

# Cranch Unit Reports on Long Range Planning

The report of the Advisory Committee on Long Range Planning at Cornell, which includes 17 recommendations touching virtually every aspect of the future of the University, has been received by University President Dale R. Corson and transmitted to appropriate University agencies. (Alumni may obtain complete copies by writing to Cornell's Office of Public Information.)

The report placed special emphasis on the need for developing an effective system of long range academic planning and recommended guidelines to control growth in such areas as enrollment, size of faculty and support staff and facilities.

The 15-member committee of students, faculty and administrators, headed by Edmund T. Cranch, associate dean of the College of Engineering, was appointed by Corson in March, 1971. According to the report, Corson asked the committee to assess "the financial state of the University, establishing guidelines for long-range planning in the light of this assessment, and evaluating the academic consequences of such planning."

When Corson received the 126-page report in early October, he emphasized that it was only a first step in the planning process. He subsequently referred the report to appropriate faculty committees, the University Senate, and the school and college deans for advice. The report was presented to the Board of Trustees and the Alumni Council Oct. 13 and 14. Corson has appointed an administrative committee headed by Provost Robert A. Plane to receive and coordinate all responses and reactions. Corson hopes to present a "distilled" plan to the Trustees in May.

"President Corson is eager to get alumni response to the report," Richard M. Ramin, vice president for public affairs, said. A special alumni committee to seek alumni response to the report has been created under the direction of Robert A. Cowie, past president of the Alumni Association and vice chairman of the Cornell University Council. He will work with the Administrative Board of the Council which is responsible for preparing and presenting the alumni response to Corson.

Ramin said regional meetings of alumni are being organized, at which time the complete report will be presented and discussed.

Individual responses and reactions to the report should be directed to Robert A. Cowie, Office of Alumni Affairs, Cornell University, 626 Thurston Ave., Ithaca, N.Y. 14850.

Cornell, with a budgeted deficit for its endowed colleges of \$730,000 for the current fiscal year, is in the midst of a three-year program to balance the budget by the end of 1973-74. The advisory committee directed its attention to the endowed colleges for the period following the three-year program.

The report, which is divided into four chapters,



**MAKING A POINT** — Alfred E. Kahn (far right), dean of the College of Arts and Sciences, gestures to stress a point during discussion of report of the Advisory Committee on Long Range Financial Planning. Members of the committee who answered questions during a combined meeting of the Board of Trustees and the Cornell University Council are (from left) Edmund T. Cranch, associate dean of the College of Engineering and chairman of the committee; Stanley A. Strauss, a graduate student; Barry B. Adams, chairman of the Department of English; David L. Call, the H. Edward Babcock Professor of Food Economics; Wayne P. Merkelson, a student; Ronald N. Loomis, director of University Unions, and Donald F. Holcomb, chairman of the Department of Physics.

devotes 85 pages to the 17 recommendations. Cranch urged readers of the report to study the chapters leading up to the recommendations, "since they provide introductory and background information that is vital to a full understanding of the recommendations."

In its introduction, the report noted that 1972 "is

grant activity confronted higher education with financial realities which it had previously managed to avoid."

In order to meet the deficit at Cornell, which reached a high of nearly \$2 million in 1969-70, a Budget Stabilization Reserve Fund of nearly \$2.7 million was used. The fund was depleted in 1970-71

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the beginning of a steady decline in the percentage change in enrollment in higher education so that by the beginning of the 1980s a decrease in numbers is predicted .... Cornell must take into account the dynamics of enrollment trends, recognizing that the pressures for growth will diminish with the 1980s being characterized as an era of no growth."

In a chapter called "Unplanned Ubiquitous Growth," the committee detailed how Cornell reached the critical financial period it is in. The report called the 1960s "a tremendous educational boom." "Spurred on by seemingly unlimited public funds at both the federal and state levels few people looked ahead ...."

When the rate of increase of financial support began to slacken in 1967, "universities suddenly realized how thin their margins of safety had been," the report stated. "Inflation increased costs rapidly, and the simultaneous slowdown of the national economy combined with a leveling of governmental

and since then other special purpose funds have been used to cover the yearly deficit. Although there has been strong growth in the principal of invested funds, "approximately \$2 million in excess of (endowment) investment income is being liquidated annually to help meet operating expenses, a sum which, if retained, would be used to generate additional income. Since the financial viability of the University depends fundamentally on the rise in value of its Endowment, the growth of the Endowment must be protected," according to the report.

In a section titled "Summary of Expenses and Income, Conclusions," the report noted that by the definitions of the recent study sponsored by the Carnegie Commission on Higher Education and the Ford Foundation, during the period 1967-70 Cornell was in the "headed for financial trouble" category.

"Because income growth permitted the University to increase expenditures substantially, the cost-income squeeze is due primarily to a decrease in the rate of income growth," according to the committee report. "Because of the very limited controls available over income, there is great need to affect controls over expenditures .... The cost-income estimates show that the costs tend to exceed income, so reducing costs is important for maintaining a balanced budget."

The committee's first recommendation stated: "The President, Provost, Deans and Department Chairmen must make systematic academic planning their principal responsibility. Planning must be recognized and organized as a high level function, involving a coordinated approach to a whole series of substantive topics .... Equally important, the University Administration must organize itself for the effective implementation of those plans."

The committee said "the importance of the proposed activity requires a professional effort at the vice presidential level." They urged that funds be made available for academic planning and that this will be "a continuing effort which will lead to a 3-5 year Program Plan for the University."

In its second recommendation, the committee said: "Institute unit planning at the smallest academic budgetary program level." The committee defined such units as "usually departments, but centers, special programs, small schools and colleges, or groups of departments could be appropriate subdivisions." The committee said "this recommendation is intended to emphasize the pivotal (Continued on Page 4)

## List of the 17 Recommendations

Listed below is a summary of each of the 17 recommendations made in the report of the Advisory Committee on Long Range Planning:

1. Make systematic academic planning a principal responsibility of University officials, possibly staffing a position at the vice presidential level;
2. Institute unit planning in all departments or other appropriate subdivisions;
3. Develop a modern measurement and information system to improve reporting academic matters and to establish a data resource base;
4. Maintain the size of the faculty at its present level and increase the size of the student body by 2,000 over a five-year period;
5. Hold student financial aid from unrestricted income at a given percentage of tuition income, increase student employment, seek governmental student aid and develop a student loan plan;
6. Schedule tuition and fee increases of approximately 6 per cent for the next three years;
7. Award faculty salary increases based on merit;
8. Continue to give high priority to selective graduate education;
9. Develop new centers programs, institutes and

departments only after careful analysis of the present and planning for at least five years;

10. Review the academic calendar and consider the possibility of full year academic operation;

11. Strengthen academic effectiveness by seeking new approaches to teaching and learning methods and practices;

12. Strengthen academic effectiveness through improved motivation, evaluation and management techniques;

13. Retain the tenure system but give attention to procedures which encourage continued professional growth, and possible termination under carefully controlled procedures;

14. Plan the distribution of faculty by rank to provide continued opportunity for the promotion and addition of assistant professors;

15. Regard educational innovation as an essential aspect of long-range planning and set aside sufficient funds for this purpose;

16. Attempt to control the size of non-academic staff and support services and increase efficiency in this area;

17. Maintain selectivity in the capital expansion and improvement program.



## For Uris Hall Maintenance

# Uris Foundation Gives \$1 Million

The Uris Brothers Foundation of New York City has pledged \$1 million to Cornell to be applied toward maintenance and operation of Uris Hall, the University's new social sciences building.

