIBRARY OF MEDICINE

August 1960

List of Members and Brief Biographical Data

- BEAN, William B. Term : 1957-1961
b. Philippine Islands, 1909
B. A., University of Virginia, 1932
M. D., University of Virginia, 1935
Professor of Medicine and Head, Department of Internal Medicine,
State University of Iowa College of Medicine, 1948-
Address: University Hospitals, State University of Iowa
Iowa City, Iowa
- BURNEY, Leroy E.
b. Indiana, 1906
B. S., Indiana University, 1928
M. D., Indiana University, 1930
M. P. H., Johns Hopkins University, 1932
State Health Commissioner, Indiana, 1945-54
Surgeon General, U. S. Public Health Service, 1956-
Address: U. S. Public Health Service, Washington 25, D. C.
- DAVIE, Eugenie M. (Mrs. Preston Davie) Term: 1958-1962
b. New York, 1895
Trustee, Adelphi College, 1945-51
Past Vice President, American Heart Association
Vice Chairman of the Board, New York Heart Association
Past Director, Women's National Republican Club
Address: 71 East 71st Street, New York 21, New York
- HEATON, Leonard D.
b. West Virginia, 1902
M. D., University of Louisville, 1926
Commanding General, Walter Reed Army Medical Center, 1952-59
Surgeon General, U. S. Army, 1959-
Address: Department of the Army, Washington 25, D. C.
- HINE, Maynard K. Term: 1959-1963
b. Indiana, 1907
D. D. S., University of Illinois, 1930
Dean, Indiana University School of Dentistry, 1945-
Editor, Journal of Periodontology, 1950-
Address: School of Dentistry, Indiana University
1121 West Michigan Street, Indianapolis 2, Indiana
- HOGAN, Bartholomew W.
b. Massachusetts, 1901
M. D., Tufts College, 1925
Surgeon General, U. S. Navy, 1955-
Address: Bureau of Medicine and Surgery
Department of the Navy, Washington 25, D. C.

HUSSEY, Hugh H., Jr. Term: 1960-1964
b. Washington, D. C., 1910
M. D., Georgetown University, 1934
Dean, Georgetown University School of Medicine, 1958-
Address: School of Medicine, Georgetown University
3800 Reservoir Road, N. W., Washington 7, D. C.

KEYS, Thomas E. Term: 1958-1962
b. Mississippi, 1908
A. B., Beloit College, 1931
M. A., University of Chicago, 1934
Librarian, Mayo Clinic, 1946-
Address: Mayo Clinic Library, Rochester, Minnesota

MIDDLETON, William S.
b. Pennsylvania, 1890
M. D., University of Pennsylvania, 1911
Dean of Medicine, University of Wisconsin, 1935-54
Chief Medical Director, Veterans Administration, 1954-
Address: Veterans Administration, Washington 25, D. C.

MUMFORD, L. Quincy
b. North Carolina, 1903
A. B., Duke University, 1925
A. M., Duke University, 1928
B. S., Columbia University, 1929
LL. D., Union College, 1955; Bucknell University, 1956
Director, Cleveland Public Library, 1950-54
Librarian of Congress, 1954-
Address: The Library of Congress, Washington 25, D. C.

NIESS, Oliver K.
b. Illinois, 1903
B. S., Washington University, St. Louis, 1925
M. D., Washington University, St. Louis, 1927
Command Surgeon, Pacific Air Forces, Hawaii, 1954-58
Surgeon General, U. S. Air Force, 1958-
Address: Department of the Air Force, Washington 25, D. C.

STADEL, William W. Term: 1957-1961
b. Kansas, 1912
A. B., University of Kansas, 1933
M. D., University of Kansas, 1936
Superintendent, San Diego County Hospital, 1948-55
Director, San Diego County Department of Medical Institutions, 1955-
Address: San Diego County General Hospital, San Diego 3, Calif.

STECHEER, Robert M. Term: 1960-1964
b. Ohio, 1896
M. D., Harvard University, 1923
Chief, Arthritis Clinic, Metropolitan Hospital, Cleveland, 1935-
Associate Professor of Internal Medicine, Western Reserve University, 1954-
Address: Metropolitan Hospital, 3395 Scranton Road
Cleveland 9, Ohio

- VALK, William L. Term: 1960-1964
b. Michigan, 1909
M. D., University of Michigan, 1937
Professor and Chairman, Department of Surgery,
University of Kansas Medical Center, 1947-
Address: University of Kansas Medical Center
39th Street and Rainbow Boulevard
Kansas City 12, Kansas
- VAN DELLEN, Theodore R. Term: 1959-1963
b. Illinois, 1911
B. S., Northwestern University, 1933
M. D., Northwestern University, 1936
M. S., Northwestern University, 1939
Associate Professor of Medicine and Assistant Dean, Medical School,
Northwestern University, 1949-
Address: 435 North Michigan Boulevard
Chicago 11, Illinois
- WELLS, Warner L. Term: 1959-1963
b. North Carolina, 1913
A. B., Duke University, 1934
M. D., Duke University, 1938
Assistant Professor of Surgery, University of North Carolina, 1952-
Address: Department of Surgery, University of North Carolina
Chapel Hill, North Carolina
- WILSON, John T.
b. Pennsylvania, 1914
A. B., George Washington University, 1941
M. A., State University of Iowa, 1942
Ph. D., Stanford University, 1948
Assistant Director for Biological and Medical Sciences,
National Science Foundation, 1955-
Address: National Science Foundation, Washington 25, D. C.

Note: Terms of all appointed members expire on August 2 of the year indicated. Where there is no year given the member is serving ex officio.

August, 1960

BOARD OF REGENTS - NATIONAL LIBRARY OF MEDICINE

Brief Biographical Data

BRILL, Norman Q.

b. New York City, 1911
M.D., New York University, 1934
Private practice in neurology and psychiatry, 1939-41
U. S. Army Medical Corps, 1941-46
Private practice, Washington, D. C., 1946-53
Professor and Chairman, Department of Neurology,
Georgetown University Medical School, 1946-49
Professor and Chairman, Department of Psychiatry,
University of California Medical School,
Los Angeles, 1953-
Medical Superintendent, Neuro-psychiatry Institute,
UCLA Medical Center, 1953-
Member, American Medical Association
Fellow, American Psychiatric Association (Member of Council)
American Psychoanalytic Association
Group Advancement Psychiatry

Address: University of California Medical Center
Los Angeles 24, California

Term expiring August 1965

Nominated July 1961
Confirmed by the Senate, September 5, 1961

BOARD OF REGENTS - NATIONAL LIBRARY OF MEDICINE

Brief Biographical Data

JARCHO, Saul W.

b. New York City, 1906
M.D., Columbia University College of Physicians and Surgeons, 1930
American Academy of Rome, 1926
School of Tropical Medicine, San Juan, Puerto Rico, 1930, 1941
U. S. Army Medical Corps, 1942-46
Army Medical School, Washington, 1942-43 (Tropical Medicine and Entomology)
Private practice, New York City, 1946-
Author of articles on history of medicine and medical geography
Fellow, American College of Physicians
Member, American Association for the History of Medicine
American Association for the Advancement of Science
American Hospital Association
American Public Health Association
American Medical Association
American Society for Tropical Medicine
Harvey Society
History of Science Society
New York Society for the History of Medicine
New York Academy of Medicine

Address: 35 East 85th Street
New York 28, New York

Term expiring August 1965

Nominated July 1961
Confirmed by the Senate, September 5, 1961

BOARD OF REGENTS
NATIONAL LIBRARY OF MEDICINE

First Meeting, FY 1959

Washington, November 7, 1958 - 9:30 a.m.

A C E N D A

1. Election of Chairman
2. Progress on new building; consideration of ground-breaking ceremony
3. Presentation of Army-Navy-Air Force proposal on charges for special NLM photographic services
- *4. Review of FY 1958 activities
5. Forecast and program for FY 1959
6. Selection of date for next meeting (May 1, 1959?)

[Adjournment probably by 12:30 or 1 p.m. Arrangements will be made for luncheon at a nearby restaurant. New members of the Board and others are invited to return to the Library after lunch for a tour of the premises.]

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- * Attached: Annual Report, FY 1958
Guide to Russian Medical Literature
Bibliography of Space Medicine

BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE FIRST MEETING, FY 1959
Washington, November 7, 1958
9:30 a.m.

Members present: BURNEY, CURRAN, DeBAKEY, FRANCIS, HAYS, LYONS,
MIDDLETON, MUMFORD, STADEL.

Members absent: BEAN, BIBBY, DAVIE, HOGAN, OGLE, VOLWILER, WILSON.

Guest present: Dr. AIMS C. McGUINNESS, Special Assistant for Health
and Medical Affairs, DHEW.

Dr. William W. STADEL of San Diego, a new member of the Board, was introduced. It was announced that Mrs. Eugenie Mary DAVIE of New York has been nominated to the Board; a telegram from Mrs. DAVIE, regretting her inability to attend this meeting, was read. One vacancy on the Board remains to be filled.

ELECTION OF CHAIRMAN

Dr. RAVDIN's term having expired, the first item of business was the election of a new Chairman of the Board. Dr. CURRAN nominated Dr. LYONS, and the nomination was seconded by Dr. MIDDLETON. Dr. LYONS was elected unanimously, and then assumed the chair; he spoke of his pleasure in accepting the office.

NEW BUILDING PROGRESS

The CHAIRMAN called on the DIRECTOR for a report on progress on the new building.

The DIRECTOR said that the architects had delivered third stage drawings to the Public Buildings Service on October 27; the deadline for final working drawings is December 19. Third stage drawings -- floor plans, sections, and elevations -- were exhibited and discussed.

Dr. BURNEY asked if all questions concerning the hyperbolic paraboloid roof had been resolved. The DIRECTOR read from the minutes of the previous meeting, in which Dr. RAVDIN is quoted as saying: "The opinion regarding this roof is all but unanimous. The great majority favor this treatment." The Public Buildings Service, which had objected to the roof

treatment at first, finally withdrew its objections. The Bureau of the Budget indicated at an early stage that its only interest in the roof is financial and not aesthetic; reports on comparative costs seem to have satisfied them.

Dr. DeBAKEY raised the question of the desirability of in some way incorporating in the treatment of the building a commemoration of the role of the Army Medical Service in the development of the Library. Drs. MIDDLETON, BURNEY, LYONS, McGUINNESS, FRANCIS, and HAYS spoke to this point. A resolution embracing Dr. DeBAKEY's idea was moved, seconded, and passed. The DIRECTOR reviewed different ideas which had been advanced for the design of the outer façade of the vestibule at the main entrance. He mentioned the possibility of having portraits of Billings, Fletcher, and Garrison incised into the marble wall in the main lobby. Dr. FRANCIS and Dr. McGUINNESS developed the idea of having a brief history of the Library displayed; the DIRECTOR felt that this might appropriately be placed on the inner façade of the vestibule slab.

Dr. MIDDLETON spoke with feeling concerning the problems of structural faults in roof construction. He said that differential contraction of the slab in the parapet type of construction had created grave problems in some recently constructed VA hospitals. He urged that very careful consideration be given this matter. He also questioned fenestration details on the mezzanine floor, and the adequacy of elevators in the northwest corner of the building. He said that generally he felt that the plans had been wonderfully done.

Dr. BURNEY suggested that it would be a good idea if the CHAIRMAN would appoint a small interim group of members of the Board with whom the DIRECTOR might consult on building details during the interval between meetings of the Board. This idea was formally accepted. The CHAIRMAN subsequently designated Drs. DeBAKEY, MIDDLETON, and LYONS to serve in this capacity.

The CHAIRMAN called for a discussion of the types of ceremonies which might mark various phases of the construction. He expressed himself in sympathy with the DIRECTOR's view that two ceremonies only, ground-breaking and dedication, would be adequate. General HAYS said that the dedication should be the major ceremony, with ground-breaking a relatively incidental event merely so that some note could be taken of the fact that construction has finally begun. Dr. DeBAKEY was in agreement. It was suggested that plans for the ceremonies might be checked out with the interim group mentioned previously.

Minutes of the First Meeting, FY 1959

November 7, 1958

The DIRECTOR stated that the Bureau of the Budget had allocated small sums for construction and design expenses during the first two quarters of the current fiscal year, but had not yet allocated the major construction funds required in the third quarter. He felt some uneasiness about this situation. Dr. BURNEY and Dr. McGUINNESS felt that this was a fairly typical budgetary procedure, and probably had no special significance.

MODIFICATION OF INTERLIBRARY LOAN POLICY

Prior to the meeting members of the Board had received a position paper dealing with the question of whether Department of Defense agencies should be required to reimburse the National Library of Medicine for certain types of copying services. Part I of the paper presented the Department of Defense views; Part II described the Library's practices since the new loan policy went into effect in September 1957. Part III of the paper discussed the issues and presented the Library administration's recommendations.

General HAYS recapitulated the Department of Defense argument, and the DIRECTOR reviewed the Library's position. Dr. MUMFORD, Dr. MIDDLETON, Dr. DeBAKEY, Dr. FRANCIS, and Dr. STADEL joined the discussion. Dr. MUMFORD said that he didn't see how the Library could supply all demands free to all agencies of the Federal Government; he felt the situation was analagous to that of the Card Division of the Library of Congress. Ultimately a compromise solution was evolved; the rules would be modified to state that the Library "may charge" for certain services, rather than stating that the Library "will charge." Paragraph 3 on page 7 of the position paper was to be modified somewhat as follows: "Under special circumstances the Library will entertain requests for such services, whether for film or paper copies, and may charge for the same."; the exact wording was to be left to the discretion of the DIRECTOR. On motion by Dr. DeBAKEY and second by Dr. FRANCIS, the Board endorsed this solution, with General HAYS abstaining.

REVIEW OF FISCAL YEAR 1958

The DIRECTOR reviewed the work of the Library during the year just past. He mentioned the very favorable reception which publications such as the Guide to Russian Medical Literature, the bibliography on Staphylococcal Infection, and the Bibliography on Space Medicine had enjoyed. He exhibited a copy of Mr. Jablonski's Russian-English Medical Dictionary, published just two weeks prior to the meeting.

The statistical appendices to the Library's Annual Report FY 1958 were reviewed and commented on one by one. The Board gave special attention to the interlibrary loan and photographic services areas. It was established that the Library's new program was being very well received in other medical libraries throughout the country. In response to a question, the DIRECTOR said that only one adverse reaction, of a type completely unforeseen, had arisen. The librarian of a large, independent, privately supported medical library in a metropolitan center on the east coast had expressed concern that the new NLM policy would tend to undermine the financial support being received by the library from industrial concerns in the community. As far as reactions from individuals who had previously been able to order items directly instead of through local libraries as at present, no criticisms of moment have arisen.

A resume of the budget situation was chalked on the blackboard:

	FY 1958 (past year)	FY 1959 (current year)	FY 1960 (coming year)
Original	\$1,450,000	\$1,415,000	\$1,520,000
After pay increase	1,496,000	1,529,000	1,638,000

The pay increase of approximately 10% voted by Congress in June 1958 has changed substantially all budget figures. In the current year, the Library has only the \$1,415,000 appropriated by Congress at the end of the last session; the additional \$114,000 required will be requested in January as part of the HEW supplemental appropriation. The budget for FY 1960, discussed in detail at the last meeting and endorsed by the Board at that time, will have to be augmented by \$118,000 to cover the pay increase.

FORECAST FOR FY 1959

The National Library of Medicine will take over publication of the Film Reference Guide for Medicine and Allied Sciences. This publication is sponsored and paid for by the Army, Navy, Air Force, Public Health Service, and Veterans Administration; funds will be transferred to NLM to provide for the compilation. It appears logical that the NLM should be concerned with the production of this medical reference aid; a possible dividend to NLM will be the opportunity to augment its medical motion picture collection, which has been lagging.

At the last meeting of the Board, the award to NLM of a grant of \$73,800 from the Council on Library Resources was announced. This award was to underwrite experimentation with new mechanical systems for the

production of the Current List of Medical Literature. The extra amount budgeted by NLM for FY 1960 is to make the system operational beginning with the issue for January 1960. A good deal of progress has been made. A machine laboratory has been set up. Some equipment is already on hand -- the Eastman Listomatic camera which is the heart of the system, some IBM collators and punches. Tape-activated typewriters also figure largely in the system; in this area many difficulties have been encountered. There is no doubt at all that a system to do the job can be developed. The real problem is to find the simplest and most efficient system out of the many thousands of possible systems that could be devised, and to try to insure that the simple machine system offers real advantages in time and efficiency over the old manual system. An advisory committee, consisting of Dr. Larkey (Welch Medical Library), Mr. Dubester (Library of Congress), Mr. Ball (Navy), Dr. Warheit (Atomic Energy Commission), and Mr. Vance (CIA), has been appointed to work with the NLM staff in the development of the project. The DIRECTOR has also had informal and tentative discussions with officials of the American Medical Association concerning the possibility of the AMA's taking the responsibility for publishing cumulative issues of the new publication, with NLM retaining responsibility for publishing the monthly issues; all copy for both publications would be furnished by NLM. If cooperation of this sort could be worked out, it would bid fair to solve the riddle of the Sphinx in the medical bibliographical world. All in all, the new program is moving well. NLM hopes to bring out the next issue of the Bibliography of Medical Reviews as a sort of pilot project for the new mechanized system.

In regard to the three final supplementary volumes of the Index-Catalogue, the DIRECTOR said that the first (author) volume was in galley proof, and ~~would be~~ published in 1959. The two subject volumes are coming along well ahead of schedule; publication of these two volumes may have to be stretched out as the budget of the Library may allow.

INTERNATIONAL HEALTH

Dr. DeBAKEY mentioned the monthly NLM NEWS, and his feeling that this little publication is a very worthwhile item, well received everywhere. The DIRECTOR mentioned that in the current issue there appears an account of his recent European trip, during which he spent two weeks at WHO Headquarters doing a survey of reference activities at the request of Dr. Candau, WHO Director-General. Dr. BURNEY mentioned the growing interest in expanding our health and medical research relationships with other countries, and spoke of the possible role of the National Library of Medicine in international health. Senator Hill, Mr. Fogarty, and

Senator Humphrey have introduced bills in this area, and they will probably be re-introduced during the coming session of Congress. Dr. CURRAN and Dr. DeBAKEY added comments.

FINANCING THE MOVE TO BETHESDA

It was brought out that the cost of moving the Library's collections [and some equipment] from downtown to the new site in Bethesda and from Cleveland to Bethesda will run to possibly \$100,000 or more. This cost, however, is covered in the construction funds already appropriated.

A more serious problem is the additional budgetary items required once the Library is established in its new building. Amounts to cover the cost of utilities, guard service, char force, grounds maintenance and the like, will be needed, and may be of the magnitude of \$100,000 annually, beginning with the budget for FY 1962, which includes funds for the last half of calendar year 1961, during which the Library will probably make the move. This type of expenditure is currently not in the NLM budget, but in the General Services Administration budget; once the move to Bethesda is made, the NLM must budget directly for this kind of item. The abrupt increase may pose real difficulties. Dr. BURNEY requested that at the next meeting of the Board the DIRECTOR be prepared to present the preliminary NLM budget for FY 1961, followed by projections for the subsequent two or three year period.

SERVICE OF GENERAL OGLE

The Board noted that General OGLE was retiring at the end of the month. The CHAIRMAN said he would prepare a note to General OGLE conveying the appreciation and thanks of members of the Board for General OGLE's helpful contributions to the deliberations of the Board during the past two years.

NEXT MEETING

It was felt that it would be desirable to hold the next meeting of the Board of Regents on the same day as the ground-breaking ceremony, if this is possible. This would probably come during the first part of May, the specific date being dependent upon the availability of the speakers to be invited to participate in the ceremony.

This meeting was adjourned at 12:30 p.m.

Respectfully submitted,

Frank B. Rogers

FRANK B. ROGERS, Secretary
Board of Regents
National Library of Medicine

NATIONAL LIBRARY OF MEDICINE

Washington 25, D. C.

September 1958

POSITION PAPER ON

THE QUESTION OF WHETHER NLM SHOULD CHARGE

THE DEPARTMENT OF DEFENSE FOR

SPECIAL PHOTOGRAPHIC SERVICES

Part I - Position of the Department of Defense

Part II - Present Practice of the NLM

Part III - Discussion and Recommendations

Prepared for the meeting of the Board of Regents of
the National Library of Medicine, November 7, 1958.

PART I - Position of the Department of Defense

C O P Y

C O P Y

C O P Y

DEPARTMENT OF THE ARMY
Office of the Surgeon General
Washington 25, D. C.

June 4, 1958

Leroy E. Burney, M. D.
Surgeon General
Public Health Service
Department of Health, Education
and Welfare
Washington 25, D. C.

Dear Doctor Burney:

Reference is made to the inclosed Public Health Service Publication No. 507 (Revised February 1958) which outlines the services provided by the National Library of Medicine.

The above mentioned publication imposes a charge for photographic services and for facsimile and other special copying services (see section on "Photographic Services" which appears on pages 4 and 5). Section 372(a) of Public Law 941, 84th Congress, upon which this publication is based, provides in part that "The Surgeon General through the Library and subject to the provisions of subsection (c) shall-- * * * (4) make available, through loans, photographic or other copying procedures or otherwise, such materials in the Library as he deems appropriate * * *." Subsection (c) provides that the Surgeon General of the Public Health Service is authorized, after obtaining the advice and recommendations of the Board of Regents, to prescribe rules under which the Library will furnish services and that these rules may provide for furnishing services without charge as a public service, or upon a loan, exchange, or charge basis, or under contract arrangements made with a public or nonprofit agency.

The Surgeons General of the Departments of the Army, Navy and Air Force take the position that the National Library of Medicine should not charge the Department of Defense for photographic services and for facsimile and other special copying services for the following reasons:

Part I - Position of the Department of Defense (continued)

a. It is not consistent to provide 99.8 percent of the services that are furnished to an agency free and charge for .2 percent, particularly when the agency performing the services is a service agency which should provide such services to other Federal agencies on a free basis.

b. Any collections received by the Library are deposited to "Miscellaneous Receipts of the Treasury" so that the Library will not be able to utilize the collections received for such services.

c. Since the budget for the Library reflects no appropriation reimbursements, it has Federal funds available to render these services on a free basis. Funds should not be appropriated to both the servicing agency and the agency serviced for the same expense.

d. Since this is a small operation and could involve numerous billings and payments of small amounts each, the administrative costs for processing these payments would be out of proportion to the cost of the services rendered.

