

MEETING OF THE BOARD OF TRUSTEES
OF THE
UNIVERSITY OF ILLINOIS

January 19, 1972



The January meeting of The Board of Trustees of the University of Illinois was held in the Chicago Circle Center, Chicago, Illinois, on Wednesday, January 19, 1972, beginning at 9:30 a.m.

President Earl M. Hughes called the meeting to order and asked the Secretary to call the roll. The following members of the Board were present: Mr. William D. Forsyth, Jr., Mr. Ralph C. Hahn, Mr. George W. Howard III, Mr. Earl M. Hughes, Mr. Earl Langdon Neal, Mr. Roger B. Pogue, Mr. Russell W. Steger, Mr. Timothy W. Swain. Dr. Michael J. Bakalis, Mr. Donald R. Grimes, and Governor Richard B. Ogilvie were absent. (Mr. Howard W. Clement and Mr. Theodore A. Jones, former Trustees of the University of Illinois, were also present as guests of the Board.)

Also present were President John E. Corbally Jr.; Executive Vice President and Provost Lyle H. Lanier; Chancellor J. W. Peltason, Urbana-Champaign campus; Chancellor Joseph S. Begando, Medical Center campus; Chancellor Warren B. Cheston, Chicago Circle campus; Dr. Eldon Johnson, Vice President; Mr. Norman A. Parker, Vice President for Public Service; Mr. V. L. Kretschmer, Acting University Director of Physical Plant Planning and Construction; Mr. C. E. Flynn, Assistant to the President and University Director of Public Information; Mr. James J. Costello, University Counsel; and the officers of the Board, Mr. H. O. Farber, Comptroller, Mr. R. R. Manchester, Treasurer, and Dr. Earl W. Porter, Secretary.

FINANCE COMMITTEE MEETING

The President of the Board asked the Chairman of the Finance Committee to convene the Committee to consider a report, "Social Questions and University Investment Policy."

REPORT OF THE FINANCE COMMITTEE

Upon reconvening, the Board of Trustees considered a report and recommendations of the Finance Committee on "Social Questions and University Investment Policy," and on motion of Mr. Howard, the report as submitted was approved. The report is as follows:

Social Questions and University Investment Policy

I. Increasingly, in the last few years, the business community has been pressed to reexamine its role in society. Various groups have insisted that corporations accept new responsibilities related to social, moral, and political problems.

The constituencies of investing institutions such as churches, foundations, colleges, and universities are, it has been said, less likely than the ordinary shareholder to view profit as the sole criterion for investment to the exclusion of corporate policy with regard to minority employment, pollution, manufacture of weapons of war, product safety, support of "colonial" or Communist regimes, and minority representation in management.¹

Although these institutions, even if allied with other institutional investors, public interest groups, and individual shareholders, may form a small proportion of the body of corporate shareholders, the effect of their efforts has, in some cases, been out of proportion to their numbers. A number of corporations, while not mandated to do so, have made increased efforts to deal constructively with a number of social questions.

One of the by-products of the general effort to come to grips with social responsibility and investment has been the accumulation of a body of literature in the form of books, articles, and committee reports as well as institutional policy statements. These have been used extensively in the preparation of this report and they provide a focus on the problem as a whole. The principles contained in this literature, however, are not wholly applicable to the publicly-supported university.

The most active of nonprofit institutions in taking action to relate social responsibility to investment are the churches. Perhaps their relatively homogeneous constituencies and guiding principles are more easily circumscribed, described, and polled than those of a university. However, some commentators have seen the use of social and moral criteria in investments by a university as endangering its basic purposes.² They warn that a formal institutional position on such questions could erode the freedom to investigate and to teach and learn freely, pointing out that the instrument of dissent must be the individual faculty member and student—not the institution itself.

Even in the company of more or less analogous institutions, however, the problems involved for the university are difficult ones. Typically, university statements on this question (almost all from private universities) acknowledge that a university must be concerned with moral or social values but conclude that drawing the policy line is difficult.

II. For the most part, the questions that are raised resolve into the following:

A. *How does a university decide whether a corporation's actions merit its reaction?*

How does one decide which business corporation is at fault—socially, morally, or politically? One paper³ has pointed out that a graduate student's report at Harvard singled out Xerox as clearly progressive socially, mainly on grounds of

¹ Phillip Blumberg, "The Politicization of the Corporation," *The Business Lawyer*, July 1971.

² "Moral Issues in Investment Policy" by Malkiel and Quandt, *Harvard Business Review*, March-April 1971.

³ Malkiel and Quandt.

its program for employment of the disadvantaged, while at Princeton, students identified Xerox as a target corporation because of its implied support of apartheid and racism in southern Africa by doing business there. The writers further point out that any company which trades with South Africa may support that economy as much as a company with affiliates there. Perhaps no portfolio of securities could be established with no relationship with South Africa. Further, the writers indicate, purchase by the United States government of gold at \$35 an ounce from South Africa is a form of subsidy in which every American participates—particularly since cash is a non-interest bearing debt of our government.

The Carnegie Corporation has posed the question: is it better for General Motors to provide implied support for apartheid in South Africa by remaining there or withdraw, thereby depriving some three thousand nonwhite employees of their jobs?

In the area of pollution, it seems agreed that almost all corporations pollute. How does the university determine what degree of pollution is the threshold for action?

It has been suggested that a screening process could be developed for questions such as these through use of reports or resolutions of the United Nations or reports or 'indictments' of federal or state agencies.⁴ If the legal aspects of these devices were settled, they present a flaw. Once reported upon or 'indicted', the corporation is presumed guilty—in at least most cases—until it has been shown to have been found innocent. Due process and fundamental fairness would seem to preclude such solutions as these.

Add to these difficulties the fiduciary aspect of trusteeship of institutional funds. For example, the rate of return of companies doing business in southern Africa is, in many instances, higher and more stable than others—in large part because those companies are said to be the most innovative, growth-minded, and successful companies.⁵ The cost of transactions themselves—buying and selling—can be substantial. In an illiquid market, trading of large blocks of stocks could have important financial effects.

Finally, to take precipitate or aggressive action could invite retaliatory strategies by corporations and governments. James Perkins, former President of Cornell University, has been quoted as asking, "In a contest of economic coercion, does anyone really think the university would win?"

Most of the private universities considering the general problem have investment portfolios many times greater than those of public universities. Although they maintain professional advisers and staffs, they have expressed dismay at the prospect of maintaining surveillance over the wide variety of companies in which they own stock.⁶ In most cases, given the complexity of the issues involved, it is unlikely that the advisers who are qualified to counsel the University on purely financial grounds are equally qualified to deal with problems of social responsibility—and unrealistic to ask them to do so.

In an attempt to answer this question, the Princeton University Community Council's Resources Committee suggested the following guidelines (which are fairly representative of the approach of other private universities):

1. It is necessary to show that the corporation is directly involved in the practice.
2. The corporation's practice must be satisfactorily documented.
3. Deliberate actions will be regarded more seriously than inadvertent actions.
4. The distinctiveness of the offense will be considered; an offense would be much more serious if the company were exceptional or alone in committing it."

B. What are the opinions of the university constituency with respect to the specific action contemplated?

The second major problem concerns the difficulty of determining the wishes of the university's constituency with respect to these problems. The trustees of Stanford University, pointing out that it is precisely on issues of this kind (corporate "guilt") that members of the university community often differ most strongly,

⁴ F.I.S.A., B.S.A., U.G.S.A., and G.S.A. statement of June 8, 1971 re: University (of Illinois) policy concerning investments and the voting of stock proxies.

⁵ Malkiel and Quandt.

⁶ Stanford University, Report of the Trustees ad hoc Committee on Investment Responsibilities, April 13, 1971.

have stated that they have "no moral or legal right to speak for diverse elements of the Stanford community on controversial social, economic, and political issues."⁷ In addition to the diversity of views involved, there is also the problem of which groups are considered to be a part of that constituency. Is it limited to faculty and students? May research personnel, clerical, and other staff be involved? Are the alumni entitled to seek a voice in such deliberations? In the public institution, should the taxpayers and the legislature be considered? Whether public or private universities are involved, should those who pay tuition be allowed to participate?

C. What action should be taken? Should the stock be bought on the basis of questions of social responsibility? Should the stock be sold? Should the stock be voted against management? Should the University informally try to persuade management to change policies?

Assuming some kind of consensus on a given issue⁸—and keeping in mind that the precedent, once established, will be difficult to limit—what is the appropriate action to take? One of the few points of agreement is that sale of an investment is not appropriate; either because it is an abdication of social responsibility which is unlikely to affect in any sensible way the corporation concerned, or because it is likely to cost the institution money in transaction costs or loss of a profitable investment.

University investors seem to agree as well that buying stock on the basis of social criteria cannot be justified when it conflicts with the well-defined duties of the fiduciary.⁹

Other questions involve informal attempts at persuasion or votes against management through use of proxies. Although one writer refers to the former as "more reflective of the past than the future"¹⁰ and some public interest groups seem to prefer the more dramatic confrontation of the latter, presumably there is room for a logical chronology involving first, the informal persuasion attempt, and then, as a last resort, the latter.

III. If a policy providing for consideration of factors of social responsibility in investments is decided upon, there remains the development of a suitable mechanism for its implementation.

At Stanford University an ad hoc committee, made up of three faculty, three students, and three alumni with the University Staff Investment Manager as an ex officio member, would advise the Vice President for Business and Finance in this area.

At Wesleyan University, a subcommittee of the ad hoc Committee on the Social Implications of Wesleyan's Investment Policy, made up of the faculty and student representative (of the ad hoc Committee?) and the Treasurer of the University would make recommendations to the Investment Committee (of the Board of Trustees?).

At Princeton University, the Resources Committee of the Princeton University Community Council would make recommendations to the Board of Trustees for its consideration and action and to the Council for its information.