The \$8.25 million building, named in honor of University Trustee Harold D. Uris, a 1925 Cornell graduate, and his late brother, Percy, was dedicated Oct. 13.

University President Dale R. Corson announced the latest gift to higher education by the Uris brothers at a joint meeting of the University Board of Trustees and the Cornell University Council, an alumni leadership group.

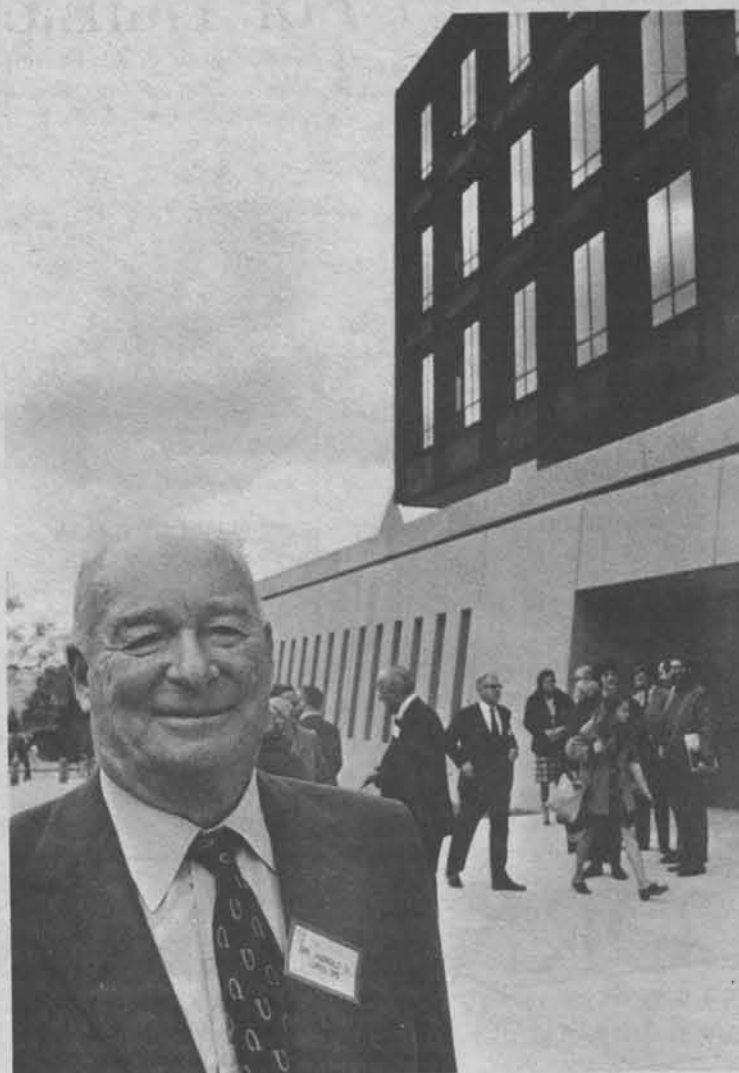
The \$1 million gift announced today brings to \$3 million the total gifts the Uris brothers, founders of the Uris Building Corporation of New York City, have given toward construction and maintenance of the social sciences facility. In 1968, they gave Cornell \$2 million toward construction of the building. Percy died in 1971.

Long-time benefactors of higher education, the Uris brothers have given more than \$10 million over the years to Cornell, Harold's alma mater, and to Columbia University, Percy's alma mater.

The undergraduate library at Cornell bears their name as does the hall at Columbia which houses the Graduate School of Business. Percy, who graduated from Columbia in 1920, served as a trustee at Columbia.

At dedication ceremonies in the 428-seat Uris Hall auditorium, Harold Uris presented the new social sciences facility to the University.

Uris called Cornell "an old, old friend" and said he is "very optimistic about the future of universities and especially Cornell. Anything I or my brother have done for Cornell has been a source of great satisfaction to us and I consider it an investment in the future of our country." He said he hoped the new



**URIS HALL** — Cornell trustee Harold D. Uris '25 strolls in front of the University's new \$8.25 million social sciences building after speaking at the dedication ceremonies in the building's auditorium.

building would "continue to contribute to the good teaching, to persistent and effective learning, and that it may help those who are as fortunate as I have been to be a part of Cornell."

Robert W. Purcell, chairman of the University board, accepted on behalf of the University. Purcell acknowledged that Uris Hall was made possible by the gift of the two brothers and that the naming of the building was "in grateful recognition of their leadership and deep concern for the advancement of higher education."

Corson also spoke: "This latest gift," he said, "reflects not only the deep concern of Trustee Uris for higher education, but also his

understanding of the less glamorous but absolutely necessary aspects of achieving high quality education at Cornell."

The concluding speaker at the dedication ceremonies was Alfred E. Kahn, an economist and dean of the College of Arts and Sciences. He said, "I'm particularly delighted to find that the students have already given the building a name. They've christened it 'Old Rusty.' I'm delighted for two reasons: First of all, I think that's an affectionate designation. And secondly, that characterization has always seemed to me not a bad one for Harold Uris." Uris has red hair.

Uris Hall is located at the northeast corner of Tower Rd. and East Ave., the hub of the University's main campus.

The building was designed by Skidmore, Owings, and Merrill and is distinctive for its weathered steel exterior. The three-story top section of the building is of welded steel trusses and solar bronze glass. The steel, a special alloy, has been allowed to weather and is taking on a deep brown oxide coating which forms a durable maintenance-free finish.

The three-story steel exterior rides on four concrete pillars atop a two-story, 180-foot square concrete exterior base.

In all, there are six levels, the sixth being between the concrete base and the steel and glass box on pillars.

## Floyd Newman's Gifts Fund Varied Projects

Floyd R. Newman, a former Cornell Trustee now a Presidential Councillor, has given some \$730,000 to the University for a variety of projects, Cornell President Dale R. Corson announced recently.

Gifts from Newman, a 1912 Cornell graduate, will be used for the College of Engineering, Cornell Plantations, the Department of Physical Education and Athletics, and site improvements at Helen Newman Hall.

"These gifts from Floyd Newman reflect his lifelong interest in the well-being of Cornell University," Corson said. "His many gifts over the years have helped the University immeasurably. Mr. Newman's generosity and faith in the University are an inspiration to all Cornellians."

The Department of Geological Sciences in the College of Engineering received a gift of \$100,000 from Newman. The money will be used to develop research capabilities in the department, support some research, purchase equipment and to attract matching fund gifts, according to Andrew Schultz Jr., dean of the College of Engineering.

Newman gave \$50,000 to begin development of eight acres known as "Slim Jim Woods Feature" within the Cornell Plantations, with an additional \$50,000 for the maintenance endowment fund of the area. He gave another \$100,000 toward maintenance of the Fall Creek and Cascadilla Creek gorges, both of which are under the management of Cornell Plantations.

Richard M. Lewis, director of Cornell Plantations, said the development of Slim Jim Woods Pasture is the first step in the Cornell Arboretum expansion plan, which was developed in 1970. Lewis said the area, which is east of the intersection of Caldwell and Plantation Rds., will be integrated into the arboretum, with upgraded road and parking facilities and some new plantings. The area gets its name from a large tree in the woods called "Slim Jim" by forestry students.

Two additional gifts from Newman totaling \$90,000 will further enhance the development of the Arboretum and Cornell Plantations, according to Lewis.