In consideration of the above, I would like to recommend that the Director of the National Library of Medicine be asked to place this matter on the agenda of the next meeting of the Board of Regents for a decision by that body.

Sincerely,

/s/ S. B. HAYS
S. B. HAYS
Major General
The Surgeon General

PART II - Present Practice of the National Library of Medicine

A. Legal base

1. The National Library of Medicine Act authorizes the Surgeon General of the Public Health Service, after obtaining the advice and recommendations of the Board of Regents, "to prescribe rules under which the Library will provide copies of its publications or materials ... Such rules may provide for making available such publications, materials, facilities, or services (1) without charge as a public service, or (2) upon a loan, exchange, or charge basis..."

2. At its second meeting, on 29 April 1957, the Board of Regents approved the new interlibrary loan policy of the National Library of Medicine, to become effective in September 1957. The new policy provided for making ordinary interlibrary loans (whether as originals or photoduplicates) on a free basis to all; but the final sections of the policy statement added provisos as follows:

"2. Pictorial works. Works such as portraits, photographs, etchings and caricatures which are a part of the Library's collection will not be loaned outside the Library. Photographic copies of these works can be made; cost estimates for such work will be provided on request.

"3. Facsimile and other copying. Whenever facsimile photocopies are required, in positive copy and exact size of the original, or whenever enlarged copies of certain pages may be required, as for exhibit or other purposes, the Library will make such copies available; cost estimates will be provided on request."

B. Schedule of fees

On 20 December 1957 the National Library of Medicine published, as NLM Circular No. 8, its schedule of fees, as follows:

"SCHEDULE OF FEES FOR PHOTODUPLICATION SERVICES

- "1. No charge will be made for the photoduplication of material provided in accord with the Library's policy on interlibrary loans, approved by the Board of Regents, April 29, 1957.
- "2. A charge will be made for special photographic services such as: reproduction of portraits, photographs and etchings, facsimile photocopies or enlarged copies for exhibit and other purposes, and microfilming or furnishing paper copy of long runs, including entire volumes.

Part II - Present Practice of the National Library of Medicine (continued)

"3. Charges for such services will be based on the following schedule of fees:

"Negative photostat, original size	3.25 per page, .50 minimum
"Positive photostat, original size, margin for binding. (Charge for negative and positive)	.90 per page
"Photographs, matte or glossy 8 x 10, contact or projection	1.50
"Copy negative	2.00
"Film slides	2.00
"Long run microfilm	2.00 for 100 con- secutive pages
"Paper copies of long runs	5.00 for 100 con- secutive pages

"4. Payment is required in advance and checks or money orders should be made payable to the Treasurer of the United States."

C. Experience at NLM

1. During July and August 1957, before the new loan policy went into effect, 447 orders were received, at a total charge of \$2,075. Three of these orders came from agencies of the Federal Government -- two from the Department of Agriculture, and one from the United States Information Agency.

2. During the period September 1957-June 1958, after the new loan policy went into effect, 89 orders were received and filled, at a total charge of \$2,132.25. None of these orders came from agencies of the Federal Government. The average charge for these 89 orders was \$24; if one large order of \$825 is excluded, the average charge for the remaining 88 orders is \$14.80. (Slightly more than 50% of the orders were for \$5 or less.)

3. The kinds of services provided for which charges were assessed are typified by the following orders:

Part II - Present Practice of the National Library of Medicine (concluded)

<u>Name</u>	<u>Type of Service</u>	<u>Charge</u>
L. W. Frohlich Company New York 22, New York	Photostats of 72 pictures of personal physicians to American presidents and Surgeons General of the Army, Navy, Air Force, PHS	\$ 82.00
Dr. J. A. Curran Brooklyn, New York	Glossy prints of the 47 Nobel Prize Winners in Medicine	70.50
Dr. Charles Long II Cleveland, Ohio	Volumes 1 and 2 of <u>Artificial Limbs</u> (paper)	73.50
Dr. J. R. Whittier Queens Village, N. Y.	33 glossy prints	50.00
Moore-White Medical Clinic Los Angeles, California	10 lantern slides	20.00
University of Minnesota Minneapolis, Minnesota	150 pages for binding. (Photostats)	75.00
Louisiana State Univ. Baton Rouge, Louisiana	Volumes 1-3, <u>New Orleans Medical Times</u> , and Volumes 1-7, <u>New Orleans Medical News and Hospital Gazette</u> . (Microfilm)	122.00

4. During the period September 1957 through June 1958 a number of requests (exact number unknown) were received from agencies of the Federal Government; all of these requests were for prints or lantern slides from the Library's Art Collection. As these were requests for services of a very limited nature, exceptions were made to the general rule, and they were filled without charge. A small number of prints were furnished from duplicates already in file. If charges had been made for all the materials furnished, they would have amounted to \$456. The number of prints and lantern slides furnished to the various agencies over a period of ten months is as follows:

Army (SGO and WRAMC)	59
Navy.	8
AFIP	61
AFIP Museum	79
Public Health Service.	52
United States Information Agency. . .	13
Smithsonian Institution.	11
Members of Congress	12
Library of Congress.	<u>2</u>
	297

PART III - Discussion and Recommendations

A. Discussion

1. The assessment of charges for special services provides a budgetary control over the nature of requests received. The only alternative to such control is placing upon the Library administration the necessity for making the decision to fill or not to fill a request, in each separate instance, on the basis of assessing the worth of the request and the presumed need it would cover. The budgetary control places this decision, in effect, on the requester.

2. As a corollary to the above, the assessment of charges provides a suitable method for reducing to manageable proportions the volume of work generated by demands of an exceptional nature.

3. Money collected by NLM is turned over to the Treasury as miscellaneous receipts; the actual cost of the work performed comes out of the NLM budget. As long as the amounts of money involved are so small, this simple method seems suitable, in that it avoids elaborate bookkeeping controls over an essentially unpredictable area.

4. Whatever rules are adopted must apply to all agencies of the Federal Government, and not only to agencies of the Department of Defense. Such agencies include large libraries and large photographic laboratories, with which NLM may do a considerable amount of business.

5. NLM now purchases services from the Library of Congress and from Defense Printing Service (Department of the Navy). It would not seem reasonable to place NLM in the position of buying sizeable special services from other government agencies, while at the same time requiring NLM to provide sizeable special services to other government agencies without charge.

B. Recommendations

1. Make a distinction between copying non-book materials, as exemplified by the collections of the Art Section, on the one hand, and the copying at more than ordinary length of book materials, on the other hand. This would be in conformity with actual practice during the last year.

2. Rewrite the rules accordingly.

a. A proposed redraft for Part VI of the National Library of Medicine's "Policies on Loaning Library Materials" follows.

Part III - Discussion and Recommendations (concluded)

VI. PHOTOCGRAPHIC SERVICES

1. Exclusions. Interlibrary loan requests for printed materials which specify photocopy will not necessarily be honored in respect to the specification. The extent of photocopying at the National Library of Medicine is limited to a selected portion of interlibrary loan requests, as explained in the preceding paragraphs, and to such additional services as are explained below.

2. Pictorial works, and facsimile copying. Works such as portraits, photographs, etchings, and caricatures which are part of the Library's collections will not be loaned outside the Library. Whenever (a) copies of such works, or (b) facsimile photocopies, in positive copy or to exact size of the original, or (c) enlarged copies, as for exhibit or other purposes, are required, photographic copies can be furnished on a reimbursable basis; cost estimates for such work will be provided on request. Requests of this kind received from agencies of the Federal Government, when accompanied by adequate justification, will be filled free of charge.

3. Copying of works of more than ordinary length. Copying of works of more than ordinary length, or of entire works, or of long runs of serial publications, and the like, will not be undertaken under ordinary circumstances. Under special circumstances the Library will entertain requests for such services, whether for film or paper copies, on a reimbursable basis only; or, in appropriate cases, the Library may lend film copies already on hand to other agencies, either governmental or commercial, for duplication on film or paper.

b. The provisions of NLM Circular No. 8, "Schedule of Fees for Photoduplication Services," would be modified accordingly.

BOARD OF REGENTS

NATIONAL LIBRARY OF MEDICINE

A G E N D A
FOR

Second Meeting, FY 1959

Washington, May 1, 1959 - 9:30 a.m.

1. NEW BUILDING
 - a. Financing
 - b. Ground-breaking ceremony, June 12, 1959, 2:30 p.m.
2. NATIONAL LIBRARY OF MEDICINE BUDGET, FISCAL YEAR 1961
 - a. Comparison with FY 1959 and FY 1960
 - b. Forecast of budget trends for FY 1962 and FY 1963
3. MECHANIZATION OF INDEX COMPOSITION
(Where we stand on the research project sponsored
by the Council on Library Resources, Inc.)
4. ELECTION OF NEW CHAIRMAN (to take office August 3, 1959)
5. SELECTION OF DATE FOR NEXT MEETING
(October 30, 1959, or November 6, 1959)

ADJOURNMENT (tentatively between 12:30 and 1 p.m.)

BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE SECOND MEETING, FY 1959
Washington, May 1, 1959
9:30 a.m.

Members absent: HAYS, HOGAN, NIESS

The meeting was called to order at 9:30 a.m. by the CHAIRMAN, Dr. Champ Lyons. Mrs. DAVIE and Dr. BEAN, who were present for the first time since their appointments to the Board, were introduced and welcomed. The CHAIRMAN announced that upon the retirement of General HAYS on May 31, Major General Leonard D. HEATON will become the Surgeon General of the Army and a member of this Board. A MOTION was voted on and carried to acknowledge the great assistance General HAYS has rendered to the Board and to the National Library of Medicine.

NEW BUILDING PROGRESS

The Director was asked to review events in the building program. Financing. In the preparation of specifications and bidding documents, alternates to the specifications were developed and agreed upon to provide a cushion in event of bids higher than the amount of money available. Contractors objected to the number of alternates; they were then reviewed and reduced to two: 1) substitution of asphalt tile for vinyl asbestos tile; 2) substitution of aluminum for bronze trim in the History of Medicine reading room. It is expected that the imminent strike in the building trades and the predicted strike in the steel industry will influence the bidding and cause contractors to raise their estimates of cost.

The contract for bookstacks will be separate from the construction contract. There is an alternate to the specifications which will require bidders to state their bids when blocks of a hundred stack sections are deducted. Since the money available for the building is a lump sum of \$5,238,000 for these two contracts, it may be preferable to accept the alternate on the bookstacks rather than the two alternates substituting less desirable materials in the building.

Drs. DeBAKEY, BIBBY, BURNEY, and VOLWILER expressed the opinion that reduction in the number of stacks would be preferable to changes in the original plans for the building. Dr. DeBAKEY proposed three motions specifying the order of priority for action if bids are higher than estimates made by the Public Buildings Service: 1) Request a supplemental appropriation from the Congress, justified by increases in the cost of labor and

materials; 2) reduce the cost by deferring the purchase of a certain number of bookstacks; 3) accept alternates for flooring and trim. After further discussion these motions were withdrawn by Dr. DeBAKEY in favor of a MOTION referring the matter to the ad hoc committee for building matters. The motion was voted upon and carried.

Ground-breaking Ceremony. June 12 has been selected as the date for the ground-breaking ceremony because it is a date between the meetings of the American Medical Association in Atlantic City and the Medical Library Association in Toronto. Awarding of the contract is expected about May 20, and the contractor should then be ready to proceed with the construction. The program for the ceremony is at the printer and will be mailed with the invitations. The spade for the ground-breaking will be the same one used by the Armed Forces Institute of Pathology in 1951, and this will lend an interesting historical overtone to the ceremony. Special invitations will be sent to former members of the Board of Regents and the Armed Forces Medical Library Advisory Group, to officers of the Association of Honorary Consultants to the Army Medical Library, and to other appropriate individuals.

REVIEW OF BUDGET FOR OPERATIONS

The Director reviewed budget requests and appropriations:

	<u>Request</u>	<u>Appropriation</u>	<u>Actual</u>	<u>Difference</u>
FY 1958	\$1,603,000	\$1,450,000	\$1,496,600	\$ 46,600 plus
FY 1959	1,452,000	1,415,000	1,526,000	111,000 plus
FY 1960	1,638,000	1,566,000	1,566,000	

The increases in FY 1958 and 1959 were due to the pay increases for Civil Service employees authorized by Congress at the end of FY 1958, and also due to a change in classification standards for library positions which resulted in some upgrading at NLM. In 1958 the average salary for library personnel at NLM was \$4,700; in 1960 it will be \$5,400. Also taken into account when computing the budget for personal services are periodic pay increases for longevity for employees who have many years of Government service and do not qualify for higher grades (one-third of the staff has been employed at NLM for ten years or more).

BUDGET FOR OPERATIONS, FISCAL YEAR 1961

The Director referred to Document A, distributed to the members, which shows that the estimated budget for FY 1961 is \$1,681,000, or an increase of \$115,000 over FY 1960. He explained each item contributing to the increase.

Intern Training Program. 3 positions (10 months each). \$13,500. The Library will have three interns for the year beginning September 1959, and they will occupy personnel slots for the regular staff. In the discussion

of the intern training program, Drs. DeBAKEY and BIBBY and Mrs. DAVIE expressed the Board's feeling that this is an important function and service which should be expanded at the proper time, with perhaps a senior member of the staff assigned the responsibility for supervising the intern training program. Use of appropriated funds for a continuing program such as this is proper. Dr. DeBAKEY recommended that the Board express to the Director its feeling that this activity deserves a high priority of support and should be expanded. The recommendation became a MOTION which was seconded, voted on, and unanimously carried.

Travel, \$3,500. The Chief of the Acquisition Division will go to Eastern Europe for the purpose of fostering procurement and exchange of medical literature, and the Chief of the Catalog Division will attend an International Conference on Catalog Code Revision in London.

Mobile Microfilm Camera, \$5,000. This is the estimated cost of research on and development of a mobile microfilm camera for use in the new building. There is a considerable challenge in developing a suitable camera and solving the problems of lighting, stability, etc. Without a mobile camera the planned stack layout in the new building will not be effective, because it was developed around a plan of taking the camera to the books rather than books to the camera. Dr. BIBBY and Mrs. DAVIE suggested that Eastman Kodak might take this project as a public service; Dr. FRANCIS suggested consultation with University Microfilms. Negotiations have since been initiated and are now underway with ITEK Corporation.

Purchase of Literature, \$5,000. The amount for the purchase of medical literature will be increased. The Director mentioned that attempts will be made to acquire literature from the Chinese mainland; the NLM now has a Chinese librarian who will become the Library's expert for the China area. Dr. WILSON suggested that negotiations for procurement and exchange might be made through the Council of the National Academy of Sciences. There was a discussion about the use of Public Law 480 funds (funds in indigenous currencies resulting from the sale of U. S. surplus agricultural commodities) for translation of literature from China and other countries. There is considerable competition for these funds, which must be appropriated by Congress for specific purposes, and the system is extremely complicated. Dr. WILSON stated that the matter is still being negotiated with the Bureau of the Budget.

1961 Publications, \$51,400. The budget includes a printing estimate of \$7,400 for the Check List of Medical Americana. This will be the first of the Library's three Jubilee Year publications and the only one for which appropriated funds will be used. The others are "Memoir of Robert Fletcher," to be published in the Bulletin of the Medical Library Association, and the history of the Library, which may be published as part of the monograph series of the Medical Library Association. The Director's bibliography of Billings, also planned for that year, may be published commercially. The two subject volumes of the supplementary series of the Index-Catalogue should be ready for printing in 1961, and the amount of \$44,000 has been included which will finally bring the Index-Catalogue to an end.

Replacement Equipment, \$1,500. This amount is for the orderly replacement of typewriters and other equipment.

Expansion of Indexing Program, \$39,500. The mechanization and expansion of the Current List operation will require an estimated \$39,500 additional in 1961. This figure is computed from the following:

Rentals (IBM equipment)	\$10,000
Supplies (film, paper tape, ribbons, punch cards, etc.)	12,000
Processing of film	5,000
Printing (2,500 more pages per year)	10,000
Maintenance of machines and camera	2,500

This is a 15% increase in the budget for the Current List, with the expectation that it will achieve a 36% increase in the amount of material processed and an improvement in the quality of the product.

Against the total of \$119,400 for all additions to the 1961 budget over 1960 there will be an estimated decrease of \$4,400 in personal services (salaries) because of one less working day in the year, making a net increase over 1960's budget of \$115,000.

BUDGET FOR OPERATIONS, FY 1962

The CHAIRMAN pointed out that the approximate date for completion of the new building is June 1961, and therefore the budget for Fiscal Year 1962 will be the first to reflect operation in the new building where the Library will assume the cost of utilities and building maintenance.

A tentative estimate of \$1,955,000 is being considered for FY 1962. Decreases from the 1961 figure will occur in travel (\$3,500), publications (\$56,400), and rent in Cleveland (\$8,300), for a total of \$68,200. Off-setting this is an increase of \$3,200 for annualization of the three intern positions (2 months for each) and the cost of building maintenance and utilities, estimated at \$339,000, for a total increase of \$342,200. The 1962 budget figure may therefore be \$274,000 higher than the estimate for 1961.

Members of the Board received copies of Document B, Comparison of Building Maintenance Costs, which compares the cost of services in the present building with estimated cost in the new building and explains the figure of \$339,000 which is an estimate derived from the National Institutes of Health, to whom the maintenance money will be paid in exchange for services rendered by the Institutes.

Following some discussion of the 1962 estimates, Dr. FRANCIS moved approval and acceptance of the budget estimates for FY 1961, and the motion was seconded, voted on, and carried without dissent.

MECHANIZATION OF INDEX COMPOSITION

The first and fundamental part of the program to expand the indexing program was the mechanization of the composition processes of the Current List to make it a better publication with a lower unit cost to the Library.

This part of the program has been successfully accomplished and the new system will be used to produce the issue for January 1960. The experimental work was done with the grant of funds from the Council on Library Resources; about \$40,000 has been used thus far. A report on the project was submitted to the Council for the calendar year 1958; another full report will be made at the end of the project, perhaps at the end of 1959.

The second part of the program involves finding ways of utilizing the intermediate products of composition for special retrieval purposes. This has not progressed very far, and appears to be much more difficult than was anticipated.

Proposal to A. M. A. The Director reported that at various times through the past years he had talked with officials of the American Medical Association about the relationship of the Current List and the Quarterly Cumulative Index Medicus, and had made various proposals concerning them. When the mechanized system for composition of the Current List was being planned it seemed to offer a new opportunity to resolve this situation, and after preliminary discussions the Director wrote to the American Medical Association on February 2, 1959 (copies distributed to members) outlining a proposition by which the A. M. A. would publish the cumulation of the Current List and NIM would publish twelve monthly issues only each year. It was proposed that this should begin with the cumulation for 1960, and the QCIM could be carried through 1959. This proposal is now under study by a special committee appointed by the Board of Trustees of the A. M. A. The proposed agreement with the American Medical Association has been investigated by counsel and there is no legal bar to the agreement.

If the agreement goes into effect, the Current List of Medical Literature will become the Index Medicus in January 1960, and the A. M. A. will publish the end-of-the-year cumulation from film supplied by NIM under the title Cumulated Index Medicus. It is estimated that it will take two weeks to put the year's accumulation of cards through NIM's Listomatic camera. Cost of the film and its processing for the cumulation will be about \$5,000, and that is the Library's contribution to the cumulation; after it goes to the A. M. A. it becomes entirely a publication of the Association. It may be possible for A. M. A. to publish the cumulation for 1960 by March 1961.

Dr. VOLWILER and the CHAIRMAN expressed opinions that if the proposal to the American Medical Association is accepted, and if the time schedule suggested by the Director can be achieved, it will be a most exciting and significant advance in librarianship. A MOTION was made by Mrs. DAVIE that the Board of Regents approves of the proposal and expresses its grateful appreciation of the Director's fine work in initiating it. After seconding by Dr. DeBAKEY the motion was voted on and carried.

Government periodicals originating in the Executive Branch require approval of the Bureau of the Budget every three years. The present authorization for the Current List will expire on June 30, 1959. A request for extension of the authorization is being made by the Secretary of Health, Education, and Welfare, with request for a 50% increase in the annual

number of pages (5,000 to 7,500) and an increase of \$10,000 for printing cost; the Secretary's letter includes a description of the entire new system.

Mindful of the difficulty encountered three years ago in getting renewal of the authorization to publish the Current List, Dr. DeBAKEY moved a resolution expressing the Board's extreme interest and concern, and underlining the urgency of maintaining the service rendered by the Current List. The motion was seconded by Dr. BIBBY, voted on, and passed.

The CHAIRMAN acknowledged the assistance of Dr. DeBAKEY in achieving liaison with the program of the American Medical Association.

APPROPRIATIONS FOR PHS

At the request of the CHAIRMAN, Dr. BURNEY reviewed the progress of legislation for appropriations for the Public Health Service, indicating additions and changes made by action of the House. Hearings before the Senate Committee will begin immediately. Legislation on international medical research has been reported out of committee and will go before the Senate shortly.

PLAQUE FOR NEW BUILDING

The ad hoc committee on the new building had considered the phraseology for a suitable plaque in the new building giving the Library's history. Copies of the proposed statement were given to each member with a request for suggestions for improvement. Helpful comments on the wording were made by Mrs. DAVIE and Drs. BIBBY, BEAN, VOLWILER, FRANCIS. The Director offered to revise the statement and resubmit it to the members.

The CHAIRMAN read a communication from Dr. W. P. Shepard in which it was suggested that the work of the late Dr. Alan Gregg in the deliberations of the Hoover Subcommittee on medical resources, and particularly his devotion and persistence in laying the groundwork for legislative action on the Library, should be acknowledged in some way in the Library's new building. Another communication from Dr. Howard Rusk was read which endorsed Dr. Shepard's suggestion and further commented that the dedication of a part of the new building to Dr. Gregg's name, or a modest plaque suitably inscribed, would be appreciated by his colleagues.

In the discussion of Dr. Shepard's suggestion, the CHAIRMAN reported that the ad hoc committee on the building felt that a portrait of Dr. Gregg presented by his colleagues and/or his widow would be gratefully received and could be hung in an appropriate place to honor his efforts in behalf of the Library. Dr. BEAN made the alternate suggestion of endowment by the Rockefeller Foundation, with whom Dr. Gregg was affiliated at the time of his death, of an annual lectureship to be given under the auspices of the Library. This idea was endorsed by Mrs. DAVIE, Drs. BIBBY and DeBAKEY, and the CHAIRMAN. Dr. CURRAN commented that some institutions have used the device of a special book which is kept on display and inscribed with names of persons whose work or contributions are especially acknowledged.