In all three of these cases, the committees were also given various data collection and research functions to supplement their advisory activities.

IV. For many of the reasons of policy and procedure set out above, the University of Illinois has traditionally not provided for the consideration of issues of social responsibility in determining investment policy. However, recognizing that some flexibility for response to such questions is desirable, the Finance Committee recommends that the following procedures be adopted:

1. If in the opinion of a faculty, staff, or student group, a particular corporation is engaged in activities which *directly* result in undesirable social or political consequences, that group should send a statement, incorporating satisfactory

⁷ Stanford University, Report of the Trustees ad hoc Committee on Investment Responsibilities. April 13, 1971.

⁸ "There are positions on social and political questions that can be agreed upon by the university community. They would include issues on human rights and human dignity, questions on environmental control and technological safety." Report of the ad hoc Committee on Social Implications of Wesleyan's Investment Policy.

⁹ Malkiel and Quandt. Also see Report of the ad hoc Committee on Social Implications of Wesleyan's Investment Policy.

¹⁰ Blumberg.

documentation of the practice, to the Secretary of the Board of Trustees for transmittal to the members of the Finance Committee. In considering such allegations, the Finance Committee will be guided by such factors as whether or not the action complained of is deliberate or inadvertent, whether the company is exceptional or alone in committing it, what proportion of the company's operation is involved in the offensive activities, and whether the company is making significant progress toward elimination of the effects of injury due to such activities.

2. Should the Committee decide that the complaint merits further investigation, it will notify the complaining group and arrange for a hearing in which further information will be sought bearing on the matters indicated above and, in addition, on the question of whether a substantial consensus exists in the University community on the specific question.

3. After consideration of the available information, the Finance Committee will recommend an appropriate course of action to the Board of Trustees, in the light of the gravity of the activities involved and the financial implications for University investments.

TRUSTEE EMERITUS AWARDS

Mr. Hughes made the following comments:

The plan for conferring Trustee emeritus awards, adopted by the Board of Trustees on March 17, 1962, provides that: "The award shall be conferred upon any Trustee who has retired from the Board after having served a full term, and who wishes to accept such a designation."

The Trustees are pleased to confer Trustee emeritus certificates on two of our former colleagues of very recent years, Howard W. Clement and Theodore A. Jones.

Howard Clement served on this Board for twelve years beginning in March 1959, serving as its president from 1962 to 1967. This was a period of rapid change and expansion in higher education which presented the University with new challenges and obligations. His leadership, statesmanship, and humanity through this era helped the University to meet these demands without diminishing its traditional quality and dignity.

Ted Jones served on this Board from 1963 until 1971. His incisive and analytical inquiries have placed many University concerns, especially in the areas of long-range planning, intercampus coordination, equal educational opportunity, and management procedures, in new perspectives.

The stewardship of these two men and their enduring influence on University activities give added significance to the award, Trustee emeritus.

The Trustees, by a rising vote, approved the granting of Trustee emeritus status to Mr. Clement and Mr. Jones, both of whom were present to receive the award.

CITATIONS, MR. AND MRS. KRANNERT

Mr. Hughes made the following statement:

I should now like to call your attention to significant milestones in the relationship of the University of Illinois with Mr. and Mrs. Herman Krannert. As some of you will recall, the Krannert Art Museum completed its tenth year of service during 1971. Equally important, it will soon be ten years since the Krannerts expressed their willingness to make another major gift to the University and launched the plan for the Krannert Center for the Performing Arts.

It is especially timely, in our view, that the Trustees take occasion to express once again to Mr. and Mrs. Krannert some measure of their deep appreciation to them. Therefore, we present the following citations for action by the Board of Trustees.

The text of the citations approved by the Trustees is as follows:

Elnora Decker Krannert

For a period of over twelve years, Mrs. Krannert has been deeply involved in important developments at the University of Illinois which could never have taken place without her support.

The Krannert Art Museum, dedicated in 1961, is in many ways a monument to her tastes and interests. She was closely involved in all aspects of its plan and its design, and took a large part in the development of the program carried out there. She presented a great "old master" painting to the Museum at the time of its dedication, and a few years later established an acquisitions fund which has made it possible to make important additions to the permanent collection. Sixteen works of the highest quality have been purchased through her generosity. The fund she has established will continue to make it possible to acquire additional distinguished works.

The Krannert Center for the Performing Arts, dedicated in 1969, is also very much a structure which bears the imprint of Mrs. Krannert's special interests. She was deeply involved in all phases of its plan, program, and design, and the building as it exists today reflects in many respects her character and influence. She personally selected and determined many of the materials and colors which the architect used. She was particularly concerned with the audience aspect of the Center, yet was completely sympathetic and understanding of its educational aims, which made it possible to provide remarkable facilities for opera, orchestra, choral organizations, theatre, and dance.

There have probably been few cases where an institution has had such constructive relationships with donors as has this University with Mr. and Mrs. Krannert. They have contributed far more than the financial support which has made possible these two "centers of excellence," and, in this case, Mrs. Krannert's special interest in the fine arts has been decisive and essential.

Therefore, the Trustees desire to convey to Ellnora Decker Krannert their profound appreciation, and that of the entire University community and of the state of Illinois as a whole, for the opportunities she has provided and the inspiration she has given to generations to come in a wide variety of the fine and performing arts.

Herman Charles Krannert

Throughout a notable career in business, chiefly as executive head of Inland Container Corporation, Herman Charles Krannert of Indianapolis has set a national example for acumen and for the highest ethics in industry. He has built a vast enterprise in the total production of container products and has done so with standards of morality and fair practice that have prompted the country's business world to admire and honor him.

Mr. Krannert has set an example also as an imaginative and wise philanthropist whose gifts have greatly lifted many institutions and are viewed with admiration throughout the nation.

A graduate of the University of Illinois in mechanical engineering in 1912, he directed his attention to strengthening his alma mater. His benefactions, joined in by his wife, Ellnora Decker Krannert, have provided the Urbana-Champaign campus with the Krannert Art Museum, numerous outstanding art objects, and the Krannert Center for the Performing Arts which is supreme among such centers both in the United States and abroad.

Within the space of one decade these gifts have given the University of Illinois a new dimension and have added tremendously to its distinction and to its public service.

In recognition of Mr. Krannert's character, his business standards and example, his active loyalty as an alumnus, and his magnificent gifts, the Board of Trustees of the University of Illinois, as it considers its resources in the early weeks of the new year 1972, offers this expression of appreciation, gratitude, and warm regard.

BUSINESS PRESENTED BY THE PRESIDENT OF THE UNIVERSITY

The Board considered the following reports and recommendations from the President of the University.

PRESIDENT'S REPORTS

President Corbally presented a report on selected topics of current interest, copies of which were distributed at the meeting, and a copy was filed with the Secretary of the Board.

In addition, the President presented the following reports:

Report on Budget

On January 4, 1972, the State Board of Higher Education approved Executive Director's Report #103 which included recommended operating budgets for higher education for Fiscal Year (FY) 1973 and which also contained a series of proposed program reductions and estimated savings to be achieved if such reductions are adopted. The action of the State Board means that the proposed program reductions for the University of Illinois are now referred to you for your consideration. My views concerning these proposals are well known, but each proposal will be referred to the appropriate University and campus officers for review and analysis. The results of our review will be presented to you for your consideration at your February meeting so that you can respond to the advice of the State Board.

The important part of Report #103 is the proposed appropriation figures for FY 1973. While the amounts proposed for the University of Illinois fall far short of amounts necessary to meet our needs, we have concluded that the current financial situation of the State of Illinois makes it unlikely that any sizable increases will be available. I have been assured that special efforts will be made to assist us in resolving currently unresolved financial problems to enable us to continue our planned expansion programs in the health sciences. I have further been invited by Governor Ogilvie to join with him and with others to explore possible federal sources of income to assist us in meeting some of our most pressing problems.

We are now beginning the process of developing operating budgets for FY 1973 within the framework of the total amount recommended for the University of Illinois by the State Board. This process will be a difficult one and will raise many problems. Our time table calls for the completion of an analysis of our problems and possibilities during the next few weeks and I will make a report concerning the 1973 budget in some detail to you at the February meeting.

Report of Designation of Acting Chancellor, Urbana

As the Trustees know, Chancellor Peltason will be abroad on official business for a four-week period beginning January 20, 1972. On Chancellor Peltason's recommendation I have designated Vice Chancellor Weir to serve as Acting Chancellor during the Chancellor's absence.

This action is consistent with the provisions in the University *Statutes* which provide for the designation of the Vice President and Provost to exercise this function for the President in his absence.

SUMMARY REPORT OF RECOMMENDATIONS ON UNIVERSITY JUDICIAL PROCESSES

(1) At the September 1971 meeting of the Board of Trustees, I was asked to develop recommendations for the Board related to the judicial processes of the University and the effectiveness of those processes in responding to alleged violations of University rules and regulations. This report was prepared in consultation with the Chancellors after consideration of reports and recommendations¹ received from the Senate Committees on Student Discipline of the three campuses and from other groups, including administrative and student groups.

The governance system established in University Statutes by the Board of Trustees in 1931, and reaffirmed in 1957, provides that the Senate Committees on Student Discipline shall have jurisdiction over the hearing and adjudication of the application of rules of student conduct to particular cases. Such jurisdiction does not include any right or responsibility with respect to the making of rules or regulations. Nor, in particular, does it affect in any way the responsibility of chancellors to exercise powers to meet an emergency, safeguard persons and property, and maintain educational activities. Such powers include interim suspension, if necessary, subject to prompt hearing.

¹ Copies were sent to Trustees.

The following recommendations for strengthening the system are now submitted:

1. Responsibility for monitoring the relationship between the Senate committees' adjudication of conduct rules and the operation of the entire conduct control system on each campus resides with the Chancellor. Beginning in 1972, each Chancellor will report annually to the President in July concerning the operation of the conduct-control system for the preceding academic year at his campus and will assess the general state of conduct governance.