Another Newman gift is a "Poly-Surf" all weather, rubber surface track which has been installed at Schoellkopf Field at a cost of \$60,000. Artificial lighting sufficient to permit night athletic contests at Schoellkopf is expected to be installed in the near future at a cost of \$40,000, of which Newman contributed \$20,000. The Class of 1939 is expected to cover the other half of the cost. Newman also gave \$50,000 to the physical education and athletics endowment fund.

"Mr. Newman's splendid gift will permit maximum use of Schoellkopf Field for Cornell and the Ithaca community," according to Robert J. Kane, dean of physical education and athletics. "The new track is in the most modern mode, replacing the old-fashioned cinder track. The lights will open up tremendous additional possibilities for us for play and practice in the fall and spring. Schoellkopf will now rank with the finest collegiate facilities in the East."

Newman also gave the University \$190,000 for maintenance and maintenance endowment for Helen Newman Hall, the women's physical education building given by Newman in 1963 in honor of his wife. One project funded by this money is the stabilization of the slope between the building and Beebe Lake. Soil slippage has resulted in erosion, poor drainage and the impossibility of permanent plantings, according to Thomas W. Mackesey, vice president for planning.

Newman, who started in the petroleum industry in 1912 as a trainee and went on to become co-owner of the largest independent industrial fuel oil distributor in the United States, has been active in both University and business affairs.

He served on the Cornell Board of Trustees from 1951 to 1958. He has been a member of the Cornell Council since 1951 and an active worker for the University.

In 1949, Newman contributed \$1 million to Cornell's nuclear studies facilities. The two buildings housing the facilities were dedicated as the Floyd R. Newman Laboratory for Nuclear Studies.

During the last decade, Newman contributed \$1.7 million for the construction of Helen Newman Hall, served as chairman of a committee to raise an endowment fund in support of the Cornell Class of 1912 Professorship in Engineering, made possible the establishment of the Thomas R. Briggs Professorship in Engineering, contributed \$100,000 to cover the costs of landscaping and engineering plans for the proposed Cornell Arboretum expansion, and gave \$19,000 to illuminate the top of Library Tower and the environs of the Andrew Dickson White Art Museum.

Cornell recognized Newman's service to the University in 1966 by selecting him as one of 10 outstanding alumni elected to serve as the University's first Presidential Councillors. In 1971, Newman was one of 13 individuals to receive an engraved silver medal from the College of Engineering in appreciation for his support in development of the College.

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## From Baldrige Estate \$6 Million Bequest Announced

Cornell will receive more than \$6 million from the estate of Anthony O.R. Baldrige, a member of the Cornell Class of 1920.

The announcement of the gift from the estate of the late New York City stockbroker was made by University President Dale R. Corson.

The bequest, which is unrestricted in its use, will be invested in the University's Capital Fund to produce income in relief of the University's operating deficit.

The Capital Fund is the University investment fund composed principally of common stocks selected with the objective of long term growth and maximum total return to the University.

In making the announcement, Corson said that "we have known that the Baldrige bequest was coming to the University, but have not known exactly when, and in what amount, the monies would be received. Because of this we could not previously include them into this year's budget. Now that we are actually receiving monies from the Baldrige trust, we are in a position to incorporate the trust income into the Cornell budget. Together with improved investment results, the added income flowing from the Baldrige estate will enable me to report to the University Board of Trustees at its meeting here later this week that the estimated 1972-73 budget deficit of \$1.1 million can be reduced to

approximately \$730,000."

Although all of the monies have not been transferred to the University, Corson said the estimated total value of the Baldrige bequest should exceed \$6 million.

The Baldrige trust, Corson said, was established in 1957 but Baldrige's wife, the income beneficiary, died this summer.

In anticipation of receipt of the Baldrige money, the Executive Committee of the University Board of Trustees acted in July to capitalize the unrestricted proceeds from the Baldrige estate "for the production of income in support of the budget for the Endowed Colleges at Ithaca, with participation in the Capital fund." It has been board policy since February, 1969, to capitalize any unrestricted bequest which exceeds \$100,000. The capital acquired in this manner, Corson said, helps to offset the advances which have had to be made from unrestricted endowment funds to temporarily help finance such major capital projects as the rehabilitation of Baker Laboratory, the North Campus Commons and Uris Hall pending receipt of specially designated gifts for these purposes.

Baldrige, who was 59 when he died just prior to Christmas, 1957, in Greenwich, Conn., was the retired head of the New York City brokerage firm of Baldrige and Son. He was also affiliated in an executive

capacity with National Steel Co., Weirton, W. Va., a company founded in 1920 by his father, William, and Ernest Weir.

At the time of his death, Baldrige left his estate in trust for his wife, Greta Thompson Baldrige, who later remarried and became Mrs. William A. Kirkland. Baldrige's will stated that all but \$200,000 of his estate would be given to Cornell at the time of his wife's death. Mrs. Kirkland died in June.

Baldrige, who was born in Connelville, Pa., in 1898, prepared for Cornell at Cascadilla School here. He was a member of Psi Upsilon social fraternity as an undergraduate. His years at Cornell were interrupted by service in the U.S. Navy during World War I.

Baldrige's brother, the late J. Lakin Baldrige, earned his bachelor's degree at Cornell in 1915 and a master's degree in architecture in 1922. He designed, built, and owned the house on Cayuga Heights Road which was the residence of Cornell's seventh president, James A. Perkins, from 1963 to 1969.



**THE SOCIAL SCIENCES** — During the Uris Hall dedication a panel discusses new developments in the social sciences. Speaking is Robin M. Williams Jr., the Henry Scarborough Professor of Social Sciences. Next are Provost Robert A. Plane, moderator; Harry Levin, the William R. Kenan Jr. Professor of Psychology, and Ta-Chung Liu, the Goldwin Smith Professor of Economics.

operation at the end of January, 1973. At first, the system will provide figures for more than 50 different important variables, later more, of the nation's economy. These will include such monthly estimates of the important barometers of the economy as personal consumption expenditures on cars, other durable and nondurable goods; total amount spent on housing construction; business investment in plant and durable producers' goods; various price and wage levels; employment; and the total GNP.

## Purcell Explains Plans For Transfer of CAL

The formation of a for-profit corporation by the Cornell Board of Trustees to which the assets and liabilities of Cornell Aeronautical Laboratory (CAL) will be transferred has been announced by Robert W. Purcell, chairman of the Board. Purcell said the action is a further reaffirmation of previous Board decisions to separate CAL from the University.

The Internal Revenue Service (IRS) has issued a ruling that Cornell will not have to pay back taxes on CAL when the for-profit corporation is formed. The University asked for the IRS ruling, according to Purcell, to clarify the possible applicability of a provision of the Tax Reform Act of 1969 to "a situation of this kind."

Calspan is the "tentative name" of the corporation, Purcell said. Laboratory officials said that name was selected because it "connotes the fact that CAL spans the breadth of technology."

Purcell noted that formation of the new corporation and preparations for a public sale of its stock are major steps toward implementation of actions taken previously by the Board. Securities and Exchange Commission regulations concerning prospective stock issues prevent the Board from commenting in detail on matters relating to the new corporation, Purcell said.

In May, the Board empowered an ad hoc committee to develop a plan for the formation of such a corporation. The Board had studied the feasibility of creating a for-profit corporation since March.

Separation of CAL from the University was first approved in principle by the Trustees five years ago after the Board decided such a separation would be "in the best interests of both." In 1967, Cornell students and faculty criticized the relationship between CAL and the University because of the laboratory's war-related research.