The CHAIRMAN added that in the event an organization of past members of the Board of Regents is formed, an annual lecture endowed in memory of Dr. Gregg might be combined with the meeting of the Board "alumni." Dr. MUMFORD then suggested that an Alan Gregg Fund would be a suitable memorial if it is a revolving fund to finance private publications, scholarships, lectureships, etc. This was endorsed by Drs. DeBAKEY and CURRAN.

Having the consensus of opinion from members of the Board, the CHAIRMAN instructed the Director to take the matter up with Dr. Shepard.

BIBLIOGRAPHIES

Two recent bibliographies published by the Library were given to members of the Board with a request that they examine them at leisure and consider the relative value of a thorough documentation of a subject as represented by Psychopharmaca, which is printed at considerable expense but which is not available until about a year after the work is compiled, and a roughly done near-printed publication such as Fungus Infections, which is brought out quickly and at very little expense when a bibliography on the subject is most needed. Does timeliness outweigh the elegance of form? Members were asked to send their comments to the Director.

ELECTION OF CHAIRMAN

Dr. VOLWILER nominated Dr. DeBAKEY to be the Board's next Chairman, and Dr. CURRAN seconded the nomination. On a motion by Dr. BEAN, the nominations were closed, and Dr. DeBAKEY was elected Chairman by unanimous vote. Dr. FRANCIS expressed the Board's appreciation and respect for the leadership of Dr. Lyons as a member and Chairman of the Board, which was graciously acknowledged by Dr. Lyons. The terms of Drs. BIBBY, CURRAN, and LYONS will expire on August 2, 1959.

NEXT MEETING OF THE BOARD

The members agreed that the next meeting will be held at the Library on November 13, 1959.

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The CHAIRMAN then adjourned the meeting at 12:25 p.m.

Respectfully submitted,

Frank B. Rogers
FRANK B. ROGERS, M. D., Secretary
Board of Regents
National Library of Medicine

Document A

National Library of Medicine Budget Forecast

Schedule of Obligations, 1958 through 1962

<u>Description</u>	<u>FY 1958</u> <u>(Actual)</u>	<u>FY 1959</u> <u>(Estimate)</u>	<u>FY 1960</u> <u>(Estimate)</u>	<u>FY 1961</u> <u>(Estimate)</u>	<u>FY 1962</u> <u>(Estimate)</u>
Permanent Positions	225	224	224	227	227
Personal Services	1,070,654	1,145,000	1,189,200	1,196,700	1,199,700
Travel	9,153	12,300	8,800	13,500	9,600
Transportation of Things	395	500	400	400	400
Communication Services	11,486	14,700	14,800	14,800	14,800
Rents and Utility Services	23,040	23,300	23,300	33,300	25,000
Printing and Reproduction	91,543	73,700	90,300	151,500	95,500
Other Contractual Services	43,112	28,900	28,500	40,800	379,800
Supplies and Materials	44,883	41,500	51,800	63,800	63,800
Equipment	136,781	115,100	86,600	93,100	93,100
Contributions to Retirement	62,317	69,200	71,000	71,800	72,000
Awards	1,125	500	---	---	---
Taxes and Assessments	1,120	1,300	1,300	1,300	1,300
Unobligated Balance	991	---	---	---	---
Totals	1,496,600	1,526,000	1,566,000	1,681,000	1,955,000

Prepared for Meeting of National Library of Medicine Board of Regents - May 1, 1959

Obligations by Object Classification:

	<u>FY 1960</u> <u>(Estimate)</u>	<u>FY 1961</u> <u>(Estimate)</u>	<u>Change</u> <u>(+ or -)</u>
Permanent Positions	224	227	+
Personal Services	1,189,200	1,196,700	+
Travel	8,800	13,500	+
Transportation of Things	400	400	0
Communication Services	14,800	14,800	0
Rents and Utility Services	23,300	33,300	+
Printing and Reproduction	90,300	151,500	+
Other Contractual Services	28,500	40,800	+
Supplies and Materials	51,800	63,800	+
Equipment	86,600	93,100	+
Contributions to Retirement	71,000	71,800	+
Taxes and Assessments	<u>1,300</u>	<u>1,300</u>	<u>0</u>
Total Obligations	1,566,000	1,681,000	+
			115,000

Comparison of 1960 Appropriation and 1961 Estimate

1960 Appropriation (Estimate) \$1,566,000

Decreases:

One less day's pay (261 days in 1960 and
260 days in 1961) \$ 4,400

Additions:

Intern Training Program	
3 positions	\$13,500
Travel to foster procurement and exchange of Medical Literature	2,500
Travel to International Conference on Catalog Code Revision	1,000
Research and development of Mobile Microfile Camera	5,000
Increase for purchase of literature	5,000
Replacement equipment	1,500
Americana Bibliography	7,400
Supplementary Series of the Index-Catalogue	44,000

Expansion of Current List of
Medical Literature 119,400

Net increase 39,500

Total estimate for 1961 1,681,000

A-4

Comparison of 1961 Appropriation and 1962 Estimate

1961 Appropriation \$1,681,000

Decreases:

Travel	\$ 3,500
Americana Bibliography	7,400
Supplementary Series of the Index-Catalog	49,000
Rent, HMD, Cleveland	<u>8,300</u>
	\$68,200

Increases:

Annualization of Intern positions	3,200
Reimbursements to NIH for building maintenance	<u>339,000</u>
	342,200

Net increase	<u>274,000</u>
Total estimate for 1962	1,955,000

Document B

Comparison of Building Maintenance Costs

	<u>Present Building</u>			<u>New Building</u> (All Costs to NLM)	<u>Increases</u>	
	<u>NLM</u>	<u>GSA</u>	<u>Total</u>		<u>Over Present</u>	<u>Over Present</u>
					<u>Total Cost</u>	<u>NLM Cost</u>
1. Guard Service	11,000	16,000	27,000	40,000	13,000	29,000
2. Fire Prevention and Protection	--	--	--	10,000	10,000	10,000
3. Electrical Service:						
Current	--	13,000	13,000	45,000	32,000	45,000
Lamp Man	--	1,000	1,000	3,600	2,600	3,600
Electricians	500	--	500	12,000	11,500	11,500
Replacement Lamps	--	--	--	5,000	5,000	5,000
4. Refrigeration Service:						
Chilled water and current	--	--	--	22,000	22,000	22,000
Operating engineers	--	--	--	24,000	24,000	24,000
5. Heating Service:						
Steam	--	6,500	6,500	39,000	32,500	39,000
Operating engineers	--	--	--	6,000	6,000	6,000
6. Water Service:						
Water	--	2,200	2,200	13,200	11,000	13,200
Plumbers	--	--	--	6,000	6,000	6,000
7. Elevators:						
Maintenance engineers	--	200	200	6,000	5,800	6,000
8. Telephone Service: (Instruments, special equipment, and switchboard operators)	--	4,000	4,000	18,000	14,000	18,000

	Present Building		Total	New Building (All Costs to MLM)	Increases	
	MLM	GSA			Over Present Total Cost	Over Present MLM Cost
9. Cleaning Services:						
Char force	--	23,700	23,700	60,000	36,300	60,000
Trash removal	--	--	--	600	600	600
10. Grounds Maintenance (Mowing, trimming, pruning, snow removal, etc.)	--	--	--	16,000	16,000	16,000
11. Transportation	300	--	300	4,600	4,300	4,300
12. Building Repairs	2,000	15,000	17,000	18,000	1,000	16,000
13. Employee Health Services	--	--	--	3,000	3,000	3,000
Totals	13,800	81,600	95,400	352,000	256,600	339,000

Note: 1. Total square feet in present buildings, 75,710 (Washington 70,000, Cleveland, 5,710).
 2. Total square feet in new building, 232,000.

BOARD OF REGENTS
NATIONAL LIBRARY OF MEDICINE

A G E N D A

First Meeting, Fiscal Year 1960
November 13, 1959
9:30 a.m.

1. Orientation and inspection of the new machine processing system, Index Medicus

LUNCH - 11:30 - 1:00

2. Review of Fiscal Year 1959 activities
(copy of Annual Report attached)
3. The President's budget for Fiscal Year 1961

(Adjournment at approximately 3 p.m.)

BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE FIRST MEETING. FY 1960
Washington, November 13, 1959
9:30 a.m.

Members present: DeBAKEY, DAVIE, FRANCIS, HINE, MIDDLETON, STADEL, KEYS, VOLWILER, WELLS.

Members absent: BEAN, BURNEY, HEATON, HOGAN, MUMFORD, NIESS, WILSON.

Guests present: Mr. Arthur P. Miller, BSS, PHS (observer); Mr. Philip E. Enterline, OSG, PHS; Mr. Seymour I. Taine, Chief, Index Division, NLM.

The meeting was called to order at 9:30 a.m. by the CHAIRMAN, Dr. DeBakey. Drs. Maynard K. HINE and Warner L. WELLS, newly appointed members, were introduced and welcomed to the Board.

MORNING SESSION

The entire morning session was devoted to an orientation in the procedures to be used in preparing the new Index Medicus, the first issue of which will appear in January 1960. Sixteen display panels had been prepared, illustrating step-by-step the preparation of the new index. The DIRECTOR explained the panels one by one, and enlarged on some of the details. Following this presentation the Board moved to the third floor Index Division area, where Mr. Seymour I. Taine, Editor of the Index Medicus and responsible for development of the new system, demonstrated the machines in operation and answered questions on various facets of the program.

The CHAIRMAN asked about the possible application of computer technology in the information retrieval field. The DIRECTOR referred to and summarized the article by Robert S. Ledley in the November 6 issue of Science; he said that Dr. Ledley has a small contract with NLM for a report on the use of computers in indexing. Dr. Ledley is also preparing a larger handbook, under NRC-NIH auspices, on the uses of computers in the biomedical sciences, and this should appear next summer. The DIRECTOR referred to his trip to Los Angeles and San Jose last summer to visit various establishments using or building computers. Mr. ENTERLINE mentioned his visit to the IBM plant in San Jose a month ago, and said he was tremendously impressed with the capabilities of the machines being developed.

Dr. VOLWILER proposed, and Dr. HINE seconded, a motion which, in its final revised form, is as follows:

MOVED: That the NIM Board of Regents expresses its deep interest in the application of digital computer technology to the effective and expeditious processing of biomedical information, particularly in the field of bibliographical service, and requests that the Director of the Library take all possible steps to further the development of this field in relation to the Library's functions and operations.

The motion was carried unanimously.

AFTERNOON SESSION

Status of the New Building. The DIRECTOR reported that it appeared that the building had been brought in at a figure about 10% under the total estimate, and that therefore it had not been necessary to take any of the alternate specifications which had been provided. All of the original stack bids were thrown out for technical reasons; the new bids are in, and it appears that the stack contract will be awarded to the Virginia Metal Products Company. Excavation for the building is almost complete, but exceedingly hard rock encountered in one region is proving very troublesome. Some concrete footings and columns along the south side have already been poured.

Panel Inscription. Four versions of the proposed inscription for the entrance panel to the new building were presented to the Board. Using the latest version as a starting point, the Board discussed possible changes. The CHAIRMAN, Mrs. DAVIE, Dr. WELLS, Dr. FRANCIS, and Dr. VOLWILER offered minor changes of wording which were accepted and agreed upon by the Board, following discussion. On two points (dissatisfaction with the word "transferred" and possible shift in position of the word "established") the final wording was left to the discretion of the DIRECTOR. (The text of the inscription, as now transmitted to the architects for development of the appropriate lettering design, reads as follows:

NATIONAL LIBRARY OF MEDICINE

Founded in 1836 as the Library of the Surgeon-General's Office, United States Army; developed as a national resource under the leadership of John Shaw Billings, Librarian from 1865 to 1895; named Army Medical Library in 1922 and Armed Forces Medical Library in 1952; made a part of the Public Health Service, Department of Health, Education, and Welfare, in 1956; established on this site in 1961, the one hundred and twenty-fifth anniversary of its founding.)

Brief Review of FY 1959 Activities. The CHAIRMAN expressed his satisfaction with the form of the 1959 Annual Report, copies of which had been distributed. The DIRECTOR said that in any reckoning the two outstanding events of the year were 1) the securing of construction appropriations and the beginning of construction on the new building, and 2) the development of the new indexing system, and the historic agreement with the American Medical Association for sharing publication responsibilities for the new index.

The various publications of the Library for 1959 were mentioned. Members of the Board expressed particular interest in Film Reference Guide for Medicine and Allied Sciences, which NLM will again publish in 1960 for the Interdepartmental Committee on Medical Training Aids. The consensus was that the Guide was a very useful tool, and ably put together; but there was, in addition, a feeling that the coverage of the publication ought to be broadened and its scope precisely defined.

The DIRECTOR pointed to the continuing increase in photoduplication activity - an average of 6,000 orders a month since inauguration of the new policy, but 8,000 orders per month during the recent summer months, when demands ordinarily drop.

Mrs. DAVIE inquired about current Chinese acquisition programs. It was stated that through the use of Hong Kong agents, and through other arrangements, NLM is managing to obtain a fairly large quantity of materials from the Chinese mainland.

In a discussion concerning further preparations for moving into the new building, problems surrounding the development of a mobile camera for use in the stacks brought forth some lively comments. The DIRECTOR stated that a prospective development contract with the Itek Corporation had fallen through, but that one of the engineering laboratories of the Bureau of State Services, FHS, had become interested and had drawn up construction plans which appeared to be sound.

The CHAIRMAN noted the special interest of the Board in the NLM internship program. The DIRECTOR reported that the Library has had three new interns since September (from Columbia, Michigan, and North Carolina), but that again the request for budgetary support of this program had been denied. He said that training-grant applications for sponsoring medical library internships at Emory University and at the University of California (Los Angeles) are at present being considered at NIH; this is a new development which offers a great opportunity to increase the number of trained medical librarians available.

Public Law 480 Program. NLM is participating with the National Science Foundation in the program for translation of scientific materials under Section 104(k) of the law. Miss Estelle Brodman, Chief of the Reference Division, is responsible for the NLM side. Projects are under way in Israel (Russian material), Poland, and Yugoslavia.

Union List of Medical Periodicals. NLM is cooperating with the Medical Library Association in the development of a Union List of Medical Periodicals. Mr. Samuel Lazerow, Chief of the Acquisition Division, is carrying the ball for NLM. The project is in a very early stage; if it can be worked out, it will provide a very useful new tool for all the medical libraries of the country. Mr. KEYS pointed out its potential usefulness in screening interlibrary loan requests at NLM.

Reorganization. The establishment of a new Circulation Division, as of October 1, was announced. The Division is composed of Loan and Stack Section, Photographic Services Section, and Binding Section.

Fiscal Year 1961 Budget (Confidential). The Library's budget for FY 1961, to be included in the President's budget which will be submitted to Congress in January, is \$1,658,000. This is \$92,000 more than is available to NLM during the present fiscal year; it is \$23,000 less than the amount requested. Of the \$23,000, more than half is accounted for by the sum necessary to support the internship program.

DATE OF NEXT MEETING

There was some difficulty in establishing a suitable date for the next meeting of the Board. On the one hand it should be held around the middle of April in order to permit consideration by the Board of the proposed FY 1962 budget. On the other hand, the date of Easter falls around this time. It was finally agreed that the next meeting will be held at the Library, at 9:30 a.m. on Monday, April 11, 1960.

* * * * *

The meeting was adjourned at 2:30 p.m.

Respectfully submitted,
Frank B. Rogers
FRANK B. ROGERS, M. D.
Secretary to the Board of Regents
National Library of Medicine

(Original version)

NATIONAL LIBRARY OF MEDICINE

FOUNDED 1836 BY JOSEPH LOVELL, SURGEON-GENERAL OF THE UNITED STATES ARMY, AS THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE; DEVELOPED AS A NATIONAL RESOURCE UNDER THE LEADERSHIP OF JOHN SHAW BILLINGS, LIBRARIAN FROM 1865 TO 1895; IN 1922 DESIGNATED ARMY MEDICAL LIBRARY, AND IN 1952 RENAMED ARMED FORCES MEDICAL LIBRARY. IN 1956, BY TERMS OF PUBLIC LAW 941, 84TH CONGRESS, TRANSFERRED TO THE PUBLIC HEALTH SERVICE, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, AS THE NATIONAL LIBRARY OF MEDICINE. ESTABLISHED ON THIS SITE IN 1961, THE ONE HUNDRED AND TWENTY-FIFTH ANNIVERSARY OF ITS FOUNDING.

(First W. B. Bean version)

NATIONAL LIBRARY OF MEDICINE

THIS GREAT TREASURE OF MEDICAL BOOKS BEGAN HUMBLLY IN 1836 AS THE LIBRARY OF THE SURGEON-GENERAL OF THE UNITED STATES ARMY, JOSEPH LOVELL. IT BECAME A NATIONAL RESOURCE UNDER THE WISE GUIDANCE OF JOHN SHAW BILLINGS, LIBRARIAN FROM 1865 TO 1895. IT WAS NAMED THE ARMY MEDICAL LIBRARY IN 1922; RENAMED THE ARMED FORCES MEDICAL LIBRARY IN 1952, AND TRANSFERRED TO THE PUBLIC HEALTH SERVICE OF THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE AS THE NATIONAL LIBRARY OF MEDICINE IN 1956. ESTABLISHED FOR THE ADVANCEMENT OF MEDICAL LEARNING ON THIS SITE IN 1961, THE ONE HUNDRED AND TWENTY-FIFTH ANNIVERSARY OF ITS FOUNDING.

(August 1959 version)

NATIONAL LIBRARY OF MEDICINE

THIS GREAT COLLECTION OF MEDICAL LITERATURE WAS BEGUN IN 1836 AS THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY. IT WAS DEVELOPED AS A NATIONAL RESOURCE UNDER THE OUTSTANDING LEADERSHIP OF JOHN SHAW BILLINGS, LIBRARIAN FROM 1865 TO 1895. IT WAS NAMED THE ARMY MEDICAL LIBRARY IN 1922; RENAMED THE ARMED FORCES MEDICAL LIBRARY IN 1952, AND TRANSFERRED TO THE PUBLIC HEALTH SERVICE OF THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE IN 1956. ESTABLISHED FOR THE ADVANCEMENT OF MEDICAL LEARNING ON THIS SITE IN 1961, THE ONE HUNDRED AND TWENTY-FIFTH ANNIVERSARY OF ITS FOUNDING.

(November 1959 version)

NATIONAL LIBRARY OF MEDICINE

FOUNDED IN 1836 AS THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY, AND DEVELOPED AS A NATIONAL RESOURCE UNDER THE LEADERSHIP OF JOHN SHAW BILLINGS, LIBRARIAN FROM 1865 TO 1895; RENAMED ARMY MEDICAL LIBRARY IN 1922 AND ARMED FORCES MEDICAL LIBRARY IN 1952; TRANSFERRED TO THE PUBLIC HEALTH SERVICE OF THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE IN 1956; ESTABLISHED ON THIS SITE, FOR THE FURTHER ADVANCEMENT OF MEDICAL KNOWLEDGE, IN 1961, THE ONE HUNDRED AND TWENTY-FIFTH ANNIVERSARY OF ITS FOUNDING.

BOARD OF REGENTS
NATIONAL LIBRARY OF MEDICINE

Meeting of 11 April 1960
9:30 a.m.
Conference Room C, Stone House
National Institutes of Health
Bethesda, Maryland

A G E N D A

1. Demonstration of mobile camera
2. Consideration of NLM budget for FY 1962
3. Report on Automatic Data Processing in the Library
4. Nomination and election of new Chairman
5. Visit to NLM building site (adjacent to Stone House)
6. Adjournment - by 1 p.m.

BOARD OF REGENTS

of the

NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE SECOND MEETING, FY 1960
Bethesda, Maryland, April 11, 1960
9:30 a.m.

Members absent: DAVIE, HEATON, HOGAN, MUMFORD, NIESS

Guests present: Mr. Arthur P. Miller, BSS, PHS
Dr. Ernest M. Allen, NIH
Mr. Ray W. Grim, NLM

The meeting was called to order at 9:30 a.m. by the CHAIRMAN, Dr. DeBakey, who explained that the three military members were attending a NATO meeting in Paris. The CHAIRMAN then welcomed a new member, Dr. Theodore R. VAN DELLEN of Chicago, to the Board.

INDEX MEDICUS. The CHAIRMAN commented on the advent of the new Index Medicus during the period since the last meeting of the Board.

REORGANIZATION OF NLM. The DIRECTOR recalled that at the last meeting the creation of the Circulation Division, embodying the Photographic Services, Loan and Stack, and Binding Sections, was announced. He said that on May 1, 1960, the present Acquisition and Catalog Divisions would be combined to form a new Technical Services Division. At the same time a new position of Assistant to the Director would be created. Mr. Lazerow, present Chief of Acquisitions, will become Chief of Technical Services. Miss MacDonald, present Chief of Cataloging, will become Assistant to the Director.

In response to questions, the DIRECTOR said that the Library is searching for a suitable candidate for the new position of Deputy Director. Search is being concentrated in the Commissioned Corps of the Public Health Service. If a suitable candidate is found, he will be sent to UCLA for training this fall.

DEMONSTRATION OF MOBILE CAMERA. A working prototype of the mobile camera was demonstrated. It was indicated that modification of the floor brakes, the lighting system, the hood, and the swinging seat would be desirable. Considerable simplification of design

might result if a fixed-focus Model E type camera were used instead of the variable-focus Model D which has been traditional at the Library. If the Model E will handle better than 90% of the material, and preliminary indications are that it will, then its adoption would probably be warranted. Examples of work done with the mobile camera were passed around for inspection.