2. The President shall review the annual reports of the Chancellors, shall consult with the Chancellors in developing any recommendations for changes, and shall present an annual report to the Board of Trustees in September concerning the operations of the system during the preceding academic year and any recommendations for change for the ensuing year.

3. The University discipline system shall be separate from general systems established by society to deal with conduct of citizens of society. The existence of a university system does not constitute for anyone connected with the University any substitute for, or immunity from, compliance with requirements of law and law enforcement. Likewise, the operations of law enforcement shall not relieve the University system of responsibility for imposing sanctions for conduct inimical to the University institution or its members.

4. Responsibility for making or defining rules of conduct does not lie with campus judicial, adjudicatory, or hearing committees or bodies; those bodies do not have latitude to fail or refuse to adjudicate rules which they do not favor or would not adopt if they had the power of legislation. Adjudicatory processes and the processes of rule-making must be separate.

5. In order to enable committees, hearing officers, and other adjudicatory bodies to apply penalties to fit particular cases, a wider range of fitting sanctions and penalties should be developed. In particular, the sanctions applicable to the varieties of acts covered by the Board's statement of August 12, 1970, as amended September 16, 1970, should be broadened and the statement amended accordingly.

6. The Senate Committees on Student Discipline should accelerate their consideration and implementation of recommendations for improving adjudicatory processes. Each Chancellor, in his monitoring of the operation of judicial processes and conduct governance, and in his reports to the President, should include recommendations for improving the system at his campus. He should also report on the record of the Senate Committee on Student Discipline in adapting the campus system to needed improvements and changing conditions.

No university appears at this time to have developed a completely effective student conduct judicial system. These recommendations stress the responsibility of the Senate Committees on Student Discipline to strive toward attainment of such systems for the campuses of the University of Illinois.

Mr. Howard, expressing his view that the report and recommendations should be looked on as interim in character, moved approval of the report and recommendations as submitted. The motion was approved unanimously.

AWARD OF CERTIFIED PUBLIC ACCOUNTANT CERTIFICATES

(2) The Committee on Accountancy recommends that the certificate of Certified Public Accountant be awarded, under Section 5 of the Illinois Accountancy Act of 1943, as amended, to five candidates who have presented evidence that they are holders of valid and unrevoked Certified Public Accountant certificates obtained by passing a standard written examination in another state or territory of the United States and who qualify in all other respects under this provision of the law. A list of the candidates is filed with the Secretary.

I concur.

On motion of Mr. Steger, these certificates were awarded.

APPOINTMENT OF VICE CHANCELLOR, CHICAGO CIRCLE

(3) The Chancellor at the Chicago Circle campus has recommended the appointment of Dr. Eugene Eidenberg, as Vice Chancellor and Associate Professor of

Political Science (with indefinite tenure) effective July 1, 1972, on a twelve-month service basis, at an annual salary of \$35,000.

Dr. Eidenberg is presently Assistant Vice President for Administration and Associate Professor of Political Science with indefinite tenure at the University of Minnesota.

As Vice Chancellor Dr. Eidenberg will be the chief budgetary and planning officer of the Chicago Circle campus. In addition, he will be responsible for the personnel system of the campus including the formulation and implementation of an affirmative action program in the area of equal employment opportunity. He will be the campus liaison officer with units and agencies of city and state government and when necessary will serve as the Chancellor's deputy in all areas of campus affairs.

The Chancellor further recommends that Dr. Eidenberg be appointed Vice Chancellor Designate on one-fifth time for the period February 1, 1972, through June 30, 1972, at a salary at the rate indicated above. During this period he will consult with campus personnel in the areas of the responsibilities he will assume on July 1, 1972.

This recommendation is endorsed by the Executive Vice President and Provost.

I concur.

On motion of Mr. Swain, this appointment was approved.

ACTING VICE CHANCELLOR FOR CAMPUS AFFAIRS, URBANA

(4) The Chancellor at Urbana-Champaign recommends the appointment of Mr. Hugh M. Satterlee, presently Dean of Students, as Dean of Students and Acting Vice Chancellor for Campus Affairs, effective February 1, 1972, and continuing through August 31, 1972, or until a vice chancellor for campus affairs is appointed, on a twelve-month service basis, at a salary of \$27,000.

Dean Satterlee will succeed Professor George T. Frampton who has asked to be relieved of this administrative assignment.

The Executive Vice President and Provost concurs.

I recommend approval.

On motion of Mr. Swain, this appointment was approved.

HEADSHIP OF THE DEPARTMENT OF ENGLISH, CHICAGO CIRCLE

(5) The Dean of the College of Liberal Arts and Sciences at Chicago Circle has recommended to the Chancellor the appointment of Dr. Jay A. Levine, presently Professor of English, as Professor of English on indefinite tenure and Head of the Department, beginning January 1, 1972, on an academic year service basis, at an annual salary of \$23,000.

Based on individual conferences with full and associate professors of the Department and written communications from other members of the Department, the Dean reports that the nomination of Professor Levine is supported by the majority of those with whom he consulted. The Chancellor at Chicago Circle, the Vice Chancellor and Dean of Faculties, and the Dean of the Graduate College approve the recommendation. The Executive Vice President and Provost concurs.

I recommend confirmation of this appointment. Dr. Levine succeeds Professor John C. Johnson who asked to be relieved of this administrative assignment.

On motion of Mr. Hahn, this appointment was confirmed.

HEADSHIP OF THE DEPARTMENT OF FOOD SCIENCE, URBANA

(6) The Dean of the College of Agriculture has recommended to the Chancellor at Urbana-Champaign the appointment of Dr. Arthur J. Siedler, presently Chief, Biochemistry Section, Eaton Laboratories, The Norwich Pharmacal Company, as Professor of Food Science on indefinite tenure and Head of the Department of Food Science effective March 1, 1972, on a twelve-month service basis, at an annual salary of \$25,000.

Dr. Siedler will fill the vacancy created by the retirement of Dr. R. T. Milner effective September 1, 1971. Dr. S. L. Tuckey has been Acting Head.

The nomination of Dr. Siedler was made with the advice of a search committee¹ and after consultation with members of the faculty of the Department. The nomination is supported by the Dean of the Graduate College. The Chancellor at Urbana-Champaign approves the recommendation. The Executive Vice President and Provost concurs.

I recommend approval.

On motion of Mr. Steger, this appointment was approved.

APPOINTMENTS TO THE FACULTY

(7) The following new appointments to the faculty of the rank of Assistant Professor and above, and involving tenure, have been approved since the previous meeting of the Board of Trustees.

Positions in the University are classified in the following categories and are designated in the budget by the symbols indicated: A— indefinite tenure; P— indefinite term appointment for part-time service only; B— two years; D— one year; E— nine months from the beginning of the academic year; F— one-year appointment ending other than August 31; G— special tenure; Q— initial term appointment for a Professor or Associate Professor; T— terminal appointment, accompanied with or preceded by notice of nonreappointment; W— one-year appointment subject to special written agreement; Y— twelve months' service required instead of two semesters; X— percentages opposite X are for the academic year; full-time summer service is indicated by "S"; 1-7— indicates the number of years of service which will be credited at the end of the contract period toward completion of the probationary period relating to tenure.

Figures following a symbol indicate percentage of time if the appointment is on a part-time basis (e.g., D75 means one year on three-fourths time).

Medical Center

1. JOHN F. FITZLOFF, Assistant Professor of Chemistry, College of Pharmacy, beginning February 1, 1972 (1), at an annual salary of \$12,500.
2. PAUL REUBEN, Assistant Professor of Operative Dentistry, College of Dentistry, beginning November 1, 1971, on one-fifth time (DY20), at an annual salary of \$3,000.
3. VICTORY V. ROMAN, Assistant Professor of Anesthesiology, College of Medicine, The Abraham Lincoln School of Medicine, beginning January 1, 1972 (1Y), at an annual salary of \$35,000.
4. SIDNEY H. WEISSMAN, Assistant Professor of Psychiatry, College of Medicine, beginning January 1, 1972, on three-fourths time (1Y75), at an annual salary of \$17,000.
5. WALLACE H. WILSON, Assistant Professor of Preventive Medicine and Community Health, The Abraham Lincoln School of Medicine, and in Health Care Services, School of Public Health, beginning January 1, 1972 (1Y), at an annual salary of \$18,000.

Urbana-Champaign

6. BOYD C. PAULSON, JR., Assistant Professor of Civil Engineering, beginning second semester 1971-72 (1), at an annual salary of \$12,500.
7. CONSTANTIN A. REBEIZ, Associate Professor of Plant Physiology in Horticulture, beginning February 1, 1972 (QY), at an annual salary of \$14,500.

Visiting Staff

8. ANDREW BARR, Visiting Professor of Accountancy, Urbana, second semester 1971-72 (E), at a salary of \$12,000.

On motion of Mr. Pogue, these appointments were confirmed.

¹ Raymond J. Miller, Professor of Soil Physical Chemistry in Agronomy and Associate Director of Agricultural Experiment Station, *Chairman*; Esther L. Brown, Associate Professor of Nutrition in Home Economics; Edwin L. Hansen, Professor of Agricultural Engineering; Edward G. Perkins, Associate Professor of Food Science; Marvin P. Steinberg, Professor of Food Engineering in Food Science; Stewart L. Tuckey, Professor of Dairy Technology in Food Science and Acting Head of the Department; Joseph S. Vandemark, Professor of Horticulture; and Meyer J. Wolin, Professor of Microbiology in Dairy Science and in Liberal Arts and Sciences.

SABBATICAL LEAVES OF ABSENCE, 1971-72

(8) The Chancellor at Urbana-Champaign has recommended that the following faculty member be given a sabbatical leave of absence in accordance with the provisions of the University of Illinois *Statutes* and on the terms and for the period indicated.