Attempts to sell CAL were hampered by a series of litigations over the legality of the sale of the laboratory to any private company. A final ruling allowing Cornell to proceed with the sale was handed down in 1971.

## Cornell Prof Develops An Econometric Model

A Cornell economist has announced the development of the first monthly econometric model for predicting the condition of the nation's economy on a monthly basis for as much as one year in advance.

Using his model, Ta-Chung Liu, the Goldwin Smith Professor of Economics and Chairman of the Department of Economics, forecasts, for example, the nation's annual rate of gross national product (GNP) for June, 1973 at \$1,219 billion (an annual rate) as compared to the most recent available actual figure of \$1,139.4 billion for the second quarter (at annual rate) of this year.

He also foresees civilian employment for June, 1973 as nearly 83 million compared to the current official figure of about 82 million. The consumer price level (index number) of June, 1973, he predicts, will be 129 as compared to the recent figure of about 126. He said these predictions may have to be

revised if the State of the Union and the budget messages to be made by the President in January, 1973 propose any new economic policies or moves.

Liu revealed his latest model at the dedication of Cornell's new \$8.5 million social sciences building, Uris Hall. In addition to Liu, Robin M. Williams Jr., the Henry Scarborough Professor of Social Sciences, discussed "New Developments in the Study of Social Conflict and Social Institutions," and Harry Levin, the William R. Kenan Jr. Professor of Psychology and chairman of the Department of Psychology, discussed, "How We Read."

Liu made the predictions by feeding various statistics into a computer programmed with more than 100 complex equations he has developed over the past years. His project was first supported by the National Science Foundation.

The forecasts were given as examples of his system which will be placed into full

The information will be published in monthly, quarterly and annual forms at the end of each month after next January for a year ahead and made available to those outside of Cornell under arrangements to be worked out with the University. Econometric models for predicting the nation's economic conditions on an annual and quarterly basis have been used increasingly for planning by businessmen, industrialists, bankers and the government since the 1950s. This is the first monthly model available.

Liu was also author of an

annual econometric model in 1955 and a quarterly model in 1963. He said he expects to refine his monthly model to extend it to make forecasts for specific industries. He said he has tested his monthly model against the actual monthly figures during the period from 1953 to 1971. His model's forecasts, with but a few exceptions, averaged to be 95 to 99 per cent accurate. The biggest deviation was in changes in wage rates which averaged out at about 76 per cent accurate. This has long been the most difficult forecast for econometric models.



# Advisory Committee on Long Range Planning

(Continued from Page 1)

planning role of the basic academic units of the University .... The ad hoc procedures of the past will not be adequate for the future. Understanding Cornell surely must begin with the basic units understanding themselves with 3-5 year plans."

The third recommendation said: "Proceed now to develop a modern measurement and information system which will provide: a) An improved system of reporting academic efforts and results. b) The data resource base for program planning and evaluation including cost indices of diagnostic significance...."

In commenting on this recommendation the committee noted that "regardless of historical precedent or the seemingly distasteful nature of things quantitative and pecuniary, Cornell must develop measures of program effectiveness and cost indices if it expects to plan rationally for the future. In short, Cornell must understand itself."

Still on the same recommendation, the report stated: "The Committee is mindful that a certain danger lurks in the development of a system of program planning and evaluation. An academic community is justifiably apprehensive that an administration might use the controls, restraints, incentives and centralization which accompany planning in a heavy handed manner and thereby poison the well-springs of academic excellence. The potential for abuse only emphasizes the very great importance of self-generated faculty responsibility for the effective use of resources."

The fourth recommendation, under the general heading "Orders of Magnitude," stated: "Institute the following overall guidelines of size: 1) The total number of faculty should not be increased. 2) Embark on a program of careful growth in the size of the student body, with the number of students rising to about 17,500 at the end of a five year period." Cornell now has a student body of about 15,500.

In explaining its recommendation on faculty size, the committee noted "the increase in numbers of faculty and support staff in the last ten years has far exceeded the growth of undergraduates." During that time there was a 24 per cent increase in undergraduates, with a 75 per cent increase in faculty and four support staff added for each faculty member.

"The number of Master degrees per faculty member could be substantially increased and a modest increase in the number of Ph.D. degrees per faculty member could be accommodated," according to the committee. "It is in this sense that we believe Cornell has unused academic capacity at the graduate level. Faced with this situation, in broad terms Cornell must either reduce the size of its academic and support staff or increase the number of students."

The report goes on to show that between 1960-61 and 1971-72, the overall student-faculty ratio in the endowed colleges dropped 20 per cent while the



Edmund T. Cranch and the Report

national student-faculty ratio showed a definite increase.

"It is now estimated that in the Endowed Colleges (Law and B&PA excepted) about 45% of the courses have ten or less students per class," the committee reported, and "that a relatively small number of students benefit from the great number of small classes. The Committee is mindful that in applying gross indices one slurs over many factors such as the uneven distribution of students and resources, the relative and changing attractiveness of different fields and of course measures of quality. From the respective trends in numbers of students and faculty and the relatively large number of small classes, it seems clear that further faculty expansion is unjustified."

In recommending an increase of 2,000 students, the committee addressed itself to questions associated with the term "campus life." The committee foresaw no problems with classroom space, stating that "a conservative estimate of current classroom underutilization is 20 per cent."

Nor did the committee see any problems for the University dining system which "is operating below capacity and could handle at least another 2,000 students." In health care, "all trends indicate that expansion will have to take place regardless of additional students and their needs will have to be considered in that expansion," the report said. "... rising levels of expectation lead some to conclude that we are already at the threshold of deteriorating

quality and accessibility of athletic facilities," the committee wrote.

University union facilities posed problems also. "Willard Straight Hall is crowded, and even without an increase in the number of students it needs to be expanded .... Additional students would require that early attention be given to renovation and possible expansion of hard pressed campus Union facilities."

An increase in students would mean an increase in parking and transportation "and additional facilities would be required in advance of such additions."

The committee said there is evidence that additional students could be accommodated in off-campus housing. "The Committee prefers that additional students be housed on campus, but it would oppose such a trend if it meant either subsidization of housing or anything like the burdensome debt service of the North Campus Dormitory complex. There may be several options open to the University in this area; provision for on-campus student housing through cooperative arrangements with private firms is one such ....

"Before embarking on major expansion in the number of students, Cornell must face up to a policy on the housing of its students and then allow sufficient time for solid planning before implementation of its policy."

In achieving the increase by 2,000 students, the committee said "upperclass transfer students and attractive one year master's degree programs should be encouraged."

The committee's recommendation "rests on the assumption that the increment of income will appreciably exceed the increment of cost," and notes that the expense of instruction should be controlled. "Faculty size will have to be carefully controlled, not permitted to increase and if possible decreased. The average number of credit hours taught will necessarily rise and in this sense the average teaching loads will rise and a decline in the academic standard of living might result. However, flexibility and discrimination in the assignment of teaching load should be encouraged...."

The fifth recommendation said: "Adopt student financial aid policies which 1) Hold aid from unrestricted funds to a given percentage of tuition income ... perhaps using 1970 as a base year. 2) Use increased student employment (summer and academic year) and stricter application of 'need' criteria in the determination of a financial aid 'package.' Consider putting some graduate financial aid on a need basis. 3) Press for maximum possible utilization of State and Federal sources of student aid. 4) Implement an effective student loan plan attractive to middle and lower income families."