BUDGET FOR FY 1962. A printed budget summary was distributed, and is attached hereto as TAB A (CONFIDENTIAL). Specific points raised were the following:

a. Equipment. This item in the operating budget refers almost exclusively to the purchase of books. Equipment such as mobile cameras and heavy duplicating equipment will come out of construction funds.

b. Printing. The printing item (06) decreases in 1962 because the continuing outlay for the Index-Catalogue will come to an end in 1961. Printing funds for the last two volumes of the Index-Catalogue are included in the FY 1961 budget, and plans for this are nearing completion now.

c. Personnel. The budget for 1962 includes provision for an increase of nine positions. Two positions are in the Office of the Director (Deputy Director and secretary). Two positions are in the Reference Division (increased demands at new location); three positions are in Photographic Services (to restore Poor Paper Program to optimum level; increase in interlibrary loan program is now usurping all resources for the Poor Paper Program). Two of the new positions are in Index Division (18 minutes for each of 14,000 additional items expected to be processed for the Index Medicus during FY 1962).

d. Interns. The internship program will be continued in FY 1962. It is expected that this program will be funded out of an increased personnel lapse rate during that year. The upheaval in the Library staff during FY 1962, due to the move, is bound to be great; the exact dimensions of the lapse rate are hard to predict.

e. Other Contractual Services. The increase in this item (07) represents building maintenance costs for the new building, to be turned over to NIH. Formerly this item has been largely in the budget of the General Services Administration; at the time of the move it will become a part of the NLM budget.

TRAINEESHIPS. The CHAIRMAN initiated a discussion of the possibility of establishing traineeships in supporting training for medical librarianship. Dr. BURNEY asked that a three-year projection of NLM plans in this area be developed and presented to the Board at its next meeting. Dr. BURNEY said that if the plans involved legislation (as for grant authority), NLM would have to inform the Service of its needs by fall of 1960.

a. Fellowships. The discussion enlarged to include the possible use of fellowship mechanisms in other areas, such as in the history of medicine and the promotion of special reviews.

b. Construction of Research Facilities. Dr. ALLEN raised the question of whether the Library should be active in the field of construction grants for research library facilities. His own Council is doing some work in this field; should it, in effect, be transferred to the NLM? The DIRECTOR expressed his opposition to such a move; Dr. BURNEY agreed.

c. Director's Views. The DIRECTOR said NLM had a great interest in the field of traineeships in medical librarianship, would develop a projected program, and bring it up at the next meeting. He also felt that NLM should concern itself with the development of the fellowship mechanism. But he would like to think of bringing these programs into being in FY 1963. He stated again that FY 1962, bracketing the move to Bethesda, would bring tremendous disruptions in the Library's programs, not least in the important area of staffing. This did not mean that planning should not proceed forthwith.

Dr. HINE and Dr. FRANCIS emphasized the need for increasing the potentialities for research in librarianship. Dr. BURNEY broached the question of increased travel funds to back up possible programs related to international health.

BUDGET APPROVAL. The Board expressed general approval of the FY 1962 budget proposal.

AUTOMATIC DATA PROCESSING. The DIRECTOR made a presentation on the subject of automatic data processing. His remarks, somewhat abridged, are attached as TAB B.

There followed a lively discussion, during which Dr. MIDDLETON reviewed the experience of the Veterans Administration in this area.

ELECTION. The CHAIRMAN announced that he would entertain nominations for a new Chairman of the Board, to take office in August 1960, at the expiration of the current Chairman's term.

Dr. STADEL moved, and Dr. VAN DELLEN seconded, the nomination of Dr. William B. BEAN.

Dr. FRANCIS moved, and Mr. KEYS seconded, that the nominations be closed.

The motions were passed and the CHAIRMAN declared Dr. BEAN elected by acclamation.

Dr. BURNEY expressed his grateful thanks for the long-time interest and very excellent assistance that Dr. DeBAKEY, Dr. FRANCIS, and Dr. VOLWILER have given in this early period of the National Library of Medicine. Dr. BEAN echoed this sentiment on behalf of the other members. Dr. DeBAKEY said that it had been a great privilege and pleasure to serve, that he felt that we were just reaching a new dawn in the Library's purposes, and that the Library's role in furthering the medical science activities of this country would continue to be a truly great one. Dr. FRANCIS and Dr. VOLWILER added warm words.

There was general agreement on the idea that the first "Board of Regents Alumni Day" should be held in connection with the dedication ceremony for the new building.

DATE OF NEXT MEETING. There was tentative agreement on Saturday, November 5, 1960, as the date for the next meeting. Dr. BURNEY urged that the possibility of an earlier meeting, or possibly a special meeting, not be ruled out.

* * * * *

The meeting was adjourned at 12:30 p.m. Following adjournment, group pictures were taken, and the members then went to the new building site and observed the construction in progress.

Respectfully submitted,

FBR
FRANK B. ROGERS, M. D.

Secretary to the Board of Regents

Attachments:

TAB A - Budget, FY 1962 (Confidential until released to the Congress)

TAB B - Consideration of the Use of Computers in Bibliographical Tasks

April 11, 1960

NATIONAL LIBRARY OF MEDICINE

Estimate of Budget Requirements for Fiscal Year 1962

Description	1960		1961		1962		Increase or Decrease
	Appropriation	Estimate	Estimate	Estimate	Estimate	Estimate	
Permanent positions.....	224	224	224	233	233	9	+
Man Years.....	212	217	224	224	224	7	+
01 Personal services.....	\$1,147,300	\$1,171,000	\$1,171,000	\$1,208,000	\$1,208,000	\$37,000	+
02 Travel.....	12,400	12,000	12,000	16,600	16,600	4,600	+
03 Transportation of things.....	400	400	400	3,800	3,800	3,400	+
04 Communication services.....	18,600	24,600	24,600	32,600	32,600	8,000	+
05 Rents and utility services...	23,300	33,300	33,300	21,200	21,200	- 12,100	-
06 Printing and reproduction....	96,000	144,000	144,000	95,000	95,000	- 49,000	-
07 Other contractual services...	30,400	49,300	49,300	355,100	355,100	+305,800	+
08 Supplies and materials.....	47,000	63,800	63,800	63,800	63,800	-	-
09 Equipment.....	92,000	91,600	91,600	91,600	91,600	-	-
11 Retirement contributions.....	69,300	70,000	70,000	72,000	72,000	2,000	+
15 Taxes and assessments.....	1,800	2,000	2,000	2,000	2,000	-	-
Required Savings*	22,500	-	-	-	-	-	-
Unobligated balance.....	5,000	-	-	-	-	-	-
Totals.....	1,566,000	1,662,000	1,662,000	1,961,700	1,961,700	+299,700	+

* 2% of permanent positions

NATIONAL LIBRARY OF MEDICINE

Expenses In Fiscal Year 1962 Connected With Moving To
The New National Library of Medicine Building

Building maintenance costs (to NIH):

Guard services.....	\$49,900
Utilities:	
Electricity.....	\$34,200
Heating, ventilating, and air conditioning services....	66,900
Telephone services.....	<u>26,500</u>
Plant maintenance:	
Plumbing services.....	8,800
Electrical services.....	19,700
Elevator maintenance.....	8,600
Trash removal.....	2,400
Grounds maintenance.....	13,100
Cleaning services.....	75,200
Insect & rodent control.....	<u>400</u>

Transportation services.....	<u>4,000</u>
Subtotal.....	309,700

One-time expenses:

Dedicating new building.....	\$2,000
Installing telephones.....	1,700
Moving History of Medicine Division staff.....	<u>3,000</u>
Subtotal.....	6,700

One-time savings:

Rental of space in Cleveland....	- 6,200
Rental of Xerox copyflo machine	-11,200
Special guard service from GSA.	<u>- 8,100</u>
Subtotal.....	-25,500
Water and sewage (to WSSC).....	<u>3,400</u>

<u>Total net increase in</u> FY 1962 connected with moving to the new building	<u>294,300</u>
--	----------------

CONSIDERATION OF THE USE OF COMPUTERS
IN BIBLIOGRAPHICAL TASKS*

by Frank B. Rogers

In the last ten years a new dimension has been added to the machine by the advent of the electronic computer. It is natural and inevitable that every area in which the manipulation of masses of data is a heavy problem should turn its attention to a study of the computer and the possibility and feasibility of using it to reduce the complexity of calculating and paper-handling tasks, and the man-power expenditures connected with those tasks.

The computer era has many interesting and important antecedents. For our purpose, however, we need only note that the first computer, electronic only in part, was built at Harvard in 1944. The first large-scale general-purpose digital computers were built by Eckert and Mauchly for Army Ordnance and the Bureau of the Census, and did not go into operation until 1950. Today there are almost a thousand computer installations, large and small, in Federal agencies, with a heavy concentration in the Department of Defense. The Treasury Department is using computers, with spectacular success, to reconcile and balance over one million government checks daily. The new LARC computer, now being installed by the Navy at the David Taylor Model Basin, offers a pointed illustration of the development of the computer art. It is said that the LARC will, during the first seventeen minutes of its operation,

*An abridged version of a paper presented at a meeting of the National Library of Medicine Board of Regents, April 11, 1960

process more data than has been processed by the Harvard computer, which is still operating, since 1944.

This is the sort of background against which it is easy to proceed from unwarranted assumptions to foregone conclusions, unimpeded by consideration of basic facts.

One of the basic facts is that a ~~computer~~ is a machine. The sole purpose for which machines are designed is to assist man in the realization of purposes which men establish. And this assistance is mediated, in all cases and ultimately in every case, by extending the range and efficiency and power of the components of the human frame. Machines enable us to run faster, pound harder, see farther, dig deeper, and nothing else. They may even enable us to think faster, if we take some pains with the definition. Machines serve to make the work-effort/work-output ratio more favorable, or to reduce the time span required to perform a task, or both. In this connection we have to remember that the requirement for the completion of some tasks may be so stringent that unless the time allotted to the task can be reduced, the results are irrelevant. (The tracking of ballistic missiles is an example.)

A corollary fact is that all machines, without exception, are and must be constructed according to logical principles. It is redundant but perhaps necessary to add that it is humanly understood logic which is involved. We are not going to get any deus ex machina except in the metaphorical sense, which may be a profound question and

very real, but does not at all concern the dimension of the problem here being elucidated.

And, most important, the sum of these two facts is this: - the design of any machine must inhere in its particular functions, and in the human purposes those functions are meant to serve. Without a consideration of purpose there is no basis for design.* We will return to this point later. Let us now turn to some more concrete considerations.

What is a computer? If we start from a known point of departure it is easier to understand. A computer is a super desk-calculator. It is a calculator which, like punched-card equipment, has the power of handling alphabetic as well as numeric characters or, for that matter, any other characters which may be digitalized. There are three outstanding characteristics which contribute to the computer's great power:

- 1) Data being processed is electrically recorded and electrically routed through the internal circuitry of the machine. This permits a speed of processing which is remarkable. Small electric switches are turned on and off in microseconds. Magnetic reading heads scan data at a rate which is eventually limited only by the speed at which an ordinary wheel can be driven, started, and stopped, repetitively and with accuracy.

*cf. Mortimer Taube, "Problems of Mechanizing Storage and Retrieval of Information," in Emerging Solutions for Mechanizing the Storage and Retrieval of Information (Studies in Coordinate Indexing, Vol. V). Washington, Documentation, Incorporated, 1959.

2) The computer has the ability to perform very long and involved sequences of work without human intervention between phases of the sequence. We may contrast this situation with a punched-card system, for example. With punched cards we carry the cards from the key-punch to the sorter, tray by tray. The operator turns on the sorter. He puts through the first batch of cards. He collects the cards from the various pockets, puts them through again for a sort on the next column, and so forth. He turns off the machine. He carries the cards, tray by tray, to a collator. He turns on the machine. He puts the cards through, batch by batch. Then he carries the cards to a tabulator, and so on and so on. In the computer, on the other hand, these sequences proceed automatically. But we should not forget that "automatically" means "because we told it to do so beforehand," and this in itself may turn out to be quite a trick.

3) The electrical circuitry and speed of operation result in a most interesting further capacity. The computer may be instructed to take care of exceptional cases. We may tell it to modify its course on the basis of whatever a calculation at a particular phase in the middle of a sequence may reveal. To illustrate: we might instruct the computer as follows -- if at a given point in the calculation the sum being carried exceeds a given amount, then proceed from there along course B rather than along course A. In more concrete terms, for instance in a payroll application, we may have a hundred or more exceptions and combinations thereof which may apply in a given instance.

We may say: Do not deduct social security from this check if the total already deducted from this particular account has reached the maximum contribution. But note: every exception is expensive in time and effort. And note again: no exceptions, and no changes in course, can take place without instructions, and these will have to be very detailed indeed, and exact.

We may leave to the engineer the details of circuitry within the computer, and for our purposes may consider it nothing but a big black box. But there are three features to which we ought to pay particular attention. These are input, programming, and output.

As to input -- how do we load information into the computer, either information pertaining to instructions on operation or information as to the data to be processed?

Let us take a type case. We run in the information on magnetic tape, whereon the digitalized information, represented by patterns of magnetized and non-magnetized iron particles, exists in a form which can be recognized and interpreted by the electrical circuitry.

But this merely pushes the real problem one step farther back. How do we get the information in digitalized form onto the magnetic tape? We get it on by having some human being depress a key -- on a card punch, a typewriter, or similar device -- for each and every character to be represented. Card punches and typewriters can only be operated at the slow speeds with which we are familiar.

There are in progress attempts to bypass this bottleneck. The Bureau of the Census has made considerable progress with a device

called the FOSDIC which permits card tallies to be photographed and the resulting microfilm to be converted directly to magnetic tape. Ultimately it seems clear that the way to get around the dilemma is by character-sensing devices which will read a character directly onto tape, in the way our eye reads a scene onto the tablet of the brain. This is not an impossible task, apparently; but it will require time before it is successfully realized, and the resulting device will be expensive.

From this discussion of input we can draw a useful generalization, which is as follows. Remarkable as the capacity of the computer may be for sustaining a long sequence of operations, it is nevertheless ultimately only the end-phase of that still longer sequence which must include as a first phase the human labor of input. Other things being equal, (as they rarely are), the computer is particularly useful in reducing end-time, and is particularly valuable in those operations where end-time is of special importance.

As for programming -- what sort of instructions must be given to the computer? The instructions are a thousand times more detailed, for the simplest task, than those required to be given to the most stupid clerk. If we want to tell a clerk to put a letter on a table, we can say "Put this over there." But suppose we have to instruct a mechanical robot to do the same thing. We would have to give him a long sequence of minute instructions: "Extend right hand. Open fingers. Accept letter. Close fingers. Lower arm. Turn 180 degrees.

Place right foot ahead of left foot. Place left foot ahead of right foot. Place right foot ahead of left foot." Etc. Etc. "Halt. Extend right arm. Open fingers. Lower arm. Turn." Etc.* Some of these instructions are iterative, and advantage can be taken of this fact to simplify the instruction ("Repeat 24 times." This is what the computer does when multiplying by 24). But the amount of detail is still formidable. The writing out of instructions for the computer to follow is called programming. A program consists of many small steps, and it takes quite a batch of steps to cover any action recognized as meaningful. It is not unusual for a computer program to require 5,000 steps. Each step in the program may require an investment of about one man-hour, plus or minus fifty percent. The more exceptions and the more alternate courses which are provided, the more expensive does programming become.

As to output -- how do we get an intelligent answer from the computer? To a large extent the problem is the same as the problem of input, upside down. Translation into the clear from machine language is required. For material in clear language - such as a bibliographical citation in full, rather than a mere number referring to the location address of such a citation - output printing mechanisms which print 600 lines a minute are widely used. These mechanisms are expensive, and they are very limited in the kinds of characters available and in the kinds of type faces. Usually they are limited to upper case letters, as is the case with punched cards.

*This illustration is used in William D. Bell, A Management Guide to Electronic Computers. New York, McGraw-Hill, 1957

It is evident that the use of computers requires that problems be specified in the most rigorous terms, and in detail. The computer has no sixth sense to help it along. When it reaches an impasse it simply grinds to a halt. The computer must have its full course charted in advance, in terms of crystal clear logic.

It is not much of an exaggeration to say that the solution to every problem exists and must exist at the time of its formulation, prior to the time the computer begins to operate. What the computer does is to make the solution explicit. Let me give a simple analogy.

Suppose we have a group of figures in a column, with a notation -- add. That is the solution of the problem. Performing the arithmetical operation merely makes it explicit. Nothing is there which wasn't there before.

Suppose my son comes to me and says "Dad, how can I solve this problem? If two men can dig a ditch six feet wide and four feet deep in three days, how long will it take three men to dig a ditch four feet wide and eight feet deep?" If I indicate the nature of the operations, my son then cries, "I can do it." He means he can carry out the indicated operations. The solution was implicit in the indicated operations; he can now make it explicit.

This is what the computer does. In many cases it is no mean feat. All that is necessary is that we realize the nature of the situation.

In what sort of terms, with what sort of logic, may we specify bibliographical problems of retrieval so that the computer may operate on them? The commonest type of problem, and by far the most important,

concerns the retrieval of material according to the subject to which it pertains.

There are several ways of characterizing the bibliographical entity by subject. One of the traditional ways is by the use of pre-formed classifications, as notably the UDC. These classifications are hierarchical in form, follow a class logic of genus and species, and indeed owe a great deal to the analogy with biological taxonomies. For reasons which we will not elaborate here, this type of subject specification is not very useful or suitable for information retrieval in large collections for minutely specified subjects.

A more adequate method involves characterizing the bibliographical unit by a set of simple terms, suitably chosen, so that the conceptual content of the bibliographical unit is expressed in those terms. (Note that "suitably chosen terms" is a qualification which in itself begs the question, and of itself requires a whole separate world of investigation, which we cannot pursue now.) The terms of the set may be thought of as subject handles by means of which the unit may be grasped. These terms may be called subject-headings, although they are not identical with traditional subject-headings, which in effect attempt to encapsulate in a single term or short phrase the entire complex subject of a given bibliographical unit. This new type of subject-heading, on the other hand, is a term assigned to each major attribute; the complex of the set of terms is thought of as defining the particular precise subject concept. The old subject-heading said in effect, "This is it." The new subject-heading says, in effect, "There it is, right there."

Two or more of the new subject-headings will indicate a precise point more satisfactorily, as by an intersection of vectors. What is more, they lend themselves more readily to adequate control, and maintenance of consistency in the retrieval vocabulary is a necessity.

What is now required is a formal logic for constituting sets of terms, and conceptualizing the resultant meaning.

This logic may be found in the class calculus of symbolic logic, and fortunately all we need to know for our purposes is the first chapter of the large encyclopedia of that subject. In that logic any attribute or property whatsoever may define a class. We may have such classes as the class of red things, or the class of compounds containing chlorine, or the class of things which are bactericidal.

There are three basic ways in which such classes may be related: logical product; logical sum; and logical difference. Equations for these interactions may be written in terms of Boolean algebra. Long expressions, involving many terms in many relations, may be simplified prior to instituting search, according to the rules of this algebra.

Under older systems a unitary retrieval axis was fixed at the moment of indexing. Under the system of coordinate indexing, a multiple retrieval axis is created at the time a search is instituted. In the context of the requirements which we have in mind -- large collection, precise pin-pointing of subjects, mediation by machine -- only the latter method is feasible.

There is one further feature of the indexing system which we must note before turning again to machines proper. In any system there are

two things which are being related - the bibliographical unit itself, and the subject content of that unit. We may call the bibliographical unit an "item." Usually we are not dealing with the item itself but rather with the address of the item -- a citation, a book number, an abstract, or the like.

So in our system we have two basic elements - items and terms. There are two ways of relating these. We can characterize each item by the terms which pertain to it

1	A	B	C	TERMS ON ITEMS
2	X	R	T	

or we can list under each term the items which pertain to it

A	1	5	8	ITEMS ON TERMS
B	2	3	5	

There are two types of search, one of which applies to one method of arrangement and one of which applies to the other.

The scanning type of search applies to the terms-on-items arrangement. This requires a search of the entire store. It requires looking at each and every item, one after another, to see if it satisfies the retrieval axis selected. In scanning we are saying "Is it this? Is it this? Is it this?" over and over.

The look-up type of search applies to the items-on-terms arrangement. Here only part of the store is involved. We select only the terms which are included in the retrieval axis, collate them as indicated, and we have our answer.

It is obvious that in terms of search time a look-up system will always be superior to the linear scanning system, and that with large collections the difference will be significant by several orders of magnitude.

Now we are ready to return to the computer.

The typical computer manipulates data which is stored in one of two ways: on reels of magnetic tape, or in a "memory," usually a magnetic core. A typical memory may have a capacity of 4,000 to 6,000 words, whereas the size of the magnetic tape store is virtually unlimited. The memory is used to store instructions -- the program -- and as an intermediate resting place for intermediate calculations. The magnetic tape is used for the data to be operated on..

Now it can be seen immediately that this is the physical analog to the linear, sequential scanning system for a terms-on-items arrangement. It is clear that this is not as efficient as a look-up, items-on-terms system.

The solution would seem to be to increase the "memory" portion proper of the computer. This has been done in some types, notably the IBM RAMAC and the Remington-Rand RANDEX. Instead of magnetic cores a stack of magnetic discs is typically used.

There are two serious problems connected with the large-memory type of device:

- 1) The largest memory device yet made would be sufficient to hold about six months of the indexing now being done at the National Library of Medicine, if the "item" to be retrieved is defined as the

minimal bibliographical citation now printed in the Index Medicus.

2) Random access storage in memory devices is enormously more expensive per unit stored than is linear storage on magnetic tape.

The question of expense is not unimportant. The small size computer is irrelevant to the bibliographical search problems of the National Library of Medicine. The medium size computer, typified by the IBM 650 or the Remington-Rand Solid State 90, would require an expenditure of about a quarter-million dollars annually. A large computer such as the IBM 709 or the UNIVAC II would require about a million and a half dollars annually. Considered merely as orders of magnitude, these figures are significant.

* * * * *

Against this background let us consider the role of the National Library of Medicine in the field of mechanized storage and retrieval of information. What should NLM's program be? First let us say what it should not be.

The National Library of Medicine has no appropriate role to play in the development of general-purpose hardware. The principles involved in the retrieval of medical information do not differ from those involved in the retrieval of scientific information generally. Secondly, other agencies of the Federal Government are already committed to the development of such hardware. The Office of Naval Research and the Air Force Office of Scientific Research are heavily involved. The National Science Foundation's Office of Science Information Service

has statutory responsibility for research and development in this field, and is supporting promising on-going programs. Finally, the size of expenditure required, involving for a single project some ten times the normal annual operating expenses of the Library, makes involvement of the Library in this particular area somewhat absurd.

But turning to the positive aspect, I would like to outline three ways in which the Library should be active.