College of Liberal Arts and Sciences and the Library***Center for Latin American Studies and the Library***

CARL W. DEAL, Director of the Center for Latin American Studies, Consultant in Bibliography, and Professor of Library Administration, six months beginning April 14, 1972, full pay.

I concur.

The following sabbatical leaves of absence have been approved on the recommendation of the Chancellor at Chicago Circle and the Executive Vice President and Provost.

College of Liberal Arts and Sciences***Department of English***

JOHN CURTIS JOHNSON, Professor of English, winter and spring quarters, 1971-72, three-fourths pay.

Curriculum in the Administration of Criminal Justice

STEPHEN A. SCHILLER, Associate Professor of Criminal Justice and Director of Curriculum in the Administration of Criminal Justice, winter quarter 1971-72, full pay.

I request confirmation of these leaves.

These recommendations are supplementary to the applications recommended to the Board of Trustees on March 17, 1971.

On motion of Mr. Howard, the leave recommended was approved and the leaves approved were confirmed.

**CHANGE IN ORGANIZATION, DEPARTMENT OF PSYCHOLOGY,
CHICAGO CIRCLE**

(9) The members of the Department of Psychology of professorial rank at Chicago Circle have voted to request a change in departmental organization from that of a department with a head to that of a department with a chairman.

With the concurrence of the Dean of the College of Liberal Arts and Sciences, the Chancellor at the Chicago Circle campus recommends that the form of organization requested be approved. The Executive Vice President and Provost also concurs.

I recommend approval of these changes, to become effective September 1, 1972.

On motion of Mr. Hahn, this recommendation was approved.

**REVISION OF THE CURRICULUM IN PHYSICAL EDUCATION,
CHICAGO CIRCLE**

(10) The Chicago Circle Senate and the Council on Teacher Education have recommended the revision of the baccalaureate program in physical education. The revised curriculum will replace the present separate teacher education programs for men and women with a common program, excepting certain specialized courses for men or women. It offers students the options of teacher education programs leading to K-12 certification, secondary certification, or a nonteacher certification program for the student choosing to be a teaching generalist or specialist.

A list of the requirements of the revised program is being filed with the Secretary of the Board.

The Chancellor at the Chicago Circle campus and the Executive Vice President and Provost concur in this recommendation. The University Senates Conference has indicated that no further Senate jurisdiction is involved.

I recommend approval.

On motion of Mr. Steger, this recommendation was approved.

**ESTABLISHMENT OF A PROGRAM LEADING TO THE DEGREE
OF MASTER OF ARTS IN RUSSIAN, CHICAGO CIRCLE**

(11) The Chicago Circle Senate has recommended authorization of a curriculum leading to the degree of Master of Arts in Russian. The program would be initiated in September 1972.

The program is designed to provide substantive training of the highest quality in the Russian language, literature, and culture for students preparing for careers in high school or college teaching, government, diplomatic and military service, private international service organizations, and research-oriented and internationally active business enterprise.

The program consists of a body of courses with a concentration in either literature or linguistics and a choice of a thesis or nonthesis option. A reading knowledge of French and German is expected of all candidates, and, from those in linguistics, also knowledge of the structure of a Slavic language other than Russian.

Degree requirements

1. A minimum of 48 quarter hours of instruction is required for the degree in either the area of literature or linguistics, with thesis or nonthesis options available in both.
2. The maximum credit granted for the M.A. thesis preparation is 8 quarter hours. In the nonthesis program the same amount of hours must be gained through specific course work selected by the student and approved by the department.
3. All candidates must take at least 28 quarter hours of the total required for the degree in 400-level courses within the major area of concentration.
4. Candidates in the area of literature must present at least 8 quarter hours of study in the linguistics program, and those in linguistics, at least 8 quarter hours of study in the literature program.
5. The final comprehensive examination will consist of both written and oral parts. A written examination of three hours for nonthesis and two hours for thesis candidates, based on both course work and the departmental reading list, will cover either (a) linguistics, including a thorough knowledge of Russian phonology and grammar and an acquaintance with Comparative Slavic Linguistics, Old Church Slavonic, a second Slavic language, and the history of the Russian literary language; or (b) literature, including an acquaintance with the entire history of Russian literature from its origins to the present and a thorough knowledge of the major developments and authors of the nineteenth and twentieth centuries. A one-hour oral examination for all candidates will test the student's knowledge in his field of interest, and may be conducted partly in Russian.
6. Comprehensive examinations will be offered at the end of every quarter. Those who fail any portion of the examination or the whole may retake that portion or the whole once, not later than one calendar year after the first attempt.

The Chancellor at the Chicago Circle campus and the Executive Vice President and Provost concur in this recommendation. The University Senates Conference has indicated that no further Senate jurisdiction is involved.

I recommend approval subject to further action by the Illinois Board of Higher Education.

On motion of Mr. Hahn, this recommendation was approved.

**CONTRACTS FOR EDUCATIONAL SERVICES, PEORIA SCHOOL
OF MEDICINE**

(12) On December 17, 1971, the Board of Trustees approved contractual agreements with appropriate hospitals and medical group-practice organizations in Peoria for the development, implementation, and conduct of undergraduate medical education programs on behalf of the Peoria School of Medicine.

In the interim, contractual negotiations for the balance of the present fiscal year have been concluded. Correspondingly, the estimated annual payments to the affiliated hospitals and group practice organizations have been determined, and it is recommended that they be increased as noted below to meet the staffing needs of the Peoria School of Medicine for the remainder of FY 1971-72.

<i>Affiliated Hospitals (Under agreement dated July 19, 1971)</i>	<i>Estimated Annual Cost Not to Exceed</i>		
	<i>Board Approved 12/17/71</i>	<i>Increase Recommended</i>	<i>New Total Authorized</i>
Institute of Physical Medicine and Rehabilitation.....	\$ 7 000	\$ 3 500	\$ 10 500
Methodist Hospital.....	7 000	34 000	41 000
Proctor Community Hospital.....	7 000	16 000	23 000
St. Francis Hospital.....	15 500	30 500	46 000
<i>Total.....</i>	<i>\$36 500</i>	<i>\$84 000</i>	<i>\$120 500</i>
<i>Group Practice Organization</i>			
Orthopedic Association, S. C.....	\$ -0-	\$ 3 200	\$ 3 200
Hansen-Seedorf Radiological Group.....	6 400	3 600	10 000
Dirkse, Anderson, Swicky and Associates	11 200	2 800	14 000
Medical Radiological Group.....	6 400	4 000	10 400
Peoria Surgical Group.....	16 000	-0-	16 000
Peoria-Tazewell Pathology Group.....	14 000	-0-	14 000
<i>Total.....</i>	<i>\$54 000</i>	<i>\$13 600</i>	<i>\$ 67 600</i>

This action will enable the Peoria School of Medicine to continue to recruit faculty members in the disciplines of family practice, internal medicine, obstetrics and gynecology, psychiatry, radiology, and physical medicine and rehabilitation. Prospective faculty members who are practicing physicians in the community have been identified and will be given specific developmental and teaching responsibilities in support of the undergraduate medical education program. Funds are available in the FY 1972 budget of the Peoria School of Medicine for operations.

The Dean of the Peoria School of Medicine and the Executive Dean of the College of Medicine recommend approval of the above changes in the contracts or agreements for FY 1971-72 approved by the Board of Trustees on December 17, 1971. The Chancellor at the Medical Center campus and the Executive Vice President and Provost concur.

I recommend approval.

On motion of Mr. Swain, this recommendation was approved by the following vote: Aye, Mr. Forsyth, Mr. Hahn, Mr. Howard, Mr. Hughes, Mr. Neal, Mr. Pogue, Mr. Steger, Mr. Swain; no, none; absent, Dr. Bakalis, Mr. Grimes, Governor Ogilvie.

AUTHORIZATION FOR THE EXECUTION OF A CONTRACT FOR CONSULTING SERVICES CONCERNING THE UNIVERSITY'S COMPUTER OPERATIONS

(13) The Executive Vice President and Provost recommends that the Board authorize the execution of a contract with Arthur D. Little, Inc., for: (a) an analysis and evaluation of the University's present computer systems and data processing services; and (b) technical recommendations concerning possible changes in organizational arrangements, equipment configurations, and the sharing of services among the campuses. This study will provide the information and professional advice needed for: (a) determining the possibilities for sharing the University's computer resources with other Illinois institutions of higher education (as recommended by a task force of the Illinois Board of Higher Education); and (b) for developing a constructive response to the recommendations for consolidation of services and operational economies recommended by the Board of Higher Education.

A general statement of the work to be accomplished was developed for the Executive Vice President and Provost by Director Dillon D. Mapother of the Office of Computing Services (Urbana-Champaign campus) and Director John F. Chaney of the University Office of Administrative Data Processing—both of whom have been involved in the work of committees advisory to the staff of the Board of Higher Education in its recent survey of computer operations in Illinois public senior institutions. That statement—together with reports on its computer

activities submitted by the University as part of the survey — were sent to three firms with well-recognized professional capabilities in this field. After careful review of the three proposals submitted, it was the unanimous opinion of Directors Chaney and Mapother, as well as other staff members who were consulted, that the proposal of Arthur D. Little, Inc., should be accepted. That firm's fixed-price figure of \$55,000 for the completed project was considerably lower than the other two estimates (\$75,000 and \$87,494). An outline of the tasks to be performed, with a breakdown of the estimated cost for each of them, is filed with the Secretary of the Board for record.

The chancellors at the three campuses and the Vice President and Comptroller have indicated their endorsement of this proposal. Funds are available in the unappropriated budget reserve.

I concur.

On motion of Mr. Howard, authority was given as recommended by the following vote: Aye, Mr. Forsyth, Mr. Howard, Mr. Hughes, Mr. Neal, Mr. Pogue, Mr. Steger, Mr. Swain; no, Mr. Hahn; absent, Dr. Bakalis, Mr. Grimes, Governor Ogilvie.