"... Cornell is having difficulty in maintaining economic accessibility for all students admitted and this can only result in the eventual reduction in the





# Cornell Issues Report on the University's Future

numbers of middle and low income students," the report stated. Except for COSEP (Committee on Special Educational Projects) students, "Cornell is in a period of scholarship retrenchment for the overwhelming majority of its student constituents.

"The Committee sees no way to alleviate this situation without further use of unrestricted funds which would put additional pressure in the direction of an increased deficit. Thus, its recommendation for holding the use of unrestricted funds to a given percentage of tuition income." In recent years, that percentage has been between 5.5 and 6 per cent of tuition income.

In calling on the Cornell administration to develop greater governmental student aid, the committee observed "that the need for financial aid is a reflection of a much larger societal state of affairs whereby public forces are at work in the direction of universal higher education, but as yet the necessary supporting financial resources have not been provided.

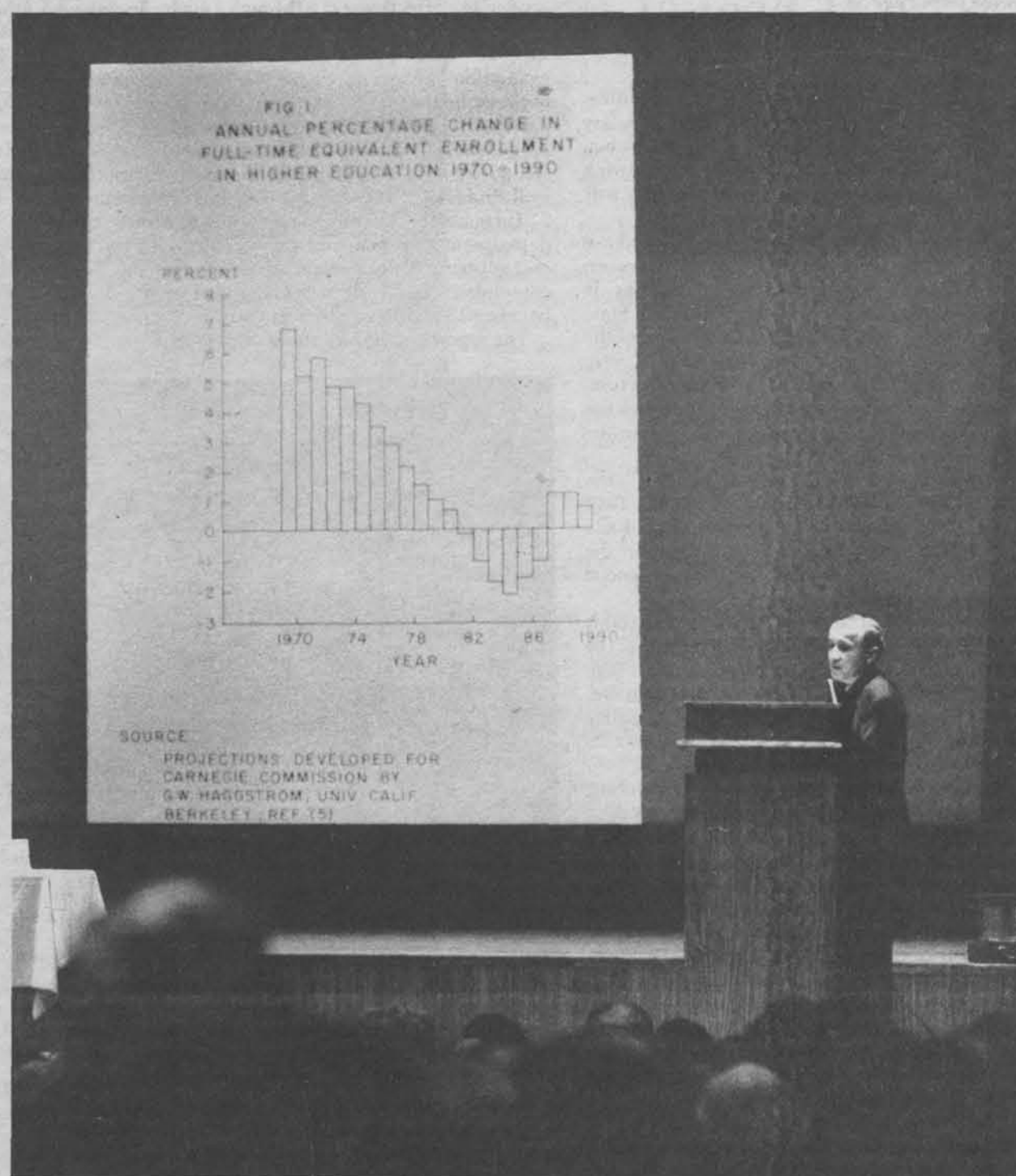
The committee stated that a principal means of determining financial need, the Parents' Confidential Financial Statement, "has loopholes .... we advise that Cornell press continued efforts at refinement of the financial aid selection process. We are not suggesting that Cornell become a tight fisted institution, but rather to recognize that the area of financial aid is one of distributing a kind of justice, and the associated responsibility requires that difficult decisions be made."

A deferred payment plan which is practical for middle income families is a "must," according to the committee, because "in a time when insufficient endowment funds are available for scholarships and a policy of subsidization of public higher education continues, the University will be forced to transfer an increasing share of the cost to the individual. There is no alternative."

In its sixth recommendation, the committee said: "Tuition and fee increases of approximately 6 per cent be scheduled for the next three years with attendant evaluation of the effect on student quality, competitive position and possible tendencies toward 'income polarization'."

During the period 1960 to 1972, Cornell had an annual average tuition increase of 6.5 per cent. Between 1967 and 1972, the average increase was 7.4 per cent. The recommended 6 per cent rate of increase "would merely enable Cornell to keep up with the rate of increase in costs and represents a diminution from the recent 7.4. increase. It can be done only if we institute substantial economies," the committee said. "The 6 per cent rate of increase ... would keep up with the anticipated rate of increase in disposable family income, in money terms."

The committee stated it did not like to recommend the increases, "but alternatives such as significant



program cuts, continued invasion of endowment funds, greatly reduced salary increases, or cuts in financial aid are deemed to be even more undesirable."

Cornell has drawn a significant number of students from middle income families and the committee recommended a continuation of the practice. That will not be easy, the committee stated, because of the increasing gap between costs of public and private

institutions.

"The warning flags are up and Cornell must proceed knowing that at some stage it might well have to continue without the benefit of increased income from tuition and fees ... if, in the face of continued national inflation, the University could not continue to increase tuition and fees, then we would face an extremely serious situation.

(Continued on Page 6)





# Cranch Unit Reports on Long Range Planning

(Continued from Page 5)

The seventh recommendation stated: "Keep a strong competitive faculty salary position based on merit increases."

According to statistics compiled by the committee, between 1967 and 1970 "Cornell's faculty salary increases have been just barely adequate when compared to national trends and there is a growing concern that serious erosion in our position will occur."

Salary increases in Cornell's endowed colleges have been based solely on merit in recent years. However, there have been "across-the-board" increases in Cornell's statutory colleges. "If this New York State policy continues, it will, in time, erode the base of the Endowed Colleges salary policy and make it very difficult to maintain an adequate salary structure. Thus, the Committee urges the Administration to use its influence in trying to convince the State authorities to move toward a merit system."

Under a section titled "Academic Affairs," the committee's eighth recommendation stated: "Give continuing high priority to selective graduate education. Assert Graduate School leadership in the identification of new programs and the financial resources needed for excellence."