FIRST: The Library should make every effort to remain abreast of all current research and development in this field.

a. Membership of NLM staff on various government and non-government information committees and panels makes available some excellent clearing-houses for information in this area.

b. The Library should take every educational advantage of direct contact with manufacturers of equipment.

c. We can and are trying to raise the level of competency of the NLM staff to deal with this particular problem through pursuing formal courses of instruction.

d. The NLM can and will continue to seek out information in more informal ways. We can read the Ledley report to the NRC when it appears this summer, as well as Ledley's report to NLM, sponsored by us, which is also due at the same time. We will await the Knox report to the National Heart Council with considerable interest. In all these ways, and many more, we can be alert to the possibilities in the field.

SECOND (and most important): The NLM must give its best thought and most earnest attention to the question of exactly what it is that it wants the machine to do. How easy it is to dream of machines spewing forth bibliographies at high speed; how difficult it is to specify an exact purpose, and a specific application.

Just what do we have in mind? Do we wish, in effect, to put the contents of the Index Medicus into a machine so that we may search by machine in a somewhat, and only somewhat, shorter time than we might otherwise search in the printed book by conventional means? What about the serious queuing problem that such use of the machine would entail? Would the machine system take the place of the printed mechanism, supplement it, or produce it as a by-product? Is the use of the machine conceived to be only the faster and more efficient preparation of the Index Medicus?

Or do we have something considerably different in mind? Are we thinking of the type of permuted title index proposed by Mr. Luhn of IBM, and soon to be tested by Chemical Abstracts under the title KWICC -- Key-word in Chemical Context? This would involve running titles into a computer, permuting the order of words, printing out the permuted titles with key-words lined up in a center column and context words on either side. This is quick, presumably, and it is dirty, certainly. But if speed of communication is of supreme importance perhaps it is worthwhile.

This is the tough question. What is valuable? What is reasonable? What is it we want to do, and why? If we know this it will be fairly

easy to determine how to do it.

THIRD: We ought to consider carefully the implications of the development of a computer system at NLM for the question of centralized versus decentralized operations and services.

At the present time we are producing centrally a printed index for decentralized consultation and use. From many aspects, this division seems ideal. Can we duplicate this division in a machine system? If we cannot, can we meet the problems of a complete centralized process? Can we meet them satisfactorily, and is the result going to pay off?

* * * * *

I have tried to outline here the core of the issues, as I see them, of the problems which automatic data processing poses for the National Library of Medicine. I have tried to outline the kind of program and posture which I think the Library should adopt in relation to these problems. I have kept reminding myself that the purpose of the Library is not to operate a particular machine system, however great an acrobatic achievement that might be in itself. It is not to publish and distribute a particular index in a particular way, however ingenious and successful that operation may be deemed to be. It is not even just to be a good library, however great and distinguished that library may be. It is rather, by virtue of being a library, to use every available bibliothecal means to promote awareness of and access to the subject content of recorded medical knowledge, to the end that the science of medicine will advance and prosper.

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NATIONAL LIBRARY OF MEDICINE

BOARD OF REGENTS

Meeting of 5 November 1960

A G E N D A

1. Report of the Director
 - a. Brief review of FY 1960
 - b. Publications
 - c. New Building
 - d. Organization and personnel changes
2. Coming events
 - a. Dedication ceremonies
 - b. Second International Congress on
Medical Librarianship
 - c. NLM-NHI Computer Project
3. NLM Extramural Programs
4. Dates of next meetings:

Friday, 7 April 1961
Thursday, 16 November 1961

THE BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE FIRST MEETING, FY 1961

Washington, D. C., November 5, 1960
9:30 a.m.

Members absent: BURNEY, DAVIE, HEATON, HOGAN, MUMFORD, NIESS, WILSON

Guests present: Dr. A. B. Kurlander, OSG-PHS; Dr. David E. Price, NIH;
Mr. Scott Adams and Dr. Estelle Brodman, NLM

The CHAIRMAN called the meeting to order, and welcomed DRS. HUSSEY, STECHER, and VALK as new members of the Board.

DR. ROGERS reviewed the work of the fiscal year just past, with particular reference to the completion of the Index Medicus project and the final report thereon, the continuing increase in demand for interlibrary loan service, and NLM publications which had appeared since spring. He recapped progress on the new building; further changes in the NLM organization were described, including the acquisition of Mr. Scott Adams as Deputy Director, and the forthcoming appointment to the staff (next summer) of Dr. Joseph H. Roe, Jr. Dr. Roe will be given a full year's training in library school and will return to join the staff as a full-time member in the fall of 1962.

Tentative plans for the dedication ceremony for the new building (November 16-17, 1961?) were outlined. It was agreed that it would be desirable to invite the new President to speak on this occasion.

Plans for the Second International Congress on Medical Librarianship to be held in Washington in June 1963 were described. (The First Congress was held in London in 1953.) The Medical Library Association will sponsor the Second Congress; the Secretariat will be located at NLM. It is hoped that there will be representation from Africa, Asia, and South America as well as from Europe. The budget of the Congress will be in the neighborhood of \$150,000, of which about 80% will be required for travel subsidies; the acquiring of such a sum will not be easy.

DR. ROGERS then spoke of the probable collaboration of NLM and the National Heart Institute in developing a computerized system of storage and retrieval for handling medical literature. The so-called "Knox Report," submitted to the National Heart Council last summer, had urged a joint effort of this sort. The size of the program contemplated would require two or three years of effort and half a million dollars, more or less.

DR. STECHER commented that it would be desirable to explore the experience of the American Society for Metals and the Center for Documentation and Communication Research at Western Reserve University, in the area of mechanical searching of literature.

The CHAIRMAN noted that at the previous meeting of the Board there had been a discussion of extramural programs by means of which the Library might more satisfactorily carry out its national responsibilities. The Board had felt that research and development in the techniques of medical bibliography deserved increasing emphasis, and DR. BURNEY had stressed the area of education and training for medical librarianship. The CHAIRMAN asked MR. ADAMS, Deputy Director of the NLM, to outline the proposal for the NLM Extramural Program which was now beginning to take shape. A summary of his statement is attached.

After a small amount of discussion, on a motion by DR. VAN DELLEN, seconded by DR. HINE, the Board approved, in principle, the general scope of the proposed program. The CHAIRMAN proposed that in the interval before the next meeting the members of the Board might consider ways in which the new proposals may best be supported.

* * * * *

The date for the next meeting of the Board was set as Friday, April 7, 1961. The meeting in the fall of 1961 will be held in connection with the dedication ceremony for the new building.

The meeting was adjourned at 12:30 p.m.

Respectfully submitted,

Frank B. Rogers

FRANK B. ROGERS, M. D.
Secretary to the Board of Regents
National Library of Medicine

Attachment

NATIONAL LIBRARY OF MEDICINE
PROPOSED EXTRAMURAL PROGRAM

/This proposed program, requiring both new legislative authority and specific appropriations to become operational, represents the response of the Public Health Service, through the National Library of Medicine, to meet longstanding needs for improving and strengthening the means for communicating the findings of medical research within the medical community./

Communication in the medical sciences is inseparable from the sciences themselves; it is both an end and a beginning for medical research. The worldwide acceleration of research, in terms both of money and manpower, has severely taxed the conventional systems for organizing, storing, and retrieving information. The accelerating volume of medical publication has brought about increasing difficulties in finding, correlating, and applying the masses of new information produced.

The National Library of Medicine is concerned with those communication systems which provide channels for the published results of completed research. It is not primarily concerned with the psychology of communication, with the oral communication of research results, or with registers of research in progress, but rather with the dissemination, organization, storage, and retrieval of information in printed form.

The proposed support program is concerned with traditional publication media (journals, reviews, and translations), with abstracting and indexing services, and with strengthening the facilities, resources, and services of medical libraries through which information is made locally available to research workers. The existing media, however strong, are not fully responsive to burgeoning research requirements, hence the Library also proposes concurrent support of investigation into the principles on which new and improved systems may be built.

In order to accomplish this support, the Library has drafted programs in the following areas:

1. Publication and translation
2. Fellowships
3. Library facilities and resources
4. Education and training
5. Research and development

PUBLICATION AND TRANSLATION

a) The need. Basic science journals, dependent on society revenues for their support, are poorly off as compared with their commercially sponsored counterparts. Abstracting and indexing services must accommodate a volume of publication over which they have no control. Weakness of resources has occasioned inordinate delays in publication; there are serious gaps in coverage, particularly of the foreign literature; and there is unnecessary

duplication of operations. Generally speaking, the needs are more acute in the secondary than in the primary publication field. Abstracts, indexes, reviews, and translations are more commonly in need of assistance.

In a world of scattered publication and increased scientific specialization, critical reviews perform a highly valuable function in synthesizing new information and consolidating the advances of research. Yet the work of their preparation, without prestige or adequate remuneration, has had little appeal to scientific authors; furthermore, their coverage of scientific areas is to a great extent unsystematic and unplanned.

A third of the world's scientific literature is published in languages which American scientists cannot read. No country has a monopoly on scientific talent, and much information so published is of significance to the development of medical research in the United States. The need for a better knowledge of Soviet medical research has been apparent; research materials published in other obscure languages should be reviewed and translated.

b) Purposes. The Library's objectives would be 1) to assist scientific groups in the organization, analysis, and processing of the published medical literature, and 2) to assist such groups in identifying and making available significant information published in the more obscure languages.

c) Program. The Library would undertake the support of proposals in the above and related fields. Such proposals would be screened by an appropriate Study Section, and recommended by the Library's Board of Regents to the Surgeon General. Support would be provided through grant or contract.

Support for publication projects would be provided to responsible scientific groups submitting adequate justification of scientific need and soundness of planning. Coordination and the potential for cooperation would be encouraged.

d) Relation to Intramural Program. The Library is developing a computer system to enable it to process more expeditiously the world literature of the biomedical sciences. The relation of this resource to the support of multiple secondary publications offers attractive possibilities for cooperation between the Library and scientific user groups.

e) Foreign Currency Program. The Library would administer two translation programs. The first, using dollar appropriations, continues the program initiated by the National Institutes of Health. A priority here is to evaluate the effectiveness of cover-to-cover journal translations and other techniques on the basis of five-years' experience.

Coordinated with this is a supplementary foreign currency program, which would utilize surplus funds available under P.L. 480 and P.L. 86-610. The use of foreign currencies would not be limited to translation; bibliographies, review papers, abstracts, and other techniques designed to improve international communication would be developed.

FELLOWSHIPS

a) The need. In a world engaged in sorting out the bits and pieces of new research findings, the integration of new knowledge and the updating and reinterpretation of past experience is a highly necessary function. Talent and time are scarce; there is a need to find mature qualified individuals, and to provide them with attractive opportunities in the form of senior fellowships which would offer prestige as well as remuneration.

The Library's vast collections offer unparalleled resources for scholarship. Its potential contribution to science is realized to the degree that its collections are productively exploited. Award of a limited number of senior fellowships would capitalize on the Library's extensive store, a hard-won and long-term investment, to fill deeply felt scientific needs.

b) Purposes. The Senior Fellowship program is designed to encourage productive scholarship, by supporting qualified individuals engaged in work on research monographs, critical literature reviews, bibliographies, special data compilations, historical studies relating to the medical sciences, and the like.

c) Program. Applications from qualified individuals would be reviewed by an appropriate Study Section, and recommended by the Board of Regents to the Surgeon General. Appointments would vary from three months to a year, with a quarter of the time to be spent in residence at the Library. An honorific title would accompany the appointment, and adequate stipend and expenses provided. Publication would be encouraged and supported.

LIBRARY FACILITIES AND RESOURCES

a) The need. A strong system of adequately housed and stocked medical libraries serving our medical schools and research establishments is essential to the effective dissemination of medical information. Yet 55% of school medical libraries reported in 1957 that they had outgrown their facilities. A minimum collection for research support has been estimated at 100,000 volumes; the median in 1958 was 55,000. In addition, newly established medical schools require operational libraries adequate for educational and research purposes. In the competition for funds, libraries have not always received the attention they deserve; the percentage of university funds dedicated to library support has been steadily declining. In their present state, medical libraries often constitute a weak link in the communication of medical information.

b) Purpose. In strengthening the medical library system of the country, the NLM would have the following objectives: 1) to assist in the construction of new facilities, or the renovation of older ones; 2) to assist medical libraries in strengthening their collections in support of expanded research and educational requirements.

c) Program. The construction of library facilities as a program is subordinate to existing PHS programs for the construction of medical care, medical research, and medical education facilities. The Library's concern will be to insure adequate representation of medical library needs to the operating programs within the PHS, and to provide technical assistance and advisory services on request.

Where the improvement of medical library resources is not a function of construction aid, the NLM, working cooperatively with appropriate professional organizations, will attempt to develop plans and techniques for strengthening the collections of medical libraries.

EDUCATION AND TRAINING

a) The need. Strengthening of the country's medical libraries also requires attention to the education and training of medical librarians and information personnel. As against an estimated annual requirement of 100 newly recruited medical librarians annually, the library schools are graduating 35 who enter this field. Furthermore, chronic shortage of trained personnel has resulted in the recruitment of some untrained personnel, or personnel with experience only in non-medical fields of librarianship. There is a need both to increase the total manpower, and to improve the capacities of those on the job.

b) Purpose. The NLM's objective is to improve the medical library services offered to research, education, and medical care by 1) increasing the total trained personnel available; 2) by improving the skills of medical librarians on the job; 3) by strengthening the educational facilities offering courses for such training.

c) Program. The Library would provide a system of long-term scholarships to support the graduate education of medical librarians, and of short-term traineeships to enable attendance at summer institutes and refresher courses. The Library would also support a system of internships, whereby individuals could receive post-graduate on-the-job training while working in cooperating medical libraries. There would also be provision for the support of library schools, to enable them to improve their capability of training personnel in this specialized field.

RESEARCH AND DEVELOPMENT

a) The need. Libraries as traditional mechanisms for the storage and retrieval of information have developed along empirical lines. The rate of increase of new knowledge, the complexity of its interrelations, and the urgency of information requirements for medical research are testing the efficiency of traditional mechanisms as never before. There is both a need to restudy the empirical decisions made in the past, and to investigate thoroughly the intellectual bases of new and better systems.

b) Purpose. Support by grant or contract would be provided to institutions and individuals who offer evidence of good project or research design, and of ability to perform. Applications would be

screened by an appropriate Study Section, and recommended by the Library's Board of Regents to the Surgeon General. There would be more emphasis on the design of systems using or modifying existing equipment than on hardware development proper. Such development work would be coordinated with the Library's own program for computer application, and with other PHS programs for computer utilization.

d) Relation to other PHS programs. Computer technology has applications in the following areas of interest to the medical sciences:

1. The processing of experimental data (basic and clinical)
2. The processing of administrative data for statistical or control purposes
3. The processing of verbal data for machine translation
4. The processing of verbal data for storage and retrieval of published information.

The first area uses computers as a function of research in process; the second as a function of management; the third in simulation of an intricate and sometimes tedious intellectual operation; and the fourth, in which the Library is primarily concerned, in simulation of traditional bibliographical systems.

While many agencies within the PHS have a general concern with the improvement of medical communication in its relations both to research and to the application of research findings, the Extramural Program proposed by the National Library of Medicine represents a comprehensive and systematic attack on the heart of the communication problem: the organization, storage, dissemination, and retrieval of published information.

November 5, 1960

BOARD OF REGENTS
OF THE
NATIONAL LIBRARY OF MEDICINE

Meeting of 7 April 1961
9:30 a.m.
Conference Room 113
National Library of Medicine
Washington, D. C.

A G E N D A

1. Introduction of new members
Admiral Kenney; Dr. Daniels
2. Message from Dr. Terry
3. Date of next meeting
 - a. New building progress
 - b. Dedication ceremony
4. Discussion of Project MEDLARS - Director
5. Discussion of Extramural Program - Deputy Director
6. Consideration of NLM Budget for 1963
7. Election of Chairman, period August 1961 - August 1962

THE BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE SECOND MEETING, FY 1961

Washington, D. C., April 7, 1961
9:30 a.m.

Members absent: HEATON, MUMFORD, NIESS, TERRY, VAN DELLEN, WILSON

Guests present: Dr. A. B. Kurlander, OSG,PHS; Dr. David E. Price, NIH

The meeting was called to order by the CHAIRMAN at 9:30 a.m. The CHAIRMAN welcomed Admiral KENNEY as a member of the Board; he announced that the President has appointed Dr. Worth B. DANIELS to fill the unexpired portion (to 1962) of the term of Mrs. Preston DAVIE (resigned), and he welcomed Dr. DANIELS, the first Chairman of the NLM Board of Regents (1956-57), to the group.

Dr. Kurlander read the following message from Dr. Luther L. TERRY, Surgeon General, USPHS, who was unable to be present because of a meeting in Lexington:

"I regret that another commitment from which I cannot escape prevents me from attending in person this morning's meeting of the Board. I am trying very hard to make the personal acquaintance of each and every member of the many Advisory Boards, Councils, and Committees with which the Service is armored, and I look forward to the pleasure of meeting with you at a later date.

"I am not unfamiliar with your interests and concerns. Indeed, before I left the Heart Institute I worked with Dr. Rogers to bring about what I think is a major communication effort: Project MEDLARS. The Heart Council and the Heart Institute are keenly interested in cooperating with the Library in establishing an electronic indexing system for medical literature. I intend to push this, and I have every confidence that the successful outcome of this effort will bring credit to the Library and the Service alike.

"You have heard a lot about 'new frontiers.' If any institution ever stood on the borderland of a new frontier it is the National Library of Medicine. Not only does it intend to enter the electronic age with flags flying; it is adding two dimensions to its future.

"First is the assumption of a new role -- the support of medical communication through its proposed extramural program. We need urgently a focus in the Public Health Service for improving communication of the published results of research; the Library is the logical place for us to center our support programs.

"The second is the new building. Only in years to come will we be able to appreciate fully the impact of this long-awaited change, not only on the morale and performance of the staff, but also on the nation's image of its National Library of Medicine.

"The proximity of the new building to the National Institutes of Health, the Naval Medical Center, the Walter Reed Medical Center, and other institutions of national stature is, I believe, a good thing for all concerned. We will, of course, maintain the independence and integrity of the National Library of Medicine as a national institution within the Public Health Service orbit. But inevitably the Library's staff will breathe the atmosphere of research and will rub shoulders daily with persons working on the frontiers of new scientific knowledge. Not only will this help the Library to realize its potential contribution to medicine, but also it will expose medical investigators to a broader view of their role, to a more intimate acquaintance with the humanities and with medicine as a cultural institution.

"With all this, the Library is going to have a challenging and exciting time of it in the immediate future. Dr. Rogers has brought it to this peak with inspiration, courage, and hard work. I look forward to working closely with him in the years to come as we develop the usefulness of this institution to American and world medicine, and for the benefit of mankind. I assure you that both he and the Board will have both my sympathetic and active support as we work to this end." (Signed: Luther L. Terry)

The DIRECTOR commented on progress and lack of progress in construction of the new building. He recommended that the dedication ceremonies for the new building be held on December 14 and 15. After discussion, this recommendation was accepted, allowing the Director the prerogative of making discretionary adjustments.

The Board enthusiastically endorsed the idea of inviting Senator Lister Hill to present an address at the dedication ceremony.

The DIRECTOR reported on 1) the publication of the Russian Drug Index; 2) the appearance of the Cumulated Index Medicus; and 3) the publication of the report on "The National Library of Medicine Index Mechanization Project." He went on to describe the new MEDLARS project:

DIRECTOR: "In putting together the Index Medicus system we had tried to combine two things. We had tried to combine a publication system that would produce the Index Medicus in better style, and we tried to graft onto this a bibliographic retrieval system which meant a way of using the component parts of the Index Medicus system to gain other objectives -- of producing other bibliographical compilations, using the same materials.

"As it turned out, we eventually failed in this second objective; a chapter in the report tries to explain why we failed and what the logical problems were that were involved. We came to the feeling that we had put the cart before the horse; that it is essentially impossible to design a publication system and then derive the bibliographic retrieval system from it; that the only approach is to design the bibliographic retrieval system first and derive the publication system from it, and this set us on our next course of thinking about the problem.

"We were aware of computers. We realized when we finished the present mechanization system that we had achieved two necessary interim steps on the way to computer use. In our present system we are digitalizing the information for the system we now have, and with this information in digitalized form it is ready for direct input into a computer system. The other thing that was necessary to achieve for this system as well as for a computer system is an absolutely logical control over the scheme of arrangement of material, and we have that.

"We talked with the people at the National Heart Institute about this problem. The National Heart Council had been concerned with the problems of medical bibliography in the heart field. We wondered if we couldn't get into a joint effort in designing a computer system.

"In talks with Dr. Terry and Dr. Watt and some of the other people in Bethesda we agreed on a program which would be directed by the National Library of Medicine, which would be funded by the National Heart Institute at least in its initial stages, and which would take the cardiovascular literature as a starting and demonstration pilot project.

"In February we sent out letters to 45 manufacturers of computer equipment and systems designers, inviting them to make proposals to the National Library of Medicine for the design of such a system. With the letter of invitation we sent out a copy of the specifications as to what we wanted from the system, and for a little more explanation there was an appendix added to the specifications which told in more detail what the limits of the system should be and what the requirements of output would be.

"The proposals were invited at the beginning of February and we held a briefing session in the middle of February, after I had left for Africa. Representatives of all these firms were invited

to Washington; they gathered in the HEW auditorium and a general briefing session was held on the whole idea; questions were asked from the floor and answered by the Library staff. A transcript of that briefing session was made and copies of the whole discussion were sent to each of the manufacturers who had been invited to submit a proposal.

"All proposals are due in to us by April 24. We will then have the tremendous problem on our hands of trying to evaluate the various proposals. We hope to write the contract before the end of June. We have outlined a time schedule for them, hoping that in two years' time a system can be designed and brought into being at the Library.

"The Heart Council is going to underwrite the entire initial contract and is going to pay for the entire cost during the upcoming fiscal year, 1962. The Library is putting sums into its Fiscal Year 1963 budget to fund what will hopefully be the final developmental year of the project -- the year in which the hardware actually begins to be assembled if the systems design has worked out the way we expect. We are trying to get out of the system this flexibility that we were unable to achieve in our more limited system.

"If you look at the last page of the appendix to the specifications you will see that we give examples of three types of output that we would like to have from the system. The first is the Index Medicus output. We feel that, regardless of how sophisticated a machine we are able to bring into being, there will be need for a printed book like the Index Medicus for as long as we can now foresee. We want the Index Medicus to be not the output, but one of the outputs of this system.