**OUTLINE FOR THE INITIAL RESPONSE OF THE PRESIDENTS
OF ILLINOIS PUBLIC SENIOR INSTITUTIONS OF HIGHER
EDUCATION TO THE PROPOSAL FOR A "PUBLIC
CORPORATION FOR COMPUTERS IN
EDUCATION"**¹

(14) I. General Background

1. The Board of Higher Education in Master Plan — Phase III approved a recommendation of its Computer-based Resources Advisory Committee for the development of a plan "for statewide computer resource coordination" among institutions of higher education.
2. As a step towards implementation of this recommendation, the Board of Higher Education on June 1, 1971, approved a progress report of its staff outlining detailed proposals for the development of the statewide plan for computer resources in higher education, including the establishment of a committee structure and a deadline of December 7, 1971, for the presentation of the completed plan to the Board of Higher Education.
3. In order to provide technical assistance to the several committees and to the Board's staff, financial assistance was secured from the Illinois Department of Finance (Management Information Division) for the support of two related projects: a detailed study of current computer installations and plans of the public senior institutions, and the development of a statewide plan by a special Task Force with joint participation of representatives of the Board of Higher Education and the Department of Finance.
4. Two sets of products have resulted from these studies:
 - a. A report on existing computer operations and plans issued by the staff of the Board of Higher Education — with recommendations for organizational changes and budgetary reductions for FY 1973.
 - b. A report of the Task Force entitled "Public Corporation for Computers in Education." The recommendations in that document constitute the main elements of the "statewide plan for computer resources in higher education."
5. A central element in the proposal for the "Public Corporation for Computers in Education" (PCCE) is the recommendation that the public senior institutions take the initiative towards the implementation of the PCCE as a means to long-range cooperation in the provision of computer services to institutions of higher education in Illinois.

This recommendation was discussed at the meeting of the Joint Council on Higher Education on December 6, 1971, and there was agreement that the senior institutions would develop a constructive response to the recommendations contained in the Task Force's report.

It was agreed also at the meeting on December 6 that the President of the University of Illinois would take the initiative in arranging for whatever dis-

¹ Title of a report approved by the Joint Council on Higher Education on January 3, 1972.

cussions or meetings might be required in order to prepare a response to the Task Force's proposals.

These steps were announced by President Corbally to the Board of Higher Education during the discussion of the Task Force's report at the Board's meeting on December 7, 1971.

6. The present document is an initial outline of the general position of the presidents towards the Task Force's proposals, with suggestions for modifications that nevertheless would achieve the broad objectives of the cooperative endeavor recommended in the report.

II. *General Position of the Presidents on the Plan for Public-Interest Corporation*

1. The general objectives underlying the Task Force's plan for cooperation in the provision of computer services to Illinois institutions of higher education are strongly endorsed.
2. The presidents endorse also the general recommendation that "the major initial impetus and direction" in such cooperative endeavor should come from the public senior institutions. They believe, furthermore, that these institutions should predominate in the control and direction of whatever cooperative organization or arrangements might prove to be feasible for the realization of the objectives identified.
3. The presidents are willing to cooperate in determining the feasibility of establishing a "public-interest corporation" and the possibility for it to secure on favorable terms the financial resources necessary for the realization of savings in equipment and other costs of cooperative computer operations.

A key question to be answered is whether or not such a corporation could be funded for these purposes through the issuance of general-obligation bonds, which would require approval by the General Assembly and the Governor. There is reason to doubt that such an effort would be successful, but the presidents will explore the possibility.

4. Even if the organizational and statutory problems in the establishment of a public-interest corporation could be solved during the next session of the General Assembly, the corporation should not attempt initially to undertake all of the functions outlined on page 2 of the Task Force's report. Its major effort should be concentrated first upon the acquisition of computer and peripheral equipment, assuming that the kinds of savings envisioned in the Task Force's report could be realized through centralized ownership or leasing of such equipment.
5. Concurrent with the acquisition and leasing of equipment, the new organization should work systematically to develop a detailed plan for interinstitutional cooperation in the use of computer equipment, software, and technical personnel.
6. No rigid calendar for the implementation of these objectives should be established in advance. Instead, an evolutionary approach to interinstitutional cooperation should be followed, with appropriate use of pilot projects and adequate testing of the feasibility of cooperative arrangements before widespread or radical changes are introduced.
7. In the event that the type of public-interest corporation proposed by the Task Force could not be established, it is recommended alternatively that the public senior institutions proceed towards the major objectives of the report through the organization of a voluntary consortium. (The latter might even organize a corporation, if that proved to be a desirable means to assuring effective interinstitutional cooperation in the provision of computer and associated services.) The name of such an organization might be "Illinois Universities Consortium for Computer Services," or some such equivalent title. In the remainder of this outline, the term "Consortium" will be used to refer to the proposed organization.

III. *Interim Plan for the Consortium — FY 1972*

1. The consortium would consist of representatives from the institutions constituting the public senior systems of higher education in Illinois. (It would be expected that a representative or representatives from the Illinois Junior College Board and from private higher education would be added to the Consortium at a later stage.) The representatives initially would include the President of the

University of Illinois and the chancellors at its three campuses, the presidents of the institutions governed, respectively, by the Board of Regents and the Board of Governors of State Colleges and Universities, and by the Board of Trustees of Southern Illinois University. The President of the University of Illinois would serve as chairman of the Consortium.

2. The Consortium would establish two task forces during January 1972, as follows:
 - a. Task Force on Organization and Mission.
 - b. Task Force on Interinstitutional Cooperation in Computer Services.
 3. The Task Force on Organization and Mission would have responsibility for determining whether or not a permanent organization should be established, what form it should take, and under what bylaws it would operate. This Task Force would also develop a broad operational plan for the permanent organization, for review by the Consortium.
 4. The Task Force on Interinstitutional Cooperation in Computer Services would have the following responsibilities *during the remainder of FY 1972*:
 - a. Analysis and evaluation of the report of the staff of the Board of Higher Education (BHE) on computer operations and associated services of the public senior universities— with special reference to possible budgetary savings during FY 1972 and FY 1973. Available for this review would be a commentary from each campus on the sections of the BHE report relating to its own computer installations, together with any suggestions it might have for campus, institutional, or statewide improvement in the utilization of computer resources.
 - b. The development of operational plans for interinstitutional sharing of computer resources and services. The recommendations made in the BHE Task Force's report, the BHE report on existing installations, and proposals submitted by vendors would be considered in this planning study, along with suggestions that might be submitted by the individual campuses or systems.
 5. A small interim staff would be necessary to support the work of the two task forces, and to coordinate other activities of the Consortium during the remainder of FY 1972. Preferably, arrangements would be made with one or more of the cooperating institutions to release staff members for this purpose.
 6. The Consortium would consider carefully the need for independent technical advice in the evaluation of both the recommendations in the BHE reports and the proposals developed by its own task forces. It is likely that such outside assistance would be especially helpful in the fairly immediate future, and proposals for a contract should be secured by February 1, 1972, if an operational plan is to be developed this year.
- IV. It should be recognized that the steps outlined immediately above for the Consortium would be taken only after the necessary approval of the system governing boards.
- V. Proposed dates for implementing the work of the Consortium are as follows:
- January 15, 1972 — Initial Consortium meeting
 - March 7, 1972 — Report to SBHE concerning proposals for organizational form
 - July 1, 1972 — Complete organizational arrangements
 - September 30, 1972 — Initiate pilot programs for interinstitutional cooperation
 - September 30, 1972 — Evaluation of progress by SBHE Task Force
- On January 3, 1972, the Joint Council on Higher Education adopted the above report and recommended its presentation to the Board of Higher Education as a progress report. The report was presented and approved in principle by the Board of Higher Education on January 4, 1972.
- I recommend approval.

On motion of Mr. Swain, this recommendation was approved.

**CONTRACT FOR INSTALLATION OF BUILDING EQUIPMENT
AUTOMATION SYSTEM, PHASE I, CHICAGO CIRCLE**

(15) The President of the University, with the concurrence of appropriate administrative officers, recommends award of a contract in the amount of \$107,328 to

Powers Regulator Company, Skokie, the low bidder, on its base bid for the installation of the first phase of a building equipment automation system for the Chicago Circle campus. (Bids for this project were received on December 9, 1971.) A copy of the schedule of bids received has been filed with the Secretary of the Board for record.

Funds are available in State capital appropriations to the University and have been released by the Governor and in the operating budget of the Physical Plant Department at the Chicago Circle campus.

Bids for this project were previously received by the University on October 12, 1971, but the low bid exceeded the funds available. Pursuant to the provision of Section 15 (e) (2) of the *General Rules Concerning University Organization and Procedures*, I report the rejection of these bids.

On motion of Mr. Swain, this contract was awarded by the following vote: Aye, Mr. Forsyth, Mr. Hahn, Mr. Howard, Mr. Hughes, Mr. Neal, Mr. Pogue, Mr. Steger, Mr. Swain; no, none; absent, Dr. Bakalis, Mr. Grimes, Governor Ogilvie.

CONTRACT FOR BIRD CONTROL OF BUILDINGS, CHICAGO CIRCLE AND MEDICAL CENTER

(16) The President of the University, with the concurrence of appropriate administrative officers, recommends award of a contract in the amount of \$12,650 to National Bird Control Laboratories, Inc., Skokie, the low bidder, for bird control of all buildings and other structures at the Chicago Circle campus and the University of Illinois Hospital buildings at the Medical Center campus.

Funds are available in the operating budget of the Physical Plant Department at the Chicago Circle campus.

On motion of Mr. Howard, this contract was awarded by the following vote: Aye, Mr. Forsyth, Mr. Hahn, Mr. Howard, Mr. Hughes, Mr. Neal, Mr. Pogue, Mr. Steger, Mr. Swain; no, none; absent, Dr. Bakalis, Mr. Grimes, Governor Ogilvie.