Cornell has the kind of varied graduate programs that are valuable and attractive, according to the committee. "Cornell has a comparative advantage here that it should vigorously exploit and promote. Thus, we recommend that Cornell adopt a policy counter to the apparent trend and try to improve its position and attractiveness for graduate study."

The ninth recommendation said: "Centers, Programs, Institutes, Departments or similar organizations should be initiated only if: 1) A clearly established unit plan exists, which foresees their continued financial viability for a period of the order of 5 years. 2) The plan includes an analysis of the cost to the University if they must be 'absorbed' at a future date. 3) A clear and convincing case is made that the organization is not duplicative of existing functions or efforts at Cornell."

In the decade of the 1960's, funds were available for the creation of new programs, the committee noted, and they often were instituted without adequate planning. "As a result, Cornell absorbed an increasing array of obligations with which are associated real and continuing costs. (This recommendation) is not intended to stifle the initiation of all such programs, but rather to point up the need for inclusion of these special academic structures in both financial and academic planning activities."

The committee's 10th recommendation said: "Undertake a comprehensive review of the academic calendar leading to a decision on possible full year academic operation of the University."

The committee observed that financial pressures will continue and "any system which includes an 'idle period' of one third of the calendar year should be seriously examined and the apparent lack of utilization justified." The committee called on the University Senate to review the matter and noted that the Senate and the Faculty Council of Representatives will have to develop ways to work together on the calendar.

Recommendation 11 stated: "Strengthen academic effectiveness by making a significant commitment to improvement of instruction through such means as: 1) Support of centralized facilities for research and development in teaching, learning, and evaluation of teaching effectiveness — for example the Center for Improvement of Undergraduate Education (CIUE). 2) Encouragement of faculty through discriminating use of released time and other elements of the reward structure, to develop new or improved instructional formats, educational materials, or learning aids. 3) Continued search for measures of effective teaching and for practices which will regularly reinforce the faculty reward structure in recognition of outstanding teaching."

The committee stated that an agency like CIUE "seems like the only conceivable way ... to sustain a coherent program" of educational research. Because of this, the committee recommended "serious consideration (of) a long-term commitment of stable funding of a central core agency such as CIUE."

The 12th recommendation said: "Strengthen

academic effectiveness through such improved motivation, evaluation and management techniques as: 1) Establishing a continuing post-tenure evaluation system having the four components outlined below: (a) An annual review of each faculty member's achievement; (b) A regular review immediately prior to each sabbatic leave; (c) A more scrupulous review for promotion from Associate to Full Professor; (d) Increased use of early retirement. 2) Increase the effective length of appointments of department chairmen and provide adequate rewards and support, 3) for certain administrative purposes, consolidate small departments into ones having between 15 and 40 faculty members."

The report details how these steps toward increased



academic effectiveness can be achieved.

The committee's 13th recommendation stated: "The tenure system should be continued, but with much greater faculty and administrative attention given to: 1) Procedures which encourage continued professional growth, 2) Possible termination under carefully controlled procedures."

While writing in support of the tenure system, the committee observed that the system "tends to provide unqualified job security and it is this de facto protection that can lead to weakness." Noting that tenured faculty have an obligation to continue the intellectual growth that justified the tenure appointment, the committee also offered a suggestion for professional growth.

According to the committee, the long period between promotion to full professor and retirement "provides no change in status to stimulate the setting of high goals on a continuing basis." In order to overcome this, the committee suggested a fourth professorial rank — distinguished professor — which would be awarded for distinguished teaching and research.

The committee said it did not like the traditional criteria for dismissal of tenured faculty and preferred the phrase "inadequate performance of University responsibilities." Using this guideline, the committee "believes a suitable procedure for termination of tenure could be developed." The committee offered a complex procedure which although they expected would be "invoked only very rarely — it seems to us important that it exist."

The committee's 14th recommendation said: "Plan the distribution of faculty by rank to provide continued opportunity for the promotion and addition of assistant professors. Encourage the use of part-time appointments in all faculty ranks."

The recommendation is "aimed at maintaining the flow of new staff" so that the faculty is renewed. The committee provided information to compute estimated turnover rates in order to manage the composition of the faculty. Also, the committee

offered three examples to illustrate the results of different policy approaches to the problem.

The 15th recommendation stated: "Regard educational innovation as an essential aspect of long-range planning and set aside sufficient funds on a continuing basis for this purpose."

In commenting on this recommendation the committee reported that "New programming funds in Cornell's 1971-72 budget amounted to about \$170,000. We view this as a bare minimum with \$250,000 being closer to the necessary level .... Cornell must provide a pool of funds for educational innovation leading to new programs of significance."

Under the heading "Support Functions," recommendation 16 said: "In the areas of non-academic and para-academic staff and support services Cornell must: 1) Control the size of the support staff, press for reductions wherever possible and encourage better manpower utilization, 2) Strengthen the role of supervisory and middle management personnel by providing management advisory service where necessary and by supporting implementation of sound manpower practices, 3) Try to eliminate the dual system resulting from the presence of State and Endowed divisions, 4) Anticipate unionization and try to improve staff utilization and efficiency."

In noting that the ratio of support employees to faculty is about 4 to 1, the committee stressed the difficulty it had gaining information in this area because of different reporting techniques. The committee pointed out that the support costs are high and may not be worth "the sacrifices."

"... a strenuous effort must be made to effect savings even if it means a reduced level of support service. The ratio of 4 is not sacred. There is no question but that the whole staff, faculty included, must give more thought to better utilization of support staff. We believe the present state of affairs is largely the result of an absence of management. No one was looking critically at these areas or attempting to effect efficiencies. Everyone has a stake in this area and administration must press for improved efficiency."

The final recommendation, 17, stated: "Maintain selectivity in the capital expansion and improvement program; specifically: 1) Require that full project costs of academic facilities be funded for both construction and maintenance with minimum use of endowed funds, 2) Require that life cycle project costs of revenue producing facilities be amortized from income and gifts, 3) Give high priority to maintenance programs and critically review plans for renovation and rehabilitation."

The committee cited two examples of recent building projects that have proven more costly than originally envisaged: Uris Hall, the new social sciences building, and the North Campus Dormitory complex.

Uris Hall "is an example of the latent problems in the construction of academic buildings," the committee said. The total cost was \$8.6 million, with \$3.3 million coming in gifts, including \$2 million from Harold and Percy Uris. The balance has been borrowed from the State Dormitory Authority.

Beginning this academic year, the committee said total debt service will be some \$382,000 per year, with operating expenses estimated at \$228,000 per year. "The point here is that before large sums of money are committed to nonself-amortizing purposes, Cornell must toughen up the decision process and be certain the project can be fully justified."

When the North Campus complex was planned, it was hoped that gifts would cover a large portion of the construction cost, according to the committee. When the gifts were not forthcoming, it was necessary to borrow \$17.4 million from the State Dormitory Authority. The 1971-72 debt amortization and service interest was \$1.4 million and these carrying expenses exceed the room charges to students living in the complex. "Construction of expensive living facilities is expensive," the committee observed, "and in planning for the housing of additional students, Cornell must carefully weigh the various alternatives."



By Cornell Engineers

## Pollution-Free Engine Developed

A non-polluting automobile engine which combines the good points of both the internal and external combustion cycles has been developed by a Cornell professor and a graduate student.