"We want to be able also to make up recurring bibliographies in a variety of fields. We want to respond to the demands of the Heart Council for special bibliographies in that field; we want to be able to respond to demands of the American Diabetes Association for a recurring bibliography of materials of interest in the field of diabetes. We want, in short, to make this total scanning effort of the world's medical literature that we are doing here easily available to everyone. It is absurd that various small special projects have to scan all this material again. This is a very tough part of the whole problem, and our scanning here should suffice for all; it should not have to be repeated. We want the capability of using this common store of material and the common scanning that we do to solve the problems of all of the various fields, and to be able to put out this information in any order that these people want. I believe that this can be done with the system.

"And the third type of output that we want is what we have called a demand bibliography -- the one-shot type of tough question which comes in to us; with the help of a machine we might be able to assemble the information rapidly and thoroughly, print out the product and hand it out.

"I think that in this project almost all of the hardware that is necessary is already in being. The main job of the project is the job of system development -- of putting the hardware together in a meaningful way and evolving systems for its use.

"There is really only one piece of hardware that is in question, and that is the output device from the computer. The output devices which are available now -- the high-speed printers which print 600 lines a minute, 130 characters long -- are excellent for their purposes except that they are limited entirely to a single face in upper case characters only. Now I don't believe that it is acceptable to print a book of this size with that kind of face. It would wear you out in five minutes, I think, to try to read a book of this kind. We want upper and lower case characters, in several faces. Such a machine does not exist on the market at the present time.

"If we can solve this problem of output, of a printed output that is suitable for photographic reproduction in the printing of the Index Medicus, we can do the job. As an interim measure, we could still get an output which could be converted to our perforated paper tapes, run these tapes through a battery of typewriters, and print the whole thing out as we do now. It would involve more days in the process, which might not be crucial in the early developmental stages.

"We are pretty excited about this whole business. We think perhaps we are on the track of a really good solution to the whole problem of the bibliographic control of the medical literature."

DEPUTY DIRECTOR: "I might add, Mr. Chairman, that not only are we excited about it, but I think that the industry and other agencies concerned with the storage and retrieval of information are also excited. Here, for the first time, is a major effort on the part of a responsible producing organization to establish a comprehensive system.

"I am particularly excited about the second objective. We have had informal talks with a lot of other groups, but the concept of building in a capability of screening centrally a tremendous chunk of the world's literature and then using this screening for multiple secondary purposes -- and initially the specifications here call for fifty such concurrent services -- is really exciting.

"One of the longstanding problems in this entire field, of course, is the relation of indexing to abstracting services, plus the fact that every new amalgamation or grouping of the sciences feels that it must have a new abstracting service oriented along its particular axis. Consequently there are all sorts of demands in our society for the supply of specially organized information.

"The concept of having a primary screen within the National Library of Medicine which would fan out prepackaged, organized bibliographies as a basis for further exploitation in depth --

that is, abstracting or the preparation of review papers or the writing of texts -- this area is very exciting. We expect to work with the Heart Institute and with a number of private and public agencies in developing optimum uses for the system three years from now."

DR. VALK: "Will this be a retrospective service, too, as well as a current accumulation?"

DIRECTOR: "We have thought a good deal about the size of the store, and our present position is this: as we move into this thing we will not try to take into the system anything from the past. It is too enormous a job to try to go back and pick up this stuff. We will let our store accumulate from the time we begin with the machine; we want a system which will have accessible, in the speediest form, a five-year store of the literature. After five years we will accept storing it in some less accessible, but still accessible, way.

"We think that a five-year span is all that is practical to try to handle with the machine at this time, and it is probably adequate to the major needs that will be placed on the system.

"If we take a five-year store, this is going to mean that there will be more than a million articles in the store at any time. If each of those items in the store has 300 characters in it and a dozen or so tags hung on it with which to pull it out, it is an enormous problem, even for a machine which works in microseconds, to deal with this size of store."

DR. DANIELS: "Is industry interested in this? I mean in the way of support. There would be many aspects that could be utilized in other fields."

DEPUTY DIRECTOR: "The Pharmaceutical Manufacturers Association has a literature committee that is actively exploring what the needs of this industry are in the field. They have worked on the chemical side with Chemical Abstracts. But it is on the biological side that they feel weakest. Both Brad and I have talked with members of the committee and they are very much interested from the point of industrial utilization of packaged information that would be based on the system."

CHAIRMAN: "This is all very heady information. I have a feeling that some people believe that with these machines one will be able to get a lot more out than is put in. That illusion, it seems to me, has been the impetus behind some of the agitation to get these thinking monsters into business as fast as ever you can to help us out. I should imagine there would be some extravagant, as well as perhaps ridiculous, demands that will come your way; you will have to have a way to protect yourself against these, or the whole thing could easily be abused, and perhaps even corrupted."

DR. WELLS: "It can never be better than the quality of the material that goes into it, can it? That is our big problem today."

DR. HINE: "You haven't figured out a red light to flash if the information put in is wrong?"

DIRECTOR: "No. It is absolutely true that the preparation of material to go in the machine is going to demand rigorous control. The machine is not going to lessen the problem of input; it is going to make it tougher for us, because if we get sloppy about this we will never be sure of anything. We have got to be on top of the material all the time to have any confidence in the result."

DR. WELLS: "That kind of discrimination may have some effect in broader terms, and will be useful of and by itself."

DIRECTOR: "I suppose the most common error that will be made will be in forgetting that what you are going to get out of this machine are bibliographic citations, arranged, to be sure, in some meaningful way, but still just bibliographical citations. You are not going to get out directly any dose rates for drugs; that is the type of question I think that somebody is likely to think we can answer. Press the button and ..."

CHAIRMAN: " ... have the paper written."

DR. HINE: "Of course we mustn't underestimate the value of that kind of information. It will go just so far, but it will be an achievement to have that much."

The discussion then turned to the question of the Library's extramural programs.

DEPUTY DIRECTOR: "Progress toward the new legislation is moving. It has been relatively slow; there have been other matters of high priority which the Service wished to present to the Congress for its authorization.

"Our request for this new authorizing legislation is over in the Surgeon General's Office. Brad and I have discussed informally with Dr. Terry the need for this. We have briefed him on what we would like to do; we gave him roughly the same description of the program that we presented to the Board last November, and we have found him very sympathetic to our ideas.

"Dr. Terry was invited to address the National Health Forum this spring, and he had this to say: 'The National Library of Medicine in fact has a sciencewide, nationwide, responsibility to work with all medical libraries in solving these problems. We expect to extend the Library's services next year. The long-awaited new building is nearing completion on a site adjacent to the National Institutes

of Health in Bethesda. If our plans are implemented, and I have every reason to believe they will be, the National Library of Medicine will play an increasingly important role in medical library research and training, translation of foreign literature, and other aspects of communication as it relates to the management and dissemination of recorded observations.³

"So Dr. Terry is not only aware of the needs, but is most sympathetic, and we are hopeful of having legislation advanced within the Public Health Service and put before the Congress in the next session.

"There have been some changes in our thinking that have taken place in the area of facilities -- that is, the need for library construction. You will recall at the time the Board last met in November we had some ideas that we would be supporting directly the construction of medical libraries on the campuses of universities, and so forth. One of the priority legislative measures which I mentioned earlier was aid to medical education, including construction of facilities, and this has been drafted with a great deal of attention and presented to the Congress. I have here H.R. 4999. It is the House bill identical with S. 1072, which includes aid to medical education facilities. In our talks with those responsible for drafting and developing this program it has been very clear that libraries are among those facilities which require assistance, and are covered.

"One item we did not touch on in our discussion last November was the fact that the Service already has, and has had for some years, an ongoing program which affects medical libraries, and that is, of course, the Hill-Burton Hospital Construction Program which since 1948 has provided library facilities in roughly 2,300 hospitals. These are so-called libraries; in some cases they are bookshelves in a conference room; in larger hospitals they are more formally constituted libraries.

"So we have, on the one hand, an ongoing Public Health Service program affecting the construction of medical libraries as a function of the Medical Care mission, the Hill-Burton Hospital Construction Program. On the other hand we have a possible program that is now in the Congress, for the support of construction of educational facilities which would include libraries. This is under the Service's education mission and the mission for continuation of the research facilities construction program.

"It seemed to us, as we saw these three ongoing programs which derive their strength from the three basic missions of the Service -- research, education, and care -- that it would not be practical to expect an independent library facilities program; that it would be libraries in relation to education, or libraries in relation to research or in relation to medical care. Hence we have changed our thinking since last November to one where our role at the National Library of Medicine would be to interpret the country's needs to the ongoing programs within the Public Health Service and those

new programs to be established, and to offer our technical advisory services, help to establish whatever kind of review mechanisms the Service might require to judge the individual applications that are submitted to it, and so forth, rather than to have an independent construction support program of our own. This is reflected in the budget submission for Fiscal Year 1963.

"There are several other activities or actions that have taken place. For the last six months the National Institutes of Health and the National Library of Medicine have been negotiating for the transfer of the ongoing Russian Scientific Translation Program, which has been in the Division of General Medical Sciences, NIH. This move has been approved by the Surgeon General; we are in the process of working out the last little details regarding transfer of personnel, and we expect this transfer to happen momentarily.

"As a function of the transfer of the Russian Scientific Translation Program there will be a remerging with the foreign currency translation program -- the so-called PL 480 program. You saw some of the results of this program here this morning. The foreign currency program is being submitted under a new authority, Public Law 86-610, the so-called International Medical Research Act, and this gives us the opportunity of doing things other than a straight translation of materials. For example, in our Fiscal Year 1963 proposals we are talking about such things as supporting the preparation of critical review papers in Poland or in Israel, to extend our own somewhat limited national manpower resources in writing review papers."

DR. KURLANDER: "I would like to emphasize the importance of what is happening with reference to the Library's influence being brought to bear now through three very large appropriations which control an awful lot of scientific construction in this country. The Library will be able to do this without the pain and the headache of sweating through tremendous appropriations for itself which could well becloud its basic functions; without the pain and the agony of individual project review on construction, which can really be time-consuming and not too productive as far as the basic missions of the Library are concerned. I think we are beginning to see more and more the benefits that the Library accrues to itself and the influence it can bring to bear on the health of the nation as a result of its close affiliation with the Public Health Service."

DR. DANIELS: "Is there any provision in aid to education for improvement of existing libraries in medical schools?"

DR. KURLANDER: "There is a provision for the renovation and improvement of facilities which would lead to the expansion of numbers of students. We can interpret that, and we do interpret that, as

expanded student body, expanded curriculum. Expansion of library can be just as important as expansion of laboratories or classrooms."

DIRECTOR: "I understand that in the new bill the health research facilities is combined with the aid to medical education into a single bill. Under the health research facilities portion of it you would again find opportunities for helping existing medical libraries as far as construction is concerned."

The CHAIRMAN then directed the attention of the Board to a consideration of the Library's budget proposal for Fiscal Year 1963.

DIRECTOR: "You have in front of you a sheet which shows comparative figures for three years: for the fiscal year 1961 in which we are now operating, for fiscal year 1962 which begins in July, and the following year, Fiscal Year 1963. See Appendix

"The budget which we are currently presenting to the Congress is, of course, the 1962 budget which this group first discussed at its meeting a year ago. We had the House Appropriations Committee hearings two weeks ago today, and within the next two weeks we expect to be heard by the Senate Appropriations Committee.

"For the operational budget of the Library for 1963 we are asking for \$2,906,000 and 14 additional positions, which is an increase of \$840,000 over our basic operation at the present time. In 1963 we will have to make our first provision for the Russian Scientific Translation Program in the Library's budget, and we will have a B budget for our proposed extramural programs, for which we anticipate that appropriations will be needed in the amount of \$825,000. Adding them all together we have a figure of \$4,171,000.

"This sheet see Appendix will explain the increase of \$840,000 in the direct operating budget of the Library. The big item, as you see, which accounts for most of the increase requested, is \$720,000 for the support of the MEDLARS Project in its final year.

"There are 14 additional positions requested, and that seems like a lot. It will bring the staff to 247 people. I might say that when I arrived on the scene at the Library here there were 242 people on the staff. There have been enormous increases in the size of the programs we have been prosecuting in the last ten years, and we have done this with a much diminished staff. The diminished staff and the increased programs cannot proceed concurrently much longer. We must have more people on hand to get all the things done that we are trying to do. One position is for the Index Medicus, and five are positions which involve top staff in the Library. Four positions are in the administrative services."

DR. DANIELS: "In requests for the new positions have you taken into consideration how much more use the NIH and Navy personnel will make of this Library when it is contiguous?"

DIRECTOR: "We have tried to take that into consideration. There are two positions in the 1962 budget which are directly related to what we think will be an increase in demands on us consequent to the move. Whether this will be enough, time will tell."

There was some discussion, in the course of which Dr. HINE and Dr. MIDDLETON expressed their views that the budget as a whole was sound. Dr. WELLS moved approval, and the motion was carried.

The CHAIRMAN indicated that the Board would proceed to the election of a new Chairman for the period August 1961 to August 1962. CHAIRMAN: "Before we do that, I would simply like to state my extreme pleasure and happiness at having been thrust into this distinguished position. I have enjoyed the association with members of the Board enormously, and am grateful for having had the opportunity to serve."

Mr. KEYS proposed the name of Dr. DANIELS. Dr. MIDDLETON seconded. Dr. WELLS moved that nominations be closed, and Dr. DANIELS was elected by acclamation.

The CHAIRMAN then added: "There is a sort of poetic justice here. Worth Daniels had a great deal to do with the establishment of the National Library of Medicine, and it seems to me that this is a very eminently justified honor and tribute to one who has labored hard and long in the vineyard."

DR. DANIELS: "I appreciate your letting me sit in this chair for a second time. Possibly there is some value right now, when we are making plans for dedication of the new building, in having the Chairman located close at hand. I will do all I can to help."

There was then some further discussion of preparations for the dedication. It was agreed that a Board of Regents "alumni" dinner meeting, to include some members of the old Advisory Group, Friends of the AFML, Honorary Consultants to the AML, and key members of the staff, would be held on the evening of dedication day; no speeches are to be planned for this dinner. There was a brief review of Mr. Jennewein's sketches for the portraits in the lobby of the new building. Mr. Grim, the Library's Executive Officer, came in with pictures of the pouring of concrete for the high roof, which had begun a few hours earlier.

At 12:30 p.m. the CHAIRMAN announced that the Board would stand adjourned until December 14.

Respectfully submitted,



FRANK B. ROGERS, M. D.
Secretary to the Board of Regents
National Library of Medicine

Attachment -
Appendix

April 7, 1961

NATIONAL LIBRARY OF MEDICINE

Summary of Appropriations and Budget Estimates		1961		1962		1963		Increase or Decrease 1963 over 1962
Pos.	Amount	Pos.	Amount	Pos.	Amount	Pos.	Amount	
Operations, National Library of Medicine	224 \$1,738,000	233	\$2,066,000	247	\$2,906,000	14		\$840,000
Scientific Translations	3 425,000 1/	3	425,000 1/	5	440,000	2		15,000
Proposed Extramural Programs	- ---	-	---	6	825,000	6		825,000
Totals	227 \$2,163,000	236	\$2,491,000	258	\$4,171,000	22		\$1,680,000
Scientific Activities Overseas	- \$ 85,000 2/	-	\$ 667,000	-	\$ 489,000	-		\$ 178,000

1/ Appropriated to NIH in 1961 and 1962; shown for comparative purposes.

2/ Allocated from National Science Foundation in 1961; shown for comparative purposes.

CONFIDENTIAL until released to Congress
NATIONAL LIBRARY OF MEDICINE

Explanation of Changes, 1963 over 1962

Library Operations:

1. Mandatory changes:

Nonrecurring costs:

- a. Occupying new building - \$ 10,000
- b. International Catalog Code Revision Meeting - 1,000
- c. Equipment for new positions in 1962 - 6,000

Total nonrecurring costs - \$ 17,000

Annualization of 9 new positions authorized in 1962 11,000

Net change, mandatory - \$ 6,000

2. Medical Literature Analysis and Retrieval System (MEDLARS), 2 positions \$720,000

3. Increased coverage of the Index Medicus, 1 position 8,000

4. Improving Program Management, 5 positions 54,000

5. Improving Administrative Services, 4 positions 23,000

6. Increase in Services in New Building, 2 positions 25,000

7. Change in Lapse, 2 manyears (no positions) 11,000

8. Other changes (no positions) 5,000

Second International Congress \$2,500

Station Wagon 2,500

Net change, Library Operations (14 positions) \$840,000

BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

A G E N D A

Meeting of December 14, 1961
Bethesda, Maryland
9:30 a.m.

1. Introduction of new members
 2. Order of activities, December 14-15
 3. Building status and moving plans
 4. Selection of date of next meeting
[Possibilities, in order of preference:
Monday, April 9
Friday, April 13
Friday, April 6
Monday, April 2
Friday, March 30
NB: Easter falls on April 22]
 5. Second International Congress on Medical Librarianship
 6. Disposition of NLM collection of medical motion pictures
 7. Report of the Director
 - a. Organization and personnel
 - b. MEDLARS
 - c. Extramural program
 - d. Publications
 - e. Budget
 8. Tour of new building
- ADJOURNMENT AT ABOUT 12:30 p.m.
9. Lunch in Board Room [Dutch treat - \$2]

THE BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE FIRST MEETING, FY 1962

Bethesda, Maryland, December 14, 1961

Members absent: Heaton, Middleton

Guest present: Dr. Joseph H. Roe, Jr., NLM

The meeting was called to order by the Chairman in the Board Room of the new National Library of Medicine Building at 9:40 a.m. Dr. Daniels introduced three new members of the Board: Dr. Norman Q. Brill of Los Angeles, Dr. Saul Jarcho of New York, and Dr. Harve J. Carlson, Assistant Director for Biological and Medical Sciences, National Science Foundation.

Dr. Rogers mentioned the recent appointment of Mrs. Mildred C. Langner to be Chief of the Reference Services Division and of Dr. John B. Blake to be Chief of the History of Medicine Division. He introduced Dr. Joseph H. Roe, Jr., newly appointed Special Assistant to the Director, who is spending the current academic year at UCLA taking a master's degree in librarianship.

There was a discussion of the order of business for the day, platform seating arrangements for the dedication ceremony, the dinner at the Sheraton-Park, and the symposium to follow on the next day. It was reported that the building is expected to be completed by March 1, that moving would occur over the period March 1 through May 8, with the main push to come over the weekend of April 13-16. The Library will probably close in the old location on April 13, and open in the new on April 16. The Library expects to be in business throughout, except for the 48-hour period on Saturday and Sunday, April 14-15.

The date of April 13 was set for the next meeting of the Board of Regents. The Director reported that moving pictures would be taken on this occasion; some of the footage will eventually be incorporated into a film on the Library, which should be ready for release by the summer of 1963.

Dr. Daniels said that it has been suggested that a stamp in honor of John Shaw Billings be issued in June 1963 at the time of convening the Second International Congress on Medical Librarianship in Washington. That year will be the fiftieth anniversary of Billings' death, and the 125th anniversary of his birth. Several institutions

and societies, including the Philosophical Society of Washington, the Johns Hopkins University, the Carnegie Institution, the American Public Health Association, the American Library Association, and the Medical Library Association, have indicated their willingness to support such a move. The Board received this proposal enthusiastically, and asked the Chairman to send a letter to the Postmaster General requesting that the Billings stamp be issued. Members of the Board suggested the names of several additional societies and individuals who might be asked to lend their support.

TRANSFER OF MOTION PICTURE COLLECTION

DR. ROGERS: In the paper before you I have tried to present as briefly as possible the history of our interest in medical motion pictures and the reasons for our wish to transfer this activity at this time.

In 1954 we set about to establish a medical motion picture archive. In doing so, we stated our intention of keeping out of the fields of production, evaluation, and distribution of films. We collected the films on the basis of donations. We wrote to many producers and distributors of films and received from a number of them substantial donations to the collection. These films necessarily were mainly of historical interest only. They were films which had passed the day of usefulness as teaching instruments. They were films which were outmoded as far as practice and techniques were concerned. But it was our feeling that these should be preserved, that they established the nature of medical practice at a given time as well as, or better than, a single book might do.

Our collection now numbers over 600 reels of motion picture film, which is fairly respectable. It is not anywhere near what exists. There are at least four or five times this amount of material which should be in the collection.

The collection of this material offers all sorts of difficulties. The film, when it comes to us, is in bad shape, usually. Often the older films are on nitrate base, which means they have to be stored separately under special conditions, because of the explosive potentialities. We have been fortunate to be able to store our films out in the Library of Congress vault in Suitland. They are now getting hard-pressed for space themselves and we can't continue to use that arrangement much longer.

There is the question of tremendous expense in transferring these nitrate films to an acetate base. There is a question of the varying film widths that are stored. Most of these films are 16 mm.; some of them are 35 mm., and for a really good archive it might be desirable to have the entire collection on 16 mm. film.

All of these problems create special difficulties in the handling of film. What we didn't realize at the time was the machinery and equipment costs that are involved in maintaining a film archive adequately. After every use the film should be cleaned; it should be examined; it should be respliced. It has to be rewound. If it is in too bad condition, a new master should be made.

As the years went by we became involved in publishing the Film Reference Guide for Medicine and Allied Sciences, which we have continued successfully for the last three years. Here again it seemed to us that a film catalog of this sort was much more efficiently attached to a distribution point than it was to an archive. The cataloging of films is an instrument of film distribution rather than an instrument of an archival nature.

With this thought in mind, we have asked the Interdepartmental Committee on Medical Training Aids, for which we publish the Guide, to find another agency for publication, and they have done so. The Audio-visual Section of the Communicable Disease Center of the Public Health Service in Atlanta will publish this Guide henceforth. I went down to visit the CDC last August. They have an enormous film production operation. They are getting under way a very large film exchange program, and film exchanges mean largely exchanges with institutions abroad. They are in a much better position than are we to conduct this exchange.

All these reasons and a few more that I have put down in this paper have driven me and my staff to the conclusion that the wisest move we could make would be to transfer this archival medical motion picture collection to an agency which is already heavily engaged in all other aspects of medical film processing, which is ready to take on this job, which has the staff and the machinery capable of handling it. Everybody in the Public Health Service has now agreed that it would be a good idea to transfer this function from the Library to the CDC.