CONTRACT FOR MINOR REPAIRS, RELAMPING, AND CLEANING SERVICES FOR LIGHTING FIXTURES FOR SELECTED BUILDINGS, MEDICAL CENTER

(17) The President of the University, with concurrence of appropriate administrative officers, recommends award of a contract in the amount of \$24,171 to Sun Ray Lighting Services Corp., Chicago, the low bidder, for providing minor repairs, relamping, and cleaning services for lighting fixtures for portions of selected buildings at the Medical Center campus.

Funds are available in the operating budget of the Physical Plant Department at the Medical Center campus.

A schedule of the bids received has been filed with the Secretary of the Board for record.

On motion of Mr. Swain, this contract was awarded by the following vote: Aye, Mr. Forsyth, Mr. Hahn, Mr. Howard, Mr. Hughes, Mr. Neal, Mr. Pogue, Mr. Steger, Mr. Swain; no, none; absent, Dr. Bakalis, Mr. Grimes, Governor Ogilvie.

CONTRACT FOR UNDERGROUND PIPING TO BURRILL HALL ADDITION, URBANA

(18) The President of the University, with the concurrence of appropriate administrative officers, recommends award of a contract in the amount of \$53,345 to Reliable Plumbing & Heating Company, Champaign, the low bidder, on its base bid for underground piping to the Burrill Hall Addition at the Urbana-Champaign campus.

Funds are available in state capital appropriations to the University and have been released by the Governor.

A schedule of bids received has been filed with the Secretary of the Board for record.

On motion of Mr. Howard, this contract was awarded by the following vote: Aye, Mr. Forsyth, Mr. Hahn, Mr. Howard, Mr. Hughes, Mr. Neal, Mr. Pogue, Mr. Steger, Mr. Swain; no, none; absent, Dr. Bakalis, Mr. Grimes, Governor Ogilvie.

**REQUEST TO ILLINOIS BUILDING AUTHORITY FOR IMPROVEMENTS
TO ABBOTT POWER PLANT, URBANA**

(19) On December 14, 1971, the Illinois Building Authority received bids for the last two divisions of work for the construction of the improvements to the Abbott Power Plant at the Urbana-Champaign campus. A copy of the schedule of bids received has been filed with the Secretary of the Board for record.

The Illinois Board of Higher Education has arranged with the Illinois Building Authority that the Authority will not use a portion of the amount declared by the General Assembly to be in the public interest until the state board specifically approves such use. This reserve amount consists of a "Cost Increase Reserve" to be used for the purpose of offsetting cost increases determined by actual bid experience. On the basis of the bids received, it is necessary that the University request the Board of Higher Education and the Illinois Building Authority to release \$333,540 in the "Cost Increase Reserve" for this project.

Accordingly, the President of the University, with the concurrence of appropriate administrative officers, recommends that the Board of Higher Education be requested to release the "Cost Increase Reserve" in the amount of \$333,540 and that the Illinois Building Authority be requested to award the following contracts contingent upon the release of the "Cost Increase Reserve," the award in each case being to the low bidder on the base bid:

Piping and Miscellaneous Mechanical Work

Gallagher & Speck, Chicago..... \$333 468

Thermal Insulation

Sprinkmann Sons Corporation of Illinois, Peoria..... 108 843

Funds for this work are available in the project budget, subject to release of the "Cost Increase Reserve."

On motion of Mr. Neal, these recommendations were approved by the following vote: Aye, Mr. Forsyth, Mr. Hahn, Mr. Howard, Mr. Hughes, Mr. Neal, Mr. Pogue, Mr. Steger, Mr. Swain; no, none; absent, Dr. Bakalis, Mr. Grimes, Governor Ogilvie.

**LEASE WITH THE ILLINOIS BUILDING AUTHORITY (ABBOTT
POWER PLANT ADDITION AND IMPROVEMENTS, URBANA)**

(20) The Board of Trustees on September 17, 1969, authorized the Comptroller and the Secretary to execute the necessary documents to permit the Illinois Building Authority to construct the Abbott Power Plant Addition and Improvements which the Seventy-sixth General Assembly had declared to be in the public interest.

The Illinois Building Authority has requested that the Board of Trustees take specific action to approve the execution of a permanent construction lease for the project to replace the interim lease currently in effect. A copy of the lease form is to be filed with the Secretary of the Board for record. The lease is for the terms indicated:

			<i>Annual Rent Due Feb. 1, 1973, Amount of Rental and on or before Heretofore Feb. 1, 1974, Paid Under and on or before Interim Feb. 1 of Each Amount of Lease Year Thereafter Rental Due to Feb. 1, 1996 Feb. 1, 1997</i>		
	<i>Legislative Declaration</i>	<i>Amount of IBA Bonding</i>			
Abbott Power Plant Addition and Improvements, Urbana	\$3 379 400	\$3 375 000	\$137 805	\$297 135	\$41 420

The execution of the interim lease and payment made thereunder from an appropriation made by the Seventy-sixth General Assembly were authorized by the Board on September 17, 1969. Funds for rental payments under the construction lease for 1971-72 are available in the appropriation for FY 1972.

The President of the University, with the concurrence of appropriate administrative officers, recommends subject to release of the "Cost Increase Reserve" for this project as described in the previous item, that the Comptroller and the Secretary of the Board of Trustees be given specific authorization to execute the lease in substantially the form requested and that the following resolution be adopted.

**Resolution Authorizing Leasing of Power Plant Addition
and Improvements from Illinois Building Authority**

WHEREAS The Board of Trustees of the University of Illinois on September 17, 1969, authorized the Comptroller and Secretary of the Board to execute the necessary documents to permit the Illinois Building Authority to proceed with construction of (Abbott) Power Plant Addition and Improvements at the Urbana campus which the Seventy-sixth General Assembly of the State of Illinois had declared to be in the public interest; and

WHEREAS in accordance with the Illinois Building Authority Act the Seventy-sixth General Assembly of the State of Illinois has declared, among others, the following University of Illinois projects at the Urbana-Champaign campus to be in the public interest:

Construct Power Plant Addition and Improvements, Urbana.....\$3 379 400

WHEREAS said declaration also provides that the cost of any specific project could exceed the amount set forth therefor so long as the aggregate amount stated therein to be financed by the Illinois Building Authority for the University is not exceeded; and

WHEREAS the amount designated for said project as follows:

Urbana-Champaign campus IBA #76-007 Construct Power Plant
Addition and Improvements.....\$3 375 000

will not cause said aggregate amount to be exceeded; and

WHEREAS the interim lease applicable to this project which was heretofore executed pursuant to prior authorization was for a different amount than now being designated; and

WHEREAS the Illinois Building Authority has forwarded to the University of Illinois a form of the permanent construction lease which it requests be used for this project and which will supersede the interim lease; and has requested that the Board of Trustees take specific action to approve the same; copy of which lease form is presented herewith and is being filed with the Secretary of the Board for record.

Now Therefore, Be It, and It Hereby Is, Resolved that the Comptroller and Secretary of this Board of Trustees be, and hereby are, authorized to execute, acknowledge, and deliver in the name and on behalf of this corporation a lease with the Illinois Building Authority in substantially the form presented to this meeting for the following building:

Construction of (Abbott) Power Plant Addition and Improvements at the Urbana-Champaign campus at a cost to the Illinois Building Authority of \$3,375,000 requiring: an initial rental on or before January 1, 1972, of the sum of \$137,805 (payment of which has heretofore been made); and on or before February 1, 1973, the sum of \$297,135; and during each successive renewal term of the Lease, the annual sum of \$297,135 on or before the 1st of February of each year for 23 years; and on or before February 1, 1997, the sum of \$41,420 with total rental payments of \$7,310,465.

On motion of Mr. Neal, the foregoing resolution was adopted, subject to release of the cost increase reserve as described in Item 19.

PURCHASES

(21) The President submitted, with his concurrence, a list of purchases recommended by the Directors of Purchases and the Vice President and Comptroller; also purchases authorized by the President.

The list of purchases was presented in two categories: purchases from appropriated funds (i.e., from state appropriations to the University) and purchases from institutional funds. The latter term designates funds received by the University under contracts with the United States government, contracts with private corporations and other organizations, funds from foundation grants, and grants from corporations and other donors, and University revolving funds authorized by law.

The total amounts of these purchases were:

From Appropriated Funds

Authorized.....	\$111 100 00
Recommended.....	40 188 26
<i>Total</i>	<u>\$151 288 26</u>

From Institutional Funds

Recommended	390 100 39
<i>Grand Total</i>	<u>\$541 388 65</u>

A complete list of the purchases, with supporting information, including the quotations received, was sent to each member of the Board in advance of the meeting, and a copy is being filed with the Secretary of the Board for record.

On motion of Mr. Forsyth, the purchases authorized by the President were confirmed, and the purchases recommended were authorized.

COMPTROLLER'S REPORT OF PURCHASES APPROVED

(22) The Vice President and Comptroller also submitted a report of purchases approved by him on recommendation of the Directors of Purchases in amounts of \$5,000 to \$7,500. A copy of this report is filed with the Secretary.

This report was received for record.

COMPTROLLER'S MONTHLY REPORT OF CONTRACTS EXECUTED

(23) The Comptroller's monthly report of contracts executed was presented.