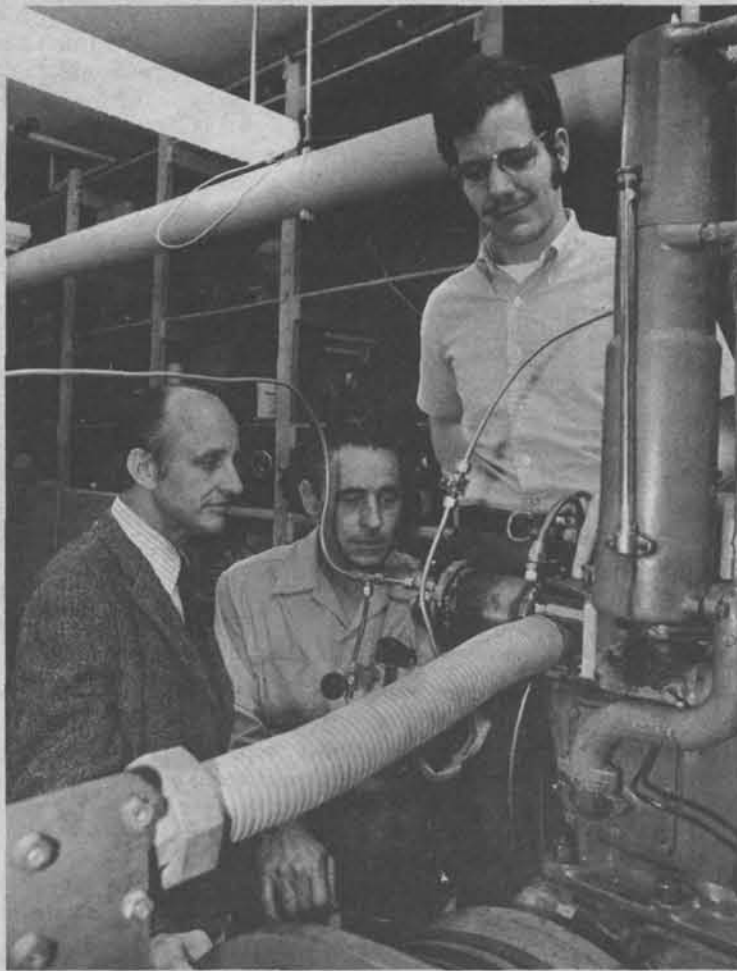
The engine, which weighs little more than a conventional V-8 engine and is about the same size, was developed by Edwin L. Resler Jr., the Joseph Newton Pew Jr. Professor in Engineering and director of the Sibley School of Mechanical and Aerospace Engineering, and Herbert M. Kosstrin, a doctoral candidate from Valley Stream, Long Island.

Although other non-polluting engines exist, the two researchers said they feel theirs is unique because it possesses the advantages of the proven internal combustion engine but does away with the pollution that engine produces.

"The configuration of our engine," Resler said, "would allow an auto manufacturer to use all his existing tooling. No expensive retooling would be necessary to produce it."

Resler also said it is feasible to modify existing engines so that pollution control can be effected in present automobiles.

The hybrid engine consists of eight cylinders, six of which are internal combustion and two of which are external types. The six internal combustion cylinders are run



**FOR CLEANER AIR** — Edwin L. Resler Jr., professor of engineering, technical associate Bud Tompkins and doctoral candidate Herbert M. Kosstrin (from left) examine the non-polluting automobile engine designed by Resler and Kosstrin.

with regular fuel but at a rich fuel-air ratio to eliminate nitric oxides emission. Nitric oxides are one of the major and most difficult to control pollutants of regular internal combustion engines.

The exhaust gases of the internal combustion cylinders

are used as fuel for the two external combustion cylinders. This eliminates carbon monoxide and hydrocarbons and results in an exhaust which surpasses the 1975 federal pollution standards, the researchers said.

The new engine was developed as part of Kosstrin's research work as a doctoral candidate.

## Glee Club Welcomes Deep-Voiced Women

After more than a century, women may join the Cornell Glee Club — if they can sing like men.

The 80-member glee club had previously restricted its membership to any male student at the University who met the standards of the organization. The opportunity for women came when club members voted to delete a single word — "male" — from their constitution, written in 1961.

Jonathan M. Kaplan, student manager of the club, explained the significance of

the deletion: "Before, we couldn't even try out a girl — this amendment eliminates discrimination solely on the basis of sex."

He emphasized, however, that the purposes of the glee club remain unchanged. They are "the study, practice, performance and promotion of music for male voices."

"Male voices are only those in the tenor and bass range and quality," Kaplan said.

Women students who think they may qualify can audition at glee club tryouts early next semester.

## New Approach for CAU

Cornell Alumni University in 1973 will be conducted at a new time and with a new approach, according to G. Michael McHugh, director of public affairs education programs.

Alumni University will be conducted during the last two weeks in July and the first two weeks in August (July 15-Aug. 11) this year. In the past, CAU was held for three weeks in July and one week in August. McHugh feels the change will attract more people who see CAU as both an educational and recreational experience.

This year the program will have a single unifying theme — "The Edge of Discovery" — with two approaches to it. "The first will be more inner-directed toward the mind of man and his relationships with other men; the other more outward-directed toward his world," McHugh said.

Several faculty members have been selected for the program, with others to be selected soon. During Weeks I and III (July 15-21 and July 29-Aug. 4), Max Black, the Susan Linn Professor of Philosophy, and Urie Bronfenbrenner, professor of human development and family studies, will participate. During Weeks II and IV (July 22-28 and Aug. 5-11), H. David Block, professor of theoretical and applied mechanics, and Edward P. Morris, professor of Romance studies, will participate.

McHugh said additional information is available by writing to him at 431 Day Hall, Cornell University, Ithaca, N.Y. 14850.

## Trustees Elect Three Presidential Councillors

Herbert F. Johnson of Racine, Wisc., Spencer T. Olin of St. Louis, Mo., and Alfred F. Saperston of Buffalo were elected Presidential Councillors at Cornell at a meeting of the University Board of Trustees Oct. 13. All three are former board members who were elected to emeritus status last May.

Election as a Presidential Councillor is "a distinction conferred for life upon men and women who during their most active years have given high service to Cornell and have made an outstanding contribution to the future of higher education."

No more than 25 persons can hold the designation at one time. The election of these men brings to number of men and women now serving on the panel to 20.

Johnson, who was a member of the Cornell board for 25 years, is chairman of S.C. Johnson & Son, Inc. (Johnson Wax).