Dr. Van Dellen moved, with Dr. Brill seconding, that the Library's motion picture archive be transferred. After discussion, in which it was ascertained that it would be the intent of CDC to handle older films as well as current films, the motion was passed.

MEDLARS PROGRESS

DR. ROGERS: The MEDLARS program has come along well since our last meeting. At our last meeting all I could report was that the invitations to submit proposals had been sent to 72 firms. From these 72 firms we received 25 detailed proposals to conduct the MEDLARS research and development. They were extremely interesting. It was a very large amount of paper that we had to wade through. We had a deadline of June 21st for the awarding of the contract. We had some money, \$100,000, which had been made available to us for the last fiscal year to support the first phase of the MEDLARS program, but we ran into some administrative difficulties and were not able to award the contract until the 14th of August, which meant that we lost the \$100,000 that we had waiting for us to finance the first phase of the project.

The award was made to the Information Systems Division of the General Electric Company. The price of the first phase, which is to occupy six months' time, was \$85,000. That \$85,000 has to come out of what we have available this year, which was meant to cover the second phase of the program.

We have been meeting regularly with the General Electric people since the 14th of August. I am convinced that it is a very good solid team of individuals that GE has rounded up to do this job.

In our invitation to bid we had, of course, written specifications. We have been refining those specifications in the early part of this contract period, and I think that we have a set of specifications which is really pretty sound now. We have had second thoughts and additional ideas since we originally issued the invitation last January. The GE people have had additional ideas, and it is absolutely necessary, before we commit very large sums of money to this operation, that we know exactly what it is we are trying to do and what the limits of it are. It is a very good document.

We have had separate presentations so far on the input system to the computer and on the characteristics of the computer main frame. We started out with a list of some 30 different main frames and that list has now been narrowed down to seven possible main frames. We have had a presentation on the output system from the computer and, as I indicated in our early discussions of MEDLARS, this promises to be the real crux of the matter.

We have investigated three classes of output equipment: the use of a mechanical printer of the type which computers ordinarily use; the use of cathode ray tube devices, where the material would be composed on the face of a cathode ray tube and then taken off photographically; and the use of mechanical photocomposition devices, where the material is projected optically, mechanically, onto film and composed directly in this way.

The mechanical printers were attractive in many ways, if we could modify them. Mechanical printers that exist have only one type face, all caps, no proportional spacing, and so forth. It is possible to have specially modified for our purpose a mechanical printer which would have two type faces and upper and lower case, and we pursued this for some time. We are just about to abandon this possibility, however, because of the large increase in price of printing that would result if we used this system. We figured that the amount of space required using a modified mechanical printer would be about 110% of the space that we now use for the same material. If this is true, and I believe it is, it is easy to see that within two years' time the added printing costs would have eaten up every advance that we had made and from then on we would just be going deeper and deeper into the hole. So it begins to look as if the modified mechanical printer is out of the picture.

We are left with the cathode ray tube and photocomposition machines, and this is probably where we are going to place our main bet -- on one of these.

On January 10th the General Electric Company is committed to make the final formal presentation of the whole recommended system to us. We will have not only the Library staff there but people from the Public Health Service, from the Department, and from other government agencies which have special interests in similar developments.

If we buy those recommendations, our attempt will be to get Phase Two of the MEDLARS Project going by the first of February, if it is possible to get all the administrative and financial details worked out.

I have a strong hunch that this thing is going to go. I can't be sure, but I feel in my bones that this is going to be a winner.

DR. DANIELS: This money is coming from the National Heart Institute?

DR. TERRY: That is correct.

DR. ROGERS: We have \$500,000 from the National Heart Institute available to us in Fiscal Year 1962. From indications which General Electric gave us at the time the original negotiations were carried on, the cost of Phase Two will be somewhat less than \$500,000. Of course, \$85,000 of that \$500,000 is already gone for Phase One, which we had expected to get out of the previous year's funds.

If we go into the photocomposition development -- this has to be started soon, if it is going to be available in time for us -- this is going to cost an extra amount of money. We are going to have some problems in squeezing everything we need out of the \$500,000 that is available to us in 1962.

EXTRAMURAL PROGRAM

MR. ADAMS: A year ago I reported on the outlines of a proposed Extramural Program through which the Library would support by grants and contracts the strengthening and improvement of medical communication. I discussed last year the areas of support of secondary publication, training and education activities in an effort to increase the total national manpower available in the field, and support of research and development of non-conventional information systems.

Progress toward authorizing legislation for the Extramural Program has been slow, but there is nonetheless progress to report. We submitted our principal legislative specifications to the Office of the Secretary of the Department. My understanding is that the Department has reviewed them favorably and that at the moment they have been forwarded to the Bureau of the Budget for its review. If all goes well, we anticipate that the Administration will submit them in some form to the Congress in the coming session.

One function of the program has become an actuality. On July 1st the Surgeon General approved the transfer of the Russian Scientific Translation Program from the Division of General Medical Services, National Institutes of Health, to the Library, and we are now operating it jointly with the Overseas (or Public Law 480) Translation Program, which is being conducted in cooperation with the National Science Foundation.

In connection with the Overseas Translation Program, I visited Poland in October with a Public Health Service Mission which was accredited to the Polish Ministry of Health. We found the Poles

most cooperative in their desire to improve international communication in medicine. The Poles agreed to publish five of their medical journals in the English language. The first journal to be done by the Poles in English -- that is, to be converted from the Polish language and published in English -- is Acta Biochimica Polonica. This is just out. It was requested by the Library and we have something of a prototype here which we can hopefully extend to other fields. There will be five journals. In addition to this we are talking about the publication of a Polish medical monthly in English, similar to the present German medical monthly that is a boiled-down segment of selected papers from the German journals. This would involve the full cooperation of the Polish-American Medical Society in Chicago as an editorial board or a cooperating editorial board. In short, we hope to establish a pattern of professional cooperation between the Ministry of Health and American editors and physicians in the United States to work jointly on a product which will represent the best work currently being produced in Poland.

We also discussed with the Ministry of Health the possibility of finding senior Polish scientists who would be fully qualified to write critical review papers in English for publication in American or international journals on specific research topics. This will be truly international; it will not be limited to Polish work. We discussed the establishment of a medical bibliographic center at the Principal Library in Warsaw in exploring such ideas as involving them in doing work on experimental forms of indexes, such as the citation index that some of you may have heard us discuss.

We are thinking very seriously about changing the character of the dollar-supported Russian Scientific Translation Program. When it was planned in 1956, the Program followed an established pattern of, among other things, cover-to-cover translation of Soviet medical journals. There have been nine such journals translated cover to cover to date, and there are copies of these journals here for your perusal. Some five years of experience has raised some basic problems about the suitability of these mechanisms, including the cover-to-cover translations. For one thing, the number of journals which we can afford represents but a small fraction of the totality of Soviet medical research publication. For another thing, we have had to rely on the Soviet editors' judgment of what is significant to Soviet research personnel. Much of this may well be repetitive or trivial to an American scientist. And for a third thing, this may have given our Soviet colleagues a somewhat false impression about the regard which the West has for the excellence of Soviet medicine.

One of the decisions we made in accepting the transfer from the National Institutes of Health was that we would do a field evaluation of the Program. It was founded on certain basic assumptions and we felt it about time to do a responsible study of how well the various gadgets and gimmicks we had used -- abstracts, cover-to-cover translations, and so forth -- had worked. Consequently, our first work in taking over the Translation Program was to contract with the Institute for the Advancement of Medical Communication to do the evaluation.

The translated papers for the nine journals are being submitted to the review systems of nine American journals for grading. The footnotes to papers in the field are being scanned to see whether or not American scientists have, in fact, made use of the translated materials. Finally, the Institute is scheduling interviews with a sampling of some 500 medical scientists and librarians. The results of this study will be given to us by January 15th, we hope. We have been thinking hard about alternative possibilities in order to do a better and a more responsible job. We need to guarantee a wider review and coverage of Soviet literature than we now provide in the narrow confines of these cover-to-cover translated journals, which are limited in field and accept only what the Russian editors want us to accept. And it seems to me -- and this is very important -- that we need to exercise a higher degree of pretty highly skilled editorial selectivity in what we translate. For the translated journals now in being, we are paying to send them to some 500 medical libraries, and the publishers are taking on an additional 200 or so subscribers, for a total distribution, therefore, of some 700 copies which, considering the funds we put into this -- roughly \$25,000 a journal -- is modest.

We have had informal discussions with the Federation of American Societies for Experimental Biology and have a preliminary proposal from them as follows: The Federation would provide for the screening of all Soviet contributions regardless of the form of publication. The selection of papers to be translated would be made by expert editorial advisers drawn from the membership of the Societies which comprise the Federation. The translated papers themselves would be submitted to rigorous review by the referee system of the American Federation Proceedings, and the surviving papers would be published in a supplement to Federation Proceedings which reaches not only all these 500 libraries but in addition some 10,000 individual scientists, the individual members of the societies that make up the Federation.

This plan would have to be supplemented by publication provision for some sort of coverage of large areas of clinical medicine that the Federation does not touch. On the other hand, I think there are distinct advantages in placing responsibility for selection of papers, and for the critical editorial review, in the hands of responsible scientists.

We do not yet have a survey report and we may be completely surprised at its recommendations. They may suggest, for example, that the most important journal in the world is the Soviet journal of biophysics, and that we must keep it up; but on the other hand, if the report does suggest basic changes, this is the direction in which we will probably move.

The translation activity has been the one operational feature of the Extramural Program to date. Absence of legislative authority and appropriations have, of course, prevented the Library from assuming the central support role for the improvement of medical communication that the draft program presented last year would suggest.

In the meantime events have been occurring on all sides which suggest an increasing urgency in getting solutions to the many-sided problem complex of improved communications. The House Appropriations Committee, for example, touched on the problem last spring -- the problem of communication of research knowledge to medical practitioners, which was a subject which interested the Committee particularly. The Committee's report asks for NIH action as follows, and I am quoting the action sentence of that report: "This Committee will expect that this whole field be thoroughly explored and that the NIH will be prepared to present a full report on potentials and a plan for development of a program to reach these potentials at the hearings next year."

The National Institutes of Health is in process now of preparing its reply to the House Appropriations Committee, and we in our Extramural Program, of course, have been maintaining very close liaison with NIH on this as well as on other matters. For the second time in the last four years -- just this last month -- the National Advisory Health Council took up the question of the strengthening of medical libraries and medical communication generally. At Dr. Terry's request the Director discussed the Library's plans with special reference to the Extramural Program; and the Council, expressing a considerable urgency, passed a Resolution addressed to the Surgeon General. The Council further recommended in this Resolution that a copy be forwarded to the National Library of Medicine Board of Regents, and with the concurrence of Dr. Terry I would like to distribute copies of that Resolution now.

I will recapitulate very briefly the four recommendations:

- First: That a program of assistance be developed at a satisfactory level to enable the construction, extension, and remodeling of medical library facilities throughout the country.
- Second: That a program of education and training be developed for the purpose of training medical librarians and documentalists at a level commensurate with national manpower needs in this critical area.
- Third: That a support program be developed for the purpose of strengthening such components of the conventional communication system as indexes, abstract services, and review publications.
- Fourth: That a program of research and development in information retrieval systems be established. This program should be aimed at tying together all the medical libraries in the country in a coordinated communication system, should be compatible with comparable or parallel systems which may be developed to handle literature in the physical and social sciences, and should tie in with the international system of medical libraries.

This fourth one is a mouthful that speaks of interdisciplinary and international coordination in the future.

I will reserve my comment on this, Mr. Chairman. The Resolution is passed on at the request of the National Advisory Health Council for the Board of Regents' attention. You have it before you.

DR. ROGERS: I would like to chime in here with the thought that Points 2, 3, and 4 are, in fact, a recapitulation of what we have been saying for a year that we propose to do in our Extramural Program, and that Point 1 is the point that we have discussed at our last two meetings. Everybody agrees presumably on the desirability of providing support for medical library construction. It has been our position that this is better taken care of within the framework of the existing programs rather than creating a special program for it.

MR. ADAMS: This is just to finish up some questions of general interest and urgency behind this business. There has been a whole series of meetings and conferences during this last year devoted to the subject of improved medical and scientific communications. For example, the National Health Forum meeting in New York on March 14-16 was devoted to the subject "Better Communications for Better Health." The Library participated in the planning of the Forum and was represented on the panel in discussing communication among health scientists. An issue of Conference was devoted in part to the discussions at the Forum. The Division of Medical Sciences, National Research Council, called together a working group last June for the purpose of coordinating biomedical informational activities, with particular reference to those of the biological sciences communications project of the American Institute of Biological Sciences and the Institute for the Advancement of Medical Communication. NRC followed this working group meeting with a special meeting of the Division on November 28 at which ~~time~~ the activities and plans of the various agencies, including the National Library of Medicine, were discussed. The Division now has under advisement the question as to whether or not it should assume a more active role.

The American Association for the Advancement of Science (AAAS) has established a new division on communication and information which is going to meet for the first time in Denver later this month and will concern itself programmatically with problems of interdisciplinary communications in the sciences.

The Extramural Program has also cooperated with special groups such as the Conference of Biological Editors and the National Federation of Science Abstracting and Indexing Services in their programming for specialized aspects of the communications problem.

All of this adds up, I think, to an increasing social and scientific concern about the need to strengthen and improve the communication of the results of research.

By virtue of its ability to acquire, organize, store, and retrieve the world's greatest collection of scientific medical publications the Library feels that it has not only the capability but also the responsibility for exercising leadership in this field, and it looks forward eagerly to the opportunity of doing so.

DR. HINE: I would like to concur in that conclusion. I wonder if there has been thought given to expanding the scope of communication to include the paramedical sciences -- dentistry and pharmacy, particularly.

MR. ADAMS: The term "medical sciences" is used in its broadest context and it includes those.

DR. HINE: The first objective mentions medical library facilities and there will be great need to increase the medical library facilities in these specialties.

ADMIRAL KENNEY: Does Dr. Terry have a comment on this? I know this will reflect on your ability to present the program and fund it, and so forth; isn't that true?

DR. TERRY: That is true. I would be interested in hearing from some of the members of the Board as to their attitudes and comments on this.

ADMIRAL KENNEY: I would like to find out fiscally how much it would add, and how much to personnel levels at the Library.

At this point the Director reviewed and summarized the budget situation at the Library. He cautioned that FY 1963 figures are confidential until released by the President.

MR. KEYS: Would you elaborate on the three particular budget items mentioned?

MR. ADAMS: In general, the publication problem divides roughly into two parts: first of all, the primary publication of the results of research in journal form or in various other forms of publication; and secondary, publication, which involves the organization of what has already been published in journals, putting it together in patterns for use, whether this is done by means of indexing, abstracting, compendia, and so forth.

As to the first problem, a good deal has been made of the difficulties in which scientific journals now find themselves, in alleged backlogs of papers, high cost of printing and publishing. An interesting study in this problem done by the Institute for the Advancement of Medical Communication shows that the backlogs, where they exist, are more likely due to the laziness of the individual scientist in writing up his paper than they are to a backlog of unpublished finished papers.

Then there is at the present time a considerable movement to support the payment of page costs for research publications in biology and medicine, as they have been for years supported in hard science areas such as physics. Out of the funds for research itself, NIH has a permissive policy on this which permits any grantee to use grant funds when a journal charges page costs. The Conference of Biological Editors has passed a resolution published in Science calling on all journal editors to exact page costs as a direct way of supporting publication. It has seemed to us that the needs of support of primary publications will be met by this general policy.

I understand that the President's Scientific Advisory Committee is behind this. It leaves us free to devote more attention to the support of secondary publication; that is, abstracting services, indexing services, review paper writing, the very large apparatus to digest and synthesize findings, and so on. We plan a program of grant support of such activities which would start relatively modestly at a \$250,000 level in 1963 and going to \$350,000 level in five years' time.

One of the things we would hope to do is to accomplish a little better coordination in the field. There is a tremendous amount of economic waste now in this business. We hope to be able to use these grants in such a persuasive form that there will be better cooperation among the large abstracting services, and we hope to keep in mind at all times the relationship to the MEDLARS program and its potential as a center of information for secondary publication.

DR. CARLSON: One of the critical needs throughout the country is manpower. I would like to ask the question as to how you are going to implement the training of librarians, especially in the medical programs.

MR. ADAMS: By a system of scholarship grants to be administered by the schools, by the development of the schools themselves, by on-the-job and in-service improvement of the manpower already in existence. And finally, this is to recruit and train new needed personnel; that is, additions to manpower.

DR. JARCHO: Can anyone offer an estimate as to the size of the deficit? The country is short how many medical librarians?

MR. ADAMS: I believe we estimated there was an annual requirement of 100 newly recruited librarians. The library schools are now graduating 35. This leaves a net annual deficit of some 65. These seem to me to be small figures. A lot depends on the definition or what you mean by medical library personnel. You could extend this much more widely if you were concerned with the training of special librarians for the pharmaceutical industry, for example.

DR. ROGERS: You have to add to that the existing deficit. You are talking about the annual deficit and there is an existing deficit as well.

DR. WELLS: Wasn't there an estimate made that there was something like ten percent deficit in terms of over-all need for general librarians? You have within the field of special, medical, or scientific librarianship probably a deficit of more than ten percent.

DR. ROGERS: It is pretty well documented that over ten percent of the total positions available in librarianship today are unfilled for lack of candidates. And I think that it is rather reasonable to make the assumption that in the field of medical librarianship it will be more than ten percent. In any technical field more than ten percent of the librarian positions are unfilled.

DR. JARCHO: Of course, additional to that is the fact that in many places the work is done by people who have little training or no training.

DR. ROGERS: In this field of training, or retraining and supplementing training, Scott mentioned summer institutes. There has been an application submitted to NIH for a pilot institute of this kind which, if approved, would go forward at the University of Illinois campus next summer,

MR. ADAMS: I understand that the National Advisory Health Council did approve that application from the Medical Library Association. This again is a prototype. This would be the type of thing we would support from the Extramural Program.

DR. DANIELS: Are we able at our salary scales to attract the kind of people who are needed? You are going to have more and more need for better and better trained people with the other functions that you will assume.

DR. ROGERS: That is hard to say.

DR. DANIELS: On this first aspect of construction, I assume most people feel that the National Library of Medicine would be unwise to get into this directly.

DR. TERRY: Of course this is a problem, as Scott mentioned, that we have been nibbling away at in one way or another through Hill-Burton or through research facilities construction or some of our other programs. I don't think there is any question but that there is a need. Exactly where and how it should be administered is another thing. I think there should be money available on a matching basis for this purpose. The decision, if such funds were made available, as to exactly how and where they would be used is not absolutely final, although it is likely that the National Library of Medicine staff would not be the implementing agency, though, obviously, we would depend on this Board of Regents for advice and consultation.

DR. BRILL: What about the program that the Medical Library Association has had for bringing foreign librarians here on fellowships? Were you referring to that a moment ago?

DR. ROGERS: No; this program has been supported by the Rockefeller Foundation up to the present time. It is going to end next year. We have not, in our program, considered the possibility of bringing people to this country.

MR. ADAMS: We are more concerned with the problem of U. S. manpower needs in the field. It may well be that the AID agency will develop programs for training or give special technical assistance in overseas librarianship, and in that case we would coordinate with them.

PUBLICATIONS

Publications of the Library which had appeared since the last meeting were exhibited. These included the final two volumes - Volumes 60 and 61 -- of the Index-Catalogue; the National Library of Medicine Catalog, 1960; Film Reference Guide ...; Russian Surgical Staplers, and the special NLM anniversary issue (July 1961) of the Bulletin of the Medical Library Association.

Particular attention was invited to Early American Medical Imprints, 1668-1820, by Robert B. Austin.

The Chairman announced that Dr. D. Rees Jensen of New York City had given to the Library a copy of the first edition, 1775, of John Jones' Plain Concise Practical Remarks on Wounds and Fractures. This is one of seven recorded copies of this work.

APPOINTMENT PROCEDURES

The Chairman spoke briefly but feelingly about methods of notification to nominees to the Board of Regents. At the very least, as a matter of common courtesy, nominees should be asked whether they wish to serve before being notified of appointment.

The meeting was adjourned at 12:10 p.m.

The members of the Board then toured through the building, had lunch in the Board Room, and participated in the Dedication Ceremony in the afternoon.

Respectfully submitted,

FRANK B. ROGERS, M.D.
Secretary to the Board

Attachment

Resolution of the
National Advisory Health Council, November 22, 1961

RESOLUTION
NATIONAL ADVISORY HEALTH COUNCIL
November 22, 1961

Be it Resolved by the National Advisory Health Council:

That the importance of medical libraries to the conduct of research, to the teaching of the medical arts and sciences, and to the practice of medicine has been underlined by medical workers for generations. The published record of medicine is both the end and the beginning of research; it is an essential instrument for the training of new physicians; and it is a prime means for the continuing education of health practitioners.

Yet, today, the medical library network which has been designed to make this published record available is in dire trouble. During a period of intensive development of research institutions, medical schools, and other medical facilities, their essential library support has been seriously neglected. In recent years the need for adequate library working and storage space, for more trained library personnel, and for new methods of handling and disseminating the growing scientific medical literature has become acute.

Medical libraries need a massive overhauling to give them the capability of meeting the requirements placed on them by our national programs of research and education. The needs are so extensive and so urgent that they can be met only by assistance from the Federal Government.

With these considerations in mind and looking towards the planned expansion of the National Library of Medicine in Fiscal Year 1963, the National Advisory Health Council wishes to make the following recommendations to the Surgeon General:

- First: That a program of assistance be developed at a satisfactory level to enable the construction, extension, and remodeling of medical library facilities throughout the country.
- Second: That a program of education and training be developed for the purpose of training medical librarians and documentalists at a level commensurate with national manpower needs in this critical area.
- Third: That a support program be developed for the purpose of strengthening such components of the conventional communication system as indexes, abstract services, and review publications.
- Fourth: That a program of research and development in information retrieval systems be established. This program should be aimed at tying together all the medical libraries in the country in a coordinated communication system, should be compatible with comparable or parallel systems which may be developed to handle literature in the physical and social sciences, and should tie in with the international system of medical libraries.

In taking this action the National Advisory Health Council invites the Surgeon General's attention to the urgency of the problems, and the need for prompt imaginative and substantial corrective action. The Council further suggests that a copy of this resolution be forwarded to the Board of Regents, National Library of Medicine, for its consideration.