Medical Center*New Contracts*

<i>With Whom</i>	<i>Purpose</i>	<i>Amount to be Paid to the University</i>
State of Illinois Department of Mental Health	Residency training in psychiatry	\$ 48 500
State of Illinois Institute for Environmental Quality	Creation of Environmental Health Resource Center	132 500
United States Department of Health, Education, and Welfare NIH-NCI-72-2031	Molecular mechanism of carcinogenesis by oncogenic viruses	224 200
<i>Total</i>		<u>\$ 405 200</u>

Change Orders

<i>With Whom</i>	<i>Purpose</i>	<i>Amount to be Paid by the University</i>
Tal Rauhoff, Inc.	Cost plus—general work: Roof repairs on various buildings	\$ 7 192
<i>Total</i>		<u>\$ 7 192</u>

Urbana-Champaign

New Contracts

<i>With Whom</i>	<i>Purpose</i>	<i>Amount to be Paid to the University</i>
National Aeronautics and Space Administration NGR 14-005-183	A theoretical investigation of nuclear induced plasma kinetics	\$ 20 000
State of Illinois Department of Mental Health	Application of principles of fluid mechanics to an- alyses of pathological changes in cerebral circu- lation	18 491
United States Department of the Interior 14-30-2924	Feasibility study on desalting brackish water in Northeastern Illinois	56 038
United States Office of Civil Defense: DAHC 20-72-C-0122	Civil defense conferences, training courses, and emergency operations simulations	92 910
DAHC 20-72-C-0242	Develop state program for civil defense education	62 700
<i>Total</i>		<u>\$ 250 139</u>

Change Orders

<i>With Whom</i>	<i>Purpose</i>	<i>Amount to be Paid to the University</i>
Agency for International Development AID-afr-550	Technical advice and assistance requested by gov- ernment of Tunisia	\$ 195 968
United States Air Force: AF30(602)4144	Experimentation in parallel computation	2 865 345
AFOSR68-1584	Feasibility of inertially confining electrons and ions by electrostatic means	38 895
United States Army: DA-ARO-D-31-124-71-G77	Microwave integrated circuits	21 000
DADA 17-70-C-0044	Development of serodiagnostic procedures for tropical canine pancytopenia	41 913
United States Department of Health, Education, and Welfare OEG-0-9-232175-4370	Development and description of syntactic struc- ture in language of deaf children	20 103
United States Navy: N00014-67-A-0305-0002	Radio direction finding techniques over broad bands of frequencies to obtain accurate infor- mation on intercepted signals	50 000
N00014-67-A-0305-0010	Research in the field of numerical and approximate analysis of structures including the development of problem oriented computer program systems	35 000
N00014-67-A-0305-0014	Effects of variations of dynamic movement rela- tionships of flight displays upon pilot perfor- mance	49 975
<i>Total</i>		<u>\$3 318 199</u>

Summary

Amount to be paid to the University:	
Medical Center.....	\$ 405 200
Urbana-Champaign.....	3 568 338
<i>Total</i>	<u>\$3 973 538</u>
Amount to be paid by the University:	
Medical Center.....	\$ 7 192
<i>Total</i>	<u>\$ 7 192</u>

This report was received for record.

INVESTMENT REPORT**For the Month of November 1971****Report of the Finance Committee**

(24) The Finance Committee reported the following changes in investments of endowment funds:

*Merritt Student Loan**Exchange:*

\$15 000 U.S. Treasury 4 per cent bonds due 8/15/72 for
15 000 U.S. Treasury 6 per cent notes due 11/15/78

*Rust Estate**Sale:*

50/100 share Dow Chemical common stock. \$ 35 03

Report of the Comptroller

The Comptroller reported the following changes in investments of current and unexpended plant funds, which he has been authorized to make:

<i>Restricted Group</i>	<i>Current Funds</i>		<i>Per Cent</i>	
<i>Purchases:</i>				
\$ 500 000 Genesco note due 7/31/72.....	5.19	\$	482 013 89	
1 000 000 First National Bank of Chicago 5½ per cent C/D due 10/16/72.....	5.20		1 002 557 66	

*Krannert Contributions**Plant Funds**Purchase:*

\$18 000 Commercial Credit demand notes. 4.88 18 000 00

*Sinking Funds**Housing Revenue Bonds**Purchases:*

\$85 000 U.S. Treasury bills due 3/31/72..... 3.98 83 730 56
10 000 U.S. Treasury 6½ per cent notes due 2/15/73.... 4.83 10 233 75

*Agency Funds**Star Course**Purchase:*

\$15 000 U.S. Treasury 2½ per cent bonds due 12/15/72... 4.17 14 759 25

This report was received for record.

CONVEYANCE OF TITLE TO PART OF WRIGHT TRUST FARM NO. 4

(25) The Illinois State Toll Highway Authority has filed a condemnation petition in the Circuit Court of DeKalb County, Illinois, to take 18.78 acres from Wright Farm No. 4 to construct a toll road. The Authority has offered to compensate the University in the amount of \$41,470, plus actual damages to growing crops.

From the proceeds of the sale, approximately \$10,000 will be used for the construction of storage buildings, necessitated by dividing the farm into less accessible units. The remainder will be used to reduce the funds borrowed to acquire the Risetter Farm, which the Board of Trustees on March 18, 1970, requested the University of Illinois Foundation to purchase to replace the Wright Farm land used for agricultural research and for the highway.

The President of the University, with the concurrence of appropriate administrative officers, recommends acceptance of the offer and that the following resolution be adopted:

**Resolution Authorizing Contract of Sale and Stipulation
Re. Part of Wright Farm No. 4**

WHEREAS, The Illinois State Toll Highway Authority, hereinafter referred to as "Authority," is engaged in the acquisition of property for the East-West Extension of the Northern Illinois Toll Highway; and

WHEREAS, the Board of Trustees of the University of Illinois, a public corporation of the State of Illinois, with its principal office in the City of Urbana, in the County of Champaign, and State of Illinois, hereinafter referred to as "Owner," holds or held title to the hereinafter described parcel of land which is referred to as part of Wright Farm No. 4 and which parcel of land is needed for, and as part of, said Toll Road extension; and

WHEREAS Authority has instituted eminent domain proceedings to acquire the property of Owner hereinafter described and referred to as part of Wright Farm No. 4; and

WHEREAS representatives of the Authority and the Owner have negotiated for the amount of compensation to be paid by the Authority to Owner for said part of Wright Farm No. 4 and said negotiations have resulted in Authority offering to Owner the sum of Forty-one Thousand, Four Hundred Seventy Dollars (\$41,470.00); and

WHEREAS the President of the University, with the concurrence of appropriate administrative officers, recommends that this offer be accepted.

Now Therefore, Be It, and It Hereby Is, Resolved that the Comptroller and Secretary of Owner be, and they hereby are, authorized to enter into a contract with Authority providing that Owner will enter into a stipulation for, and consent to the entry of, a judgment in the amount of the total compensation to be paid for the property to be taken by the Authority in the sum of Forty-one Thousand Four Hundred Seventy Dollars (\$41,470.00) which sum shall include any access rights taken together with damages to the remainder of Owner's property as a result of the taking by the Authority, and that the Authority will agree that adequate provision will be made to provide for drainage equivalent to that which existed before the construction of said Toll Road, and for the vesting of fee title in the Authority to that part of Wright Farm No. 4 described as follows, viz:

That part of the Northeast Quarter and of the West Half of the Southeast Quarter of Section 32, Township 40 North, Range 3 East of the Third Principal Meridian, in DeKalb County, Illinois, described as follows: Beginning at the Southwest corner of the Northeast Quarter (NE $\frac{1}{4}$) of said Section 32, said point of beginning being 133.30 feet Southeasterly of the centerline of a highway known as the East-West Tollway Extension as said centerline is surveyed and staked out by the Illinois State Toll Highway Authority and recorded as Document No. 357374 in the Recorder's office of DeKalb County; thence Northerly along the West line of the Northeast Quarter (NE $\frac{1}{4}$) of said Section 32, which intersects the said centerline at Station 4454 + 35.90, to a point 130.00 feet Northwesterly of said centerline; thence Northeasterly along a line parallel with the said centerline to a point 130.00 feet Northwesterly of the said centerline at Station 4464 + 00.00; thence Northeasterly along a straight line to a point 180.00 feet Northwesterly of the said centerline at Station 4470 + 00.00; thence Northeasterly along a line parallel with the said centerline to a point on the East line of said Section 32; thence Southerly along the East line of said Section 32, which intersects the said centerline at Station 4480 + 88.22, to the Southeast corner of the Northeast Quarter (NE $\frac{1}{4}$) of said Section 32; thence Westerly along the South line of the Northeast Quarter (NE $\frac{1}{4}$) of said Section 32 to the Northeast corner of the West Half (W $\frac{1}{2}$) of the Southeast Quarter (SE $\frac{1}{4}$) of said Section 32, said point being 130.50 feet Southeasterly of the said centerline at Station 4467 + 62.19; thence Southerly along the East line of the West Half (W $\frac{1}{2}$) of the Southeast Quarter (SE $\frac{1}{4}$) of said Section 32 to a point 157.23 feet Southeasterly of the said centerline at Station 4467 + 62.23; thence Northwesterly along a straight line to a point 131.05 feet Southeasterly of the said centerline at Station 4465 + 00.00; thence Westerly along a straight line to the point of beginning;

and also;

That part of the Northeast Quarter and of the West Half of the Southeast Quarter of Section 32, Township 40 North, Range 3 East of the Third Principal Meridian, in DeKalb County, Illinois, described as follows: Beginning at a point on the East line of said Section 32, said point of beginning being

180.00 feet Northwesterly of the centerline of a highway known as the East-West Tollway Extension as said centerline is surveyed and staked out by the Illinois State Toll Highway Authority and recorded as Document No. 357374 in the Recorder's office of DeKalb County; thence Northerly along the East line of said Section 32, a distance of 720.00 feet to a point; thence Westerly perpendicular to the said East line 33.00 feet to the Westerly right of way line of the Township Road known as Willrett Road; thence Southwesterly along a straight line to a point 180.00 feet Northwesterly of the said centerline at Station 4480 + 07.77; thence Northeasterly along a straight line to the point of beginning.