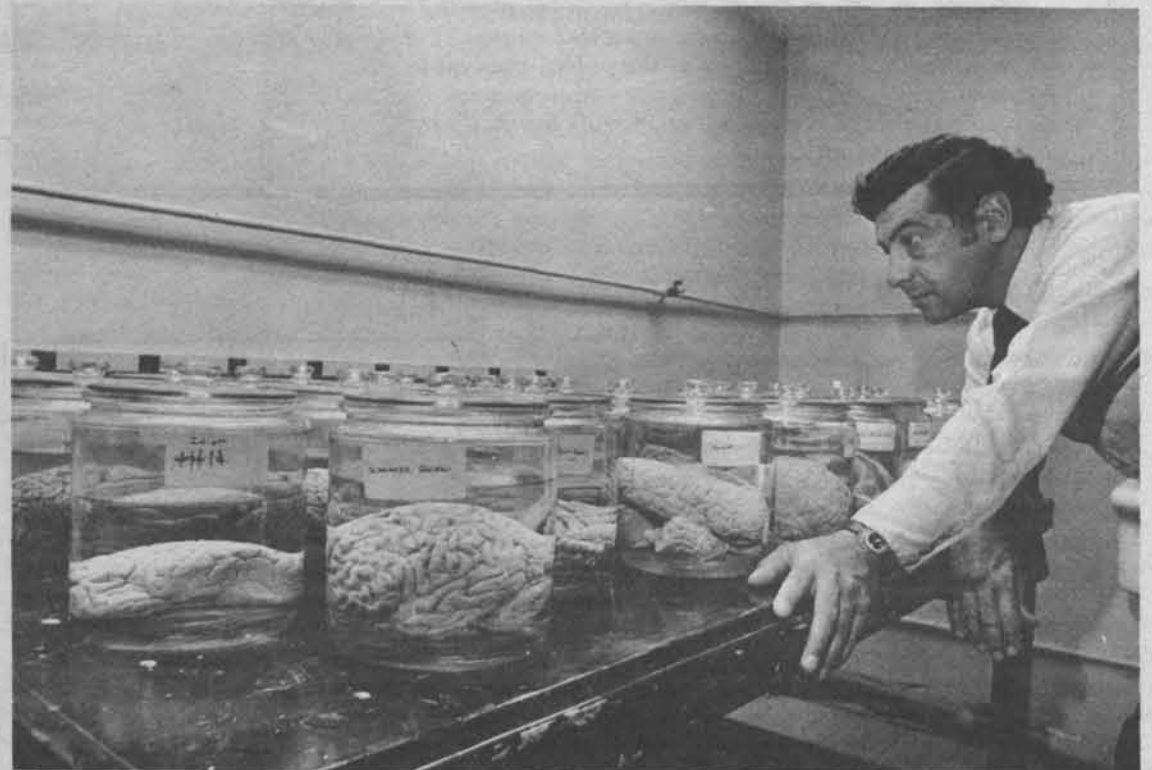
In 1967, Johnson pledged a gift of \$4.8 million toward construction of a new art museum at Cornell which will be completed next year. He is a member of the administrative board for the museum which will bear his name.

Olin, who served on the Cornell board from 1957 until last May, is a director of the Olin Corp. Among his many gifts, Olin provided the funds for Cornell's Hollister Hall, which houses the School of Civil Engineering, named in honor of the former dean of engineering and Professor Emeritus S.C. Hollister. He also established the Spencer T. Olin Professorship in Engineering.

Saperston, who served two five-year terms on the board as an alumni trustee, is senior partner in the Buffalo law firm of Saperston, Wiltse, Duke, Day & Wilson. He earned his law degree at Cornell in 1919.

Saperston was chairman of the Commission on Residential Environment in 1966-67 which studied housing at Cornell. He has been active in leadership roles in virtually every phase of Cornell alumni activity and served as chairman of the Cornell Fund in 1960-61 and 1966-67.

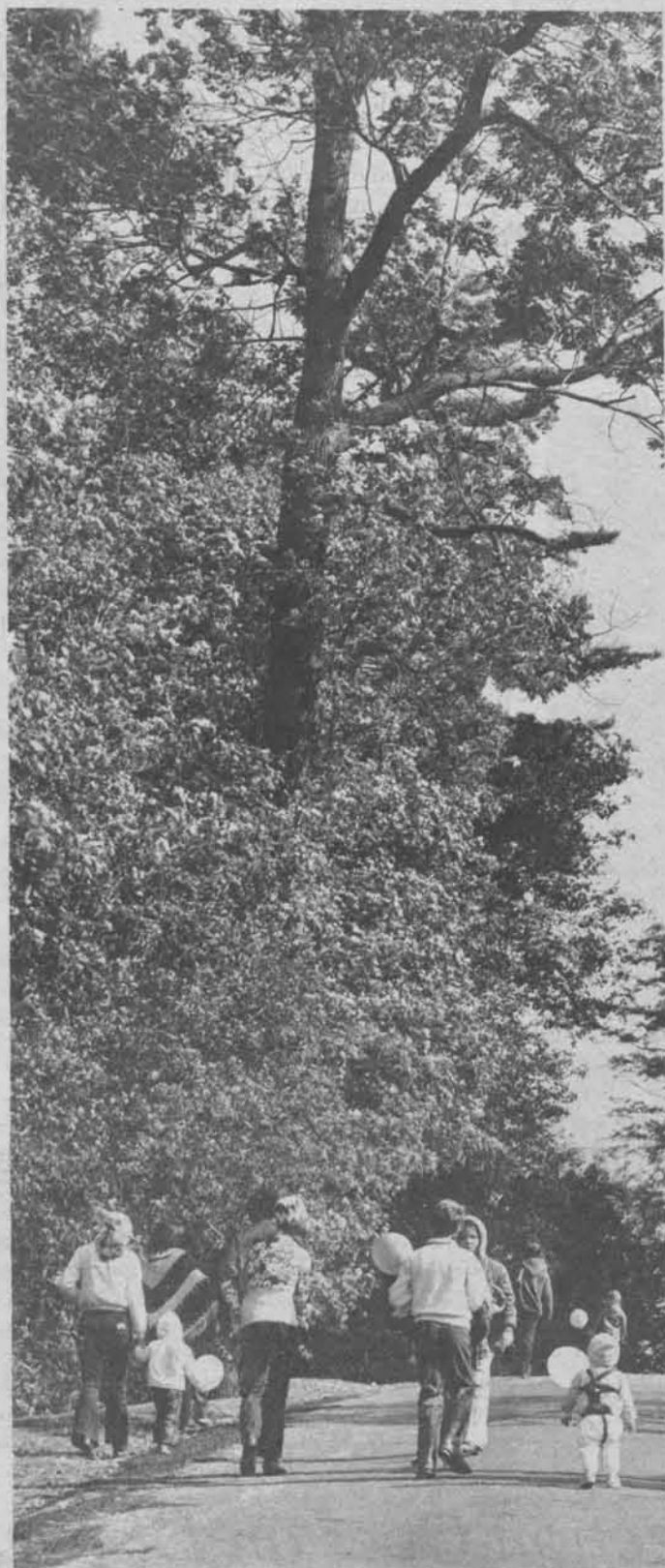
## Brain Collection Goes on Display



**THINK TANKS** — Robert S. Marshall, assistant director for academic affairs in the Division of Biological Sciences, looks at Cornell's Wilder Brain Collection, which will soon be put on display. The famous collection, which has been stored in a basement for several years, has been dusted off for a display which will be set up in Stimson Hall to illustrate a chapter in the history of neuroanatomy. Besides 14 brains of prominent persons, the exhibit will include historical and scientific notes and a model of a brain with its various portions labeled.



## The Second Annual Fall-In and ...



Balloons, as well as apples and cider, were plentiful at the Cornell University Plantations' second annual "Fall-In" last month. Free and open to the public, the Fall-In's purpose is to develop community awareness to the Plantations and the resources they provide for the Cornell and Ithaca communities.



Horse drawn wagons transport Fall-In visitors to activities including folk dancing, landscape sketching, folk singing and talks on fall bulb planting, birds and wildlife photography. Visitors could also visit the Sculpture Gardens, learn about the Forest Home community or "pinch and smell" fragrant herbs and woody plants.

## The First Oktoberfest



Risley Residential College was the scene of a German-style celebration of autumn, the Oktoberfest. The fun included folk dancing, craft shows, games, theatrical performances, music and — of course — feasting and drinking.

## CORNELL REPORTS

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