NATIONAL LIBRARY OF MEDICINE
Washington 25, D.C.

November 30, 1961

MEMORANDUM FOR: Members of the NLM Board of Regents

FROM: Director, NLM *JBR*

SUBJECT: Disposition of the NLM Archival Collection
of Medical Motion Pictures

It is proposed to transfer the NLM Archival Collection of Medical Motion Pictures to the Audio-Visual Section of the PHS Communicable Disease Center, Atlanta, Georgia. NLM desires to obtain the assent of the Board of Regents to this transfer. The following background information is offered on this question, which appears as item 6 on the agenda for the meeting of the Board of Regents to be held on December 14, 1961.

1. As early as 1949 the late Professor Tom Jones, on behalf of the Audio-Visual Institute of the Association of American Medical Colleges, approached NLM with questions and proposals regarding NLM's role in the field of medical motion pictures. At the time, these discussions led to no immediate action, as the NLM was then pre-occupied with large and immediate political, organizational, and funding problems. In succeeding years NLM studied the question, examined existing patterns of operation in this area, assessed the needs, and in 1954 finally inaugurated a Medical Motion Picture Program within the Library.

2. The boundaries of this program were carefully circumscribed. NLM would attempt to create a central archival repository for medical motion pictures. The creation of such a repository was a clear and urgent need, to which no other organization was devoting attention. On the other hand, NLM waived interest in the fields of distribution of films, evaluation of films, film cataloging, film production, and related areas in which many other organizations were more competent, and already heavily engaged. NLM would concentrate on the job of preserving the record, of preventing the disappearance from the face of the earth of significant records which in their special way revealed the state of the art at a given time with a great immediacy of impact. NLM would not circulate these films, but it would make them available in the Library for screening by individual investigators, in much the same way that books are made available. Because of this emphasis, and because of the prior existence of many distribution agencies for current films, it can be seen that the predominant emphasis of the NLM collection was the historical.

3. A modest amount of manpower, as available, was assigned to the NLM project. Over a period of six years almost 600 films were collected. The amount is small, measured against what is known to exist, but it is substantial when measured against the results obtained by the only known film archive of similar purpose, that of the British Council on Scientific Films. The NLM collection grew by donation; the American Medical Association, various pharmaceutical companies, some government agencies, and some individuals contributed. Again, because of the nature of the operation, it must be borne in mind that the films, on arrival at NLM, were already obsolete, in their scientific dimension.

4. From time to time NLM found itself drawn, faute de mieux, into extending its film activities. NLM participated in several Russian-American exchanges of films, NLM's role being the purchaser of the majority of the American films exchanged, and the eventual recipient of the exchanged Russian films. Large files of data were built up for acquisition purposes, and inevitably these files came to be drawn on to answer reference requests. In 1958 the Interdepartmental Committee on Medical Training Aids (ICMTA), whose membership was made up of the medical film interests of the Army, Navy, Air Force, Veterans Administration, and Public Health Service, asked NLM to take over, redesign, and publish on behalf of ICMTA their Film Reference Guide, a selected annual listing of about 2,000 films. This NLM successfully accomplished, on a reimbursable basis.

5. As publication of the Guide continued in succeeding years, two things became more evident.

a. After the initial redesign had been accomplished, NLM was playing a minor editorial role in production of the Guide, with no control over its contents. It became a routine publication, which any member of ICMTA was capable of performing as well as NLM, and with more logic.

b. ICMTA became more and more concerned with the grave problems of medical film distribution, and the sometimes wasteful delays and inconveniences involved in the traditional dispersement of the film distribution function among many agencies, public and private. NLM production of the Guide suggested to ICMTA an NLM role in the distribution problem, and some overtures were made to NLM to move into this field.

6. To the NLM management it appeared unwise to move in this direction. The problem of film distribution is immense, in terms of number of transactions, in terms of dollar cost of individual items,

in terms of special facilities required, in terms of the inter-digitation of interests of commercial and public agencies. NLM is a newcomer on the film scene, with no experience to guide it. On the other hand, what NLM did realize, perhaps sooner than the ICMTA, was that the relationship of the Guide, or similar catalog of increased scope, had a much more fundamental and important bearing, and potential solvent role, in regard to problems of film distribution, as contrasted with problems of maintaining an archive.

7. For these reasons, following completion of the Guide for 1961, NLM suggested to ICMTA that the Guide henceforth should be produced by one of the ICMTA members. (This suggestion has been adopted, and CDC, Atlanta, will now take on this function.) At the same time NLM had to re-evaluate its position on maintaining a film archive. The result of that re-evaluation was a decision to give up this function.

8. The reasons for this decision are as follows:

a. The various film functions -- archive, distribution, cataloging, etc. -- are interlocking to such a degree that it is administratively impractical to place them in separate organizational elements.

b. The archive function is essentially a passive function. It is difficult to obtain support for this kind of function, by itself.

c. The technology of films and the machines required for processing are formidable. NLM had originally miscalculated on this score. Even for an archive there are required film cleaning equipment, expensive film-editors of the Moviola type, means for transferring films from nitrate to acetate base, means for transferring 35mm. film to 16mm., splicing and rewind equipment, and the like. These equipments are required in film distribution and production functions; it is more economical to use existing equipments for the archival maintenance function, rather than to purchase a new set of equipments especially for it.

d. There can be discerned a growing interest in the entire broad audio-visual field as it applies to medicine. This interest embraces exhibits, their warehousing, cataloging, and circulation; film strips as well as motion pictures, with various types of sound equipment; production of anatomical teaching models; and similar activities. NLM does not wish to be drawn into this field, willy-nilly; responsibility for the control of the published literature is a quite sufficient charge.

9. Accordingly, last August the Director of NLM spent two days at the new headquarters of the Communicable Disease Center in Atlanta. CDC has a very large Audio-Visual Section, and is heavily engaged in the production, distribution, and foreign exchange of medical motion pictures. The production facilities are enormous, with sound stages, intricate machines, and a large staff of writers, directors, cameramen, and technicians. The circulation traffic in films is heavy. The exchange activity has recently been bolstered with the appointment of an Advisory Committee (Dr. Michael E. DeBakey, Chairman). After discussion, the Chief of the Audio-Visual Section and the Director of NLM reached tentative agreement on the transfer of the NLM Motion Picture Archive to the CDC. Subsequently, the Director of the CDC carried this recommendation to the Bureau of State Services, PHS. The matter has now been cleared through the Office of the Surgeon General, PHS, and awaits only the approval of the NLM Board of Regents.

10. The Director recommends that the NLM Board of Regents approve the transfer of the NLM Motion Picture Archive and the motion picture archival function to the Communicable Disease Center. It will be helpful if this approval can be given now, because of the impending move to NLM's new quarters, and the saving which can therefore be made by moving the films once instead of twice. The following additional items are relevant:

a. The traditional picture collection (including still photographs), a part of the History of Medicine Division, is not affected by this transfer.

b. The word "films" in Section 372(a)(1) of the National Library of Medicine Act may be construed to mean "microfilms" as readily as "motion pictures."

c. Present arrangements whereby NLM stores nitrate film in the Library of Congress vaults in Suitland, Maryland, can no longer be continued, due to mounting pressures on available space.

d. Films located at CDC would be readily available for occasional NLM use (e.g., the historical film on Harvey's work).

e. The move of NLM to the new building, the advent of MEDLARS and the Extramural Program, and the desirability of clarifying and making firm the NLM organizational structure, not to mention the availability of a transfer point in CDC, argue the suitability of taking this step now.

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BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

A G E N D A

Meeting of April 13, 1962
Bethesda, Maryland
9:30 a.m.

1. Shooting scenes for NIM motion picture
2. Showing footage from dedication
3. MEDLARS status
4. Budget review, Fiscal Year 1964
5. Reports
 - a. The staffing situation
 - b. Publications program, EMP
 - c. New translation plan
6. Clearance for Dedication funds
7. Plans for Open House; future meetings at Library
8. Election of Chairman, 1962-63
9. Setting of date for next meeting
10. Tour of building

THE BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE SECOND MEETING, FY 1962

Bethesda, Maryland, April 13, 1962

Members absent: Heaton, Kenney, Mumford, Van Dellen

The CHAIRMAN called the meeting to order at 9:30 a.m.

Mr. Kimberly and a camera crew from the Communicable Disease Center were present to shoot scenes for a forthcoming moving picture on the National Library of Medicine. While the scenes were being filmed the Director discussed the progress being made in moving the NLM collections to the new building. Some film footage taken at the Dedication Ceremony was then screened, and the CHAIRMAN remarked that he had never seen a movie with a better cast of characters. (At this point, Dr. Terry was excused on urgent business.)

MEDLARS PROJECT

Dr. Rogers: On the 14th of August last year work on the MEDLARS contract began, the contractor being the General Electric Information Systems Section. On January 12 the MEDLARS GE team made an all-day oral presentation of their findings in the preliminary design phase to members of the Library staff and to interested persons in the Service, the Department, and other institutions of the Federal Government in Washington. The findings were incorporated in a report of Phase I, delivered to us on January 31. It was a good report, a full report, the result of honest work and analysis. The GE team came up with the recommendation of a configuration of equipment for MEDLARS, the center of which would be a Honeywell 800 computer with six tape drives. Also recommended was the development of a special output print device which would be either of the optical-mechanical type as characterized by Photon, or of the cathode ray tube type along the lines of the work done by a number of companies. The investigation during Phase I had shown that production of the output device could not proceed as an adaptation of some existing machine but would have to be developed. The Government had an option to pick up the Phase II part of the contract, which it did at the last minute, and GE went ahead with their work.

During the course of Phase I the procedure had enlarged considerably as the capacity of the machines became better understood by the Library staff. Several things that were not envisioned earlier turned up; for example, as it turns out, we will put both vernacular and English titles into the store and we will have the ability to express one or the other in various forms of print-out. We will have the ability not only to select items according to a specified constellation of headings, but also ask for print-out under all headings assigned. Various changes of this type constituted an enlargement of the project. The requirement of lead time in the development of the output printer threw this development into Phase II rather than Phase III, which would start in the fall.

The necessity of developing the printer from the ground up rather than modifying existing machines causes a large increase in the amount of funds required to finance Phase II. We were fortunate in being able to overcome the financial matter fairly expeditiously. The National Heart Council had contributed the original sum to get the project under way and they met early in March and approved the additional funds to get Phase II off the ground. It has again been a frustrating experience trying to get an actual revised contract for Phase II signed, sealed, and delivered. Last week a contract was negotiated, to which the Library, the Service, and GE agreed, at a figure of \$954,000. We are still worrying over the last stage, which is to persuade the Secretary to put his signature on the findings and determinations which will actually bring the contract into being, and I hope it will be accomplished next week. The contract was signed on June 25.

I am very pleased with the way the project is going. I think we have a good team working for us. I think some sound basic concepts have been employed, and I see no reason why we cannot expect success. The development of the output printer is touch and go, however, and a lot depends on this area. What we are asking for here is a device which will compose on film at the rate of 440 characters a second, choosing from 200 characters in several fonts, upper and lower case. We are told there are no inventions needed to build this, and that the engineering problem is straightforward.

One thing we are including in the contract is a special study of secondary objectives; this was in the original specifications, but we then thought of it as a rather long-range effort. It is evident that it is not as long-range as we thought; the pressure is on us from the medical schools. We had thought last summer in terms of remote input and output to the computer system; but as the study turned out, we are going into a tape configuration, which points more toward remote output by duplication of tapes, and distribution of these tapes to regional medical centers for search on a decentralized basis. We will do the central compilation of the store. This seems quite reasonable and possible to me, and study along these lines will proceed at the same time we are developing the rest of Phase II.

The contract runs through next April, and is overlapped by the final Phase III contract which begins in September, for actual implementation--bringing the machines in and making them work. This requires modification of the building site for the computer installation. The architects have been working on this; plans are now being drawn up; remodeling will begin in the fall. Large sums of money are going into this in our 1963 budget beginning July 1. We have \$700,000 available, which should be entirely adequate for Phase III. Add to all this the price of modification of the building, which we are taking out of construction funds, and it is probable that the cost of the whole project, as of September 1, 1963, will be about \$2 million. What we have for that price is just a system. If we want to buy the computer, the price is \$940,000. Rental would be \$20,000 per month. Three million dollars is quite an investment, but I believe that the results will justify the expenditure.

Dr. Brill: What sort of equipment would be required in the decentralized locations?

Dr. Rogers: Essential equipment would be several tape drives plus a central frame which might be a vastly simplified, special-purpose computer in the MEDLARS configuration, plus some kind of output device such as a paper tape typewriter or low-speed mechanical printer.

Dr. Brill: Would a 7090 be of any use?

Dr. Rogers: It is a question of incompatibility of equipment of different manufacturers. There are very large problems here. We will have to do this secondary study; GE will look at questions of this sort and try to find some answers.

Dr. Jarcho: MEDLARS will carry the last five years of material?

Dr. Rogers: It will carry as much as you want it to carry. The difficulty is in the time of search. We are loading material on magnetic tapes; about six reels of tape will carry the entire load for a year. Six reels can be searched in about thirty minutes, but this means that two and a half hours would be required to search five years of the store. Fortunately we are able to batch questions, and this rescues us to a great extent.

Dr. Brill: What is the input going to look like? Who codes it?

Dr. Rogers: The input will be on punched paper tape much like the tapes we are now producing for the Index Medicus. Input is in the clear, in English, without coding. This is an important point.

Dr. Carlson: On the Honeywell 800 now on the NIH campus I am under the impression that they have had considerable trouble.

Dr. Rogers: They have had a lot of problems; some of them we might say anybody can expect with any computer. They are getting them ironed out. Information retrieval is a cat of a different breed from scientific application or business applications. If the Honeywell software were perfect, it is doubtful if we could use it to more than a very limited extent.

Dr. Daniels: These machines in regional libraries--what will they cost?

Mr. Adams: We will have to find that out in our study. I think whatever the cost is, it will not be as large as some of these institutions are now contemplating in establishing their own systems from the beginning.

Dr. Daniels: Are the other libraries cognizant of this whole program as it is moving along?

Dr. Rogers: We haven't put out enough information on this. When it comes to secondary objectives we must have the results of the study before we can start making promises. Next spring--February or March--we expect to have a MEDLARS symposium to which we will invite the librarians of most of the medical schools; we will spend two or three days here when the equipment is in place, and try to bring everybody on board as to the possibilities.

BUDGET DISCUSSION

There ensued a discussion of the proposed Fiscal Year 1964 budget of the Library. Summary tables, showing the breakdown of items, were distributed. The comparison of totals is as follows:

FY 1962 - \$2,808,000 (includes \$500,000 from NHI)
 FY 1963 - \$3,335,000 (includes \$700,000 for Phase III of MEDLARS)
 FY 1964 - \$4,185,000 (includes funds for purchase of MEDLARS equipment)

The amounts of foreign currencies, for prosecution of the Public Law 480 program, are as follows:

FY 1962 - \$667,000
 FY 1963 - \$356,000
 FY 1964 - \$447,000

The staffing levels for the three years are significant:

FY 1962, 234 FY 1963, 250 FY 1964, 275

In FY 1964 an increase of 25 positions, or 10%, is being requested. This is accounted for by the MEDLARS program. At the present time there are 46 positions in the Bibliographic Services Division, responsible for the major outputs of the Index Medicus and the Bibliography of Medical Reviews. By the end of 1964 it is anticipated that 72 persons will be required in the Bibliographic Services Division to operate the MEDLARS system. This will include data processing and programming personnel not now found on the staff. It will also provide for still greater increases in coverage of articles, to 180,000 per year. It is expected that the mater will be indexed in greater depth than at present, and this is going to require more time per article indexed. But if operating costs are increased by more than 50%, as they will be, the value of the resulting products should be increased by far more than 100%.

EXTRAMURAL PROGRAM

Mr. Adams: We are not yet legitimized in the Extramural Program area. The specifications are still within the Department, and there has been no opportunity to introduce them to the Congress. We are operative only in the translations area. We submitted a supplementary report on NLM's role in medical communications to the House Appropriations Committee, and there are extra copies available here. This was one of three reports made to the House Appropriations Committee; NIH and BSS made separate reports. Also in the Senate Appropriations Committee hearings we submitted a copy of our statement.

One of the things which we have wanted to do in the Extramural Program is to provide for support of publication needs, with particular reference to needs in areas of secondary publication. One of the present problems in the Division of Research Grants of the National Institutes of Health has been to provide adequate centralized review facilities for grants in this area. This led to a series of discussions between the Division of Research Grants and NLM, and we are now in the process of establishing a cooperative program; we have recruited a head for this program, Mr. Marion Daniel Bailey, who will be reporting to the Library on April 30. One of the primary provisions of the program is for contextual review of grant proposals; this will be supplementary to the scientific review of the proposal done by the appropriate study sections of the NIH. Supplementary contextual review would relate to all publications--to the economic and fiscal aspects, to the technical aspects, and finally its relationship to established programs.

In the field of education and training, we have helped the Medical Library Association plan a refresher course for medical librarians to be held at the University of Illinois this summer. The intern programs which are supported through the Division of General Medical Sciences, NIH, are continuing. We are also interested in the possibility of support for extension of medical library service to rural communities from a state university medical library base.

I would like to report that we have made a reconversion of the translation program which was transferred to us from the NIH last July. Five years ago I was responsible for starting this program with the understanding that it would be reviewed after five years, and when we took the program over one of the first things we did was to contract with the Institute for the Advancement of Medical Communication to do a field study of the effectiveness of cover-to-cover translations. We have been concerned with the small volume of journal subscriptions which the publishers were marketing; none of the nine titles had sold more than 250 copies. The report reached us in January, and confirmed us in our misgivings. There are three prominent aspects of the report: 1) based on citation counts, the use of Soviet material, after five years' effort, has increased from 13/100 to 14/100 of 1%; 2) submitting the translated papers to the editors of American journals in parallel fields and asking these referees "What would you do with this?" has shown that, in general, American editors would use one out of three Russian papers as being of significance; 3) massive interviews with librarians and others establish that the cover-to-cover translations simply have not been used. We concluded that this demonstrated clearly that support for cover-to-cover translation was a weak mechanism for communicating the findings of Soviet science to American scientists. Added reasons: 1) of 250 Soviet serials reporting original work, only 9 were being translated--we were providing about 3% coverage of the total Soviet literature; 2) we were accepting, in effect, a Soviet selection of these papers. Consequently, we are in the final phase of negotiation of a contract with the Federation of American Societies for Experimental Biology, in which we are trying to achieve much broader coverage. We have made arrangements to have their central office receive all of the English-language abstracts now being done by Excerpta Medica and Biological Abstracts

plus a supplemental intake. On a preliminary screening we expect that some 4,000 papers will be selected. Of these, the editors at the Federation will select 500 for full translation. Of these, about 300 will be published in a new Supplement to Federation Proceedings, and distributed to some 11,000 individuals who compose the membership of the societies. In addition to library use of these translated materials, we feel this new program will make up for a number of weaknesses which existed in the cover-to-cover translations.

Many of our other translation activities will be continuing. Abstracts of Soviet Medicine will be discontinued as a separate, but the abstracts will continue to appear in the subject sections of Excerpta Medica. We have the foreign currency program as well. We have an agreement with the Poles to publish certain of their journals in the English language. With the cooperation of the Polish Ministry of Health we have lined up scientists to do critical reviews, and we are now working on selection of topics.

Dr. Rogers: I call your attention to examples of some of our foreign currency program publications which have come out since the last meeting, and to the new Cumulated Index Medicus, which was available three months after the conclusion of the year which it covers; also to the Bibliography of Medical Reviews, Vol. 6, which this time is a cumulative volume with everything up to this time - a six-year review of reviews, which should be very useful.

CLEARANCE FOR DEDICATION SURPLUS

The Director said that after all bills had been paid for the Board of Regents' banquet on the evening of December 14 last, there remains a surplus of \$35.20. The Board authorized the use of this sum as a "coffee fund."

COMING EVENTS AT NLM

Open House for members of the medical community of the Washington metropolitan area will be held on successive Sundays, May 13 and May 20, from 3 to 5 p.m. The District of Columbia Library Association will meet at NLM on April 26. The Special Libraries Association will tour the building in May. The National Federation of Science Abstracting and Indexing Services will meet at the Library in the spring, and the American Association for the History of Medicine will meet here in 1964.

ELECTION OF CHAIRMAN

DR. DANIELS announced that, his term expiring in August, the election of a new chairman of the Board was in order. DR. HINE nominated DR. WELLS. The nomination was seconded, put to a vote, and unanimously carried.

DR. DANIELS then asked that his resignation as Chairman be accepted, so that DR. WELLS could serve in this capacity throughout the summer. After discussion, it was moved by DR. BRILL and seconded by DR. HUSSEY that the resignation of DR. DANIELS as Chairman be accepted. The motion was carried.

Dr. WELLS thereupon took the Chairman's role. He commented on DR. DANIELS' great service to the Board and to the Library. He spoke of the contributions of MR. KEYS, whose term on the Board would also end this summer. Other members of the Board added comments, and DR. DANIELS and MR. KEYS responded.

NEXT MEETING

It was decided that the next meeting of the Board would be held on Monday, November 5, 1962.

After a brief tour of the new building, which was to be opened for business on April 16, the meeting was adjourned at 1:45 p.m.

Respectfully submitted,



FRANK B. ROGERS, M.D.
Secretary to the Board

CONFIDENTIAL until released to Congress

April 13, 1962

NATIONAL LIBRARY OF MEDICINE

	<u>Pos.</u>	<u>M. Y.</u>	<u>Amount</u>
1962 operating budget.....	234	222	\$2,808,000
1963 budget estimate.....	250	237	3,335,000
1964 preliminary estimate.....	275	260	4,185,000

Major items of increase, FY 64

MEDIARS.....	488,000
Extramural Program.....	290,000

Foreign currency program

1962 operating budget	667,000
1963 budget estimate.....	356,000
1964 preliminary estimate.....	447,000

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Comparison of Program Costs, FY 1963 and 1964

	1963 Estimate	1964 Estimate	+ or -
Office of the Director.....	\$632,000	\$684,000	+\$52,000
Extramural Program.....	436,000	726,000	+290,000
Technical Services.....	515,000	520,000	+5,000
History of Medicines.....	100,000	100,000	0
Bibliographic Services.....	1,078,000	1,566,000	+488,000
Reference Services.....	574,000	589,000	+15,000
Totals.....	3,335,000	4,185,000	+850,000