On motion of Mr. Steger, the foregoing resolution was adopted by the following vote: Aye, Mr. Forsyth, Mr. Hahn, Mr. Howard, Mr. Hughes, Mr. Neal, Mr. Pogue, Mr. Steger, Mr. Swain; no, none; absent, Dr. Bakalis, Mr. Grimes, Governor Ogilvie.

SECRETARY'S REPORT

The Secretary presented for record appointments to the faculty made by the President; resignations and declinations; leaves of absence and retirements. A copy of the report is filed with the Secretary.

FUTURE BOARD MEETINGS

President Hughes announced the schedule for the next three Board meetings: February 16, Urbana-Champaign campus; March 15 (the Annual Meeting which had previously been changed by the Board from the second Tuesday, March 14), Urbana-Champaign campus; and April 19, Medical Center campus.

RECESS

The regular meeting of the Board was recessed and the President of the Board stated that an executive session had been requested and was being ordered to consider recommendations and reports relating to patentable discoveries and pending litigation.

EXECUTIVE SESSION

When the Board reconvened in Executive Session, the same members of the Board, officers of the Board, and officers of the University as recorded at the beginning of these minutes were present. The Board considered the following recommendations.

RECOMMENDATIONS OF THE UNIVERSITY PATENT COMMITTEE

(26) The University Patent Committee, with the concurrence of the Chairman of the University Research Board, submits the following recommendations relating to patentable inventions by members of the staff.

1. Emulsion system of perfluorocarbon compounds — David M. Long, Professor of Surgery, Medical Center, inventor; developed under the sponsorship of the 3M Company. By mixing liquid perfluorocarbon with existing diluted emulsions, it was possible to make very viscous emulsions with volume ratios of 12:1 and even 15:1. These emulsions proved to be most effective in outlining the tracheo-bronchial tree, particularly the 12:1 and 10:1 emulsions. The 15:1 emulsion was very viscous. These concentrated emulsions were made by stirring liquid perfluorocarbon into the dilute emulsions and mixing with a tongue blade.

The Committee recommends that the rights of the University in this invention be transferred to the University of Illinois Foundation for further development and possible patent application, subject to the rights of the sponsoring agency.

2. Preparation of a whole soybean beverage base — A. I. Nelson, Professor of Food Processing in Food Science, Urbana, M. P. Steinberg, Professor of

Food Engineering in Food Science, Urbana, and L. S. Wei, Associate Professor of Food Science, Urbana, inventors. The first contribution lies in utilizing the whole soybean, not an extract, for preparing the beverage base; the second contribution lies in developing techniques for treating the whole soybean so that it can be used for making a beverage by inactivating constituents that cause off-flavor development and nutritional deficiencies. The third lies in developing processing procedures that will reduce whole soybeans to a smooth, particulate-free slurry that is a stable suspension of particles, is free of objectionable texture, and is not irritating to mouth and throat. The fourth lies in treating the soybean slurry during preparation to control the viscosity or mouth feel of the beverage base.

The Committee recommends that the rights of the University in this invention be transferred to the University of Illinois Foundation for further development and possible patent application.

3. Use of soybean beverage base for preparation of high-protein beverage—A. I. Nelson, Professor of Food Processing in Food Science, Urbana, M. P. Steinberg, Professor of Food Engineering in Food Science, Urbana, and L. S. Wei, Associate Professor of Food Science, Urbana, inventors. This invention describes the combination of the soy beverage base with other food materials or components to prepare a rather wide range of flavorful high protein drinks: (1) soybean beverage base combined with cheese whey, (2) whole soybean beverage, (3) soybean beverage base combined with milk products, and (4) soybean beverage base combined with natural or synthetic fruit juice.

The Committee recommends that the rights of the University in this invention be transferred to the University of Illinois Foundation for further development and possible patent application.

4. Improved method of soybean preparation for oil extraction—A. I. Nelson, Professor of Food Processing in Food Science, Urbana, M. P. Steinberg, Professor of Food Engineering in Food Science, Urbana, L. S. Wei, Associate Professor of Food Science, Urbana, and Raymond D. Rice, former Research Assistant in Food Science, Urbana, inventors. The whole beans are cleaned, and the moisture level raised to whatever level is deemed desirable (usually 20 per cent) by immersion in water for a specified length of time (about 10 minutes). An equilibration period is allowed to enable moisture to distribute itself evenly throughout the bean, typically two hours or longer. The beans are heated, such as by placing in a steam chest at 210°F, and held at the elevated temperature for a sufficient time, such as two minutes. The enzyme-inactivated beans are dried to 8–10 per cent moisture and flaked in preparation for extraction in the normal manner. The spent flake need not be toasted if the heating process given the beans before extraction was sufficient to inactivate the antibiological factors or if such inactivation is to be done at a later stage in the processing of the spent flake into human or animal food. The oil resulting from this process requires less extensive refining, and the refined oil has greater storage stability as compared to conventionally produced oil. The resultant spent flake is free of beany odor and flavor and is quite acceptable to humans as food. The remaining flavor is pleasant and so mild that the flake takes on the flavor of the food with which it is mixed. The flake has excellent nutritive value.

The Committee recommends that the rights of the University in this invention be transferred to the University of Illinois Foundation for further development and possible patent application.

5. Method and equipment for rapid freeze drying of thick sections of foodstuffs—M. P. Steinberg, Professor of Food Engineering in Food Science, Urbana, and Walter C. Yackel, Research Associate in Food Science, Urbana, inventors. The key concept here is that needles are gradually pushed into the product as dehydration progresses; the tips of the needles remain at the drying front (or surface of the receding frozen layer or frozen core-dry meat interface). Heat of sublimation is conducted from the base plate down the needles to the drying front. The rate of heat transfer is the factor limiting rate of drying, and developing heat at the tip of each needle shortens the drying time.

The Committee recommends that the rights of the University in this invention be released to the inventors.

6. Method and equipment for increasing rate of freeze drying of thick sections of foodstuffs by injecting gas at the drying interface—M. P. Steinberg, Professor

of Food Engineering in Food Science, Urbana, and Walter C. Yackel, Research Associate in Food Science, Urbana, inventors. This invention uses a hollow needle for gas injection. This needle has only one hole and that is at its tip. The most important difference between this method and apparatus and former methods and apparatus is that the foodstuff is frozen separately and then the needles are gradually pushed into the foodstuff as drying progresses. The advantage here is that the tip of the needle is always at the receding ice front and all the gas is injected at the drying interface where it is of the greatest benefit in accelerating freeze drying.

The Committee recommends that the rights of the University in this invention be released to the inventors.

7. Speed control of step motors — Emil Lander, Research Assistant in Electrical Engineering, Urbana, Richard A. Yackel, Research Associate in Electrical Engineering, Urbana, and Gurdial Singh, Research Associate in Electrical Engineering, Urbana, inventors; developed under the sponsorship of Warner Electric Brake & Clutch Company. The basic idea is to insert a time delay into the feedback loop of the motor, the duration of which is determined by the desired final speed.

The Committee recommends that the rights of the University in this invention be assigned to the sponsoring agency.

8. Continuous flow concrete mixer — Edwin L. Hansen, Professor of Agricultural Engineering, Urbana, inventor. This is a combination auger and vibrator. Materials are metered in at one end and mixed concrete is discharged at the other. The idea of continuous mixing is not new, but the use of the vibrator for mixing may be.

The Committee recommends that the rights of the University in this invention be released to the inventor.

9. Internal vibrating concrete screed — Edwin L. Hansen, Professor of Agricultural Engineering, Urbana, and Steven George Hubble, Graduate Student, Urbana, inventors. A concrete strike-off screed vibrates the concrete internally, especially near the bottom edge next to the mold liner. This compacts the mix and liberates entrapped air at the lower surface of the concrete which in turn makes a flawless surface when the concrete slab is removed from the mold.

The Committee recommends that the rights of the University in this invention be released to the inventors.

10. Bone pulverizer — Frederick H. Wezeman, Research Associate in Orthopaedic Surgery in The Abraham Lincoln School of Medicine, Medical Center, inventor. A bone, cartilage, or general tissue pulverizer is constructed of two pieces of nonmagnetic stainless steel. This pulverizer is capable of pulverizing completely any tissues (soft or hard) at low temperatures. If necessary, high temperatures could also be used simply by heating the item prior to use. Whereas this would be applicable for hard tissues such as bones and teeth, it would not suffice for *soft* tissues since "fracture compression" is a necessary requirement for these tissues which therefore must be in a frozen state.

The Committee recommends that the rights of the University in this invention be released to the inventor.

11. Oscillating mass flow probe — S. L. Soo, Professor of Mechanical and Nuclear Engineering, Urbana, inventor; developed under the sponsorship of Detroit Edison Company. This design does two things: (1) renders the probe insensitive to flow velocity because change of 60 fps to 80 fps now only changes the intensity of impact by 2 per cent, and (2) the probe current is magnified because of greater amount of charges being transferred with a more severe impact produced by the vibrator.

The Committee recommends that the rights of the University in this invention be released to the inventor, subject to the rights of the sponsoring agency.

12. Immunodisc electrophoresis — Sanit Makonkawkeyoon, Graduate Student in Microbiology, Medical Center, inventor. An immunodisc electrophoretic technique for performing antigenic analysis of complex materials is described. The acrylamide gel for electrophoresis is polymerized in the form of a hollow cylinder by placing a Plexiglas rod in the middle of the tube. Subsequent to electrophoresis the rod is removed and the lumen is filled with the antiserum mixed with molten

agar. The procedure yielded numerous clearly separated precipitin bands which were easy to count as they appeared in the form of precipitin discs rather than as overlapping arcs characteristically seen in immuno-electrophoresis in agar or polyacrylamide gels on slides.

The Committee recommends that the rights of the University in this invention be released to the inventor.

On motion of Mr. Swain, these recommendations were approved.

On motion of Mr. Steger, the Board adjourned.

EARL W. PORTER
Secretary

EARL M. HUGHES
President