

CORNELL UNIVERSITY
OFFICIAL PUBLICATION

ANNUAL REPORT OF
ACTING PRESIDENT C. W. DE KIEWIET
FOR THE YEAR 1949-50

With Appendices Containing Reports of the Deans and Other Officers



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Report of the President

TO THE BOARD OF TRUSTEES OF CORNELL UNIVERSITY:

I HAVE THE HONOR to present the following report for the academic year 1949-50. Reports of the vice presidents, deans, directors, and heads of other administrative and academic divisions may be found in the Appendices. These descriptions of detailed operations are commended to your attention. Summaries of changes in the Faculty and Board of Trustees are also included. The financial report of the Treasurer will be submitted separately.

The note that I want to strike in this report is one of progress, a real continuation of that progress which has been characteristic of Cornell University in its entire career.

At the outset I should like to make a comment about the great educational leader who laid down the office of president a year ago and who laid down his office as Chancellor of the University a few months ago. In recognition of Dr. Day's unselfish service and significant contribution, Cornell has offered grateful honor to him. As President Emeritus of the University, he will have a home purchased for his use by the Trustees. The Faculty met together to do him honor in a dinner which was one of the great occasions of the year, and have made him a continuing Faculty member. The students and the alumni also paid him special tribute. He is on the campus, a member of our community still, a great aid and comfort to an Acting President.

A president is an important figure symbolically and practically in the life of a university. It must be recognized that a temporary administration has its necessary defects. It does, as can be easily understood, engender a feeling of some uncertainty in the community. Nevertheless, I feel that an important honor has been conferred on me in making it possible for me to hold the fort for a while to give a very conscientious selection committee the ample time that it needs to make that choice which we all must have—the best choice that is available.

As a historian, I do not feel so anxious about my responsibilities as to be unable to step back and evaluate what may be happening. We have come to the end of a period of anxiety produced by the war and the aftermath of the war. More particularly have we come to a point

in our expansion—our new building construction, our financial commitments—when it is healthy to pause for a while in order to survey where we have been and whither we should go. A temporary administration has in some respects been an advantage in facilitating such a breathing spell.

This year we have balanced the budget. It is fortunate for the institution that this process could be undertaken at this time and carried to what I think we all feel is a successful conclusion, so that although a new administration may face difficult problems, yet it will have momentum, the opportunity to build on a sound basis, to realize better that which we all seek—the development and the progress of the University.

A budget can be presented in two ways. It is either a set of figures, a bundle of balance sheets, red and black ink, or it can be the translation into figures of the thinking, the working, the feeling, the aspirations, the hopes, and the ambitions of students, scientists, and teachers. Through this year, although the operation has been in many ways a drastic one, we have tried at all times to remember that we are dealing with people, with the prospects of an eminent group of men working together to provide teaching and research according to the objectives of the University.

The figures may be of interest to you. The deficit that we estimated at the beginning of the 1949-50 fiscal year was \$828,000. We were able, as the result of all manner of effort, to produce approximately \$300,000 of new income over and above the Alumni Fund and other Greater Cornell Fund contributions. Consequently, the amount of money that had to be withdrawn from the amount budgeted for the operating expense of the University during the past fiscal year, in order to plan a balanced budget for 1950-51, was in the order of \$500,000. This figure represented the goal of those who had the responsibility of preparing the new budget.

I would be imperfect in my comment if I did not bring to your attention the extraordinary assistance that the entire community gave to this operation. Faculty cooperation was outstanding. Their understanding of the needs of the University, of the great benefits that would accrue by operating on a balanced budget, was a constant solace to those of us who had to hold that line.

In fact, the attention of the University community was focused so intently and so continuously on the problem of economy that there was a remarkable effect on the financial outcome of the 1949-50 fiscal

year. Instead of the originally budgeted deficit for the Endowed Colleges in Ithaca of \$828,000, or the later estimate of approximately \$500,000, the actual deficit, by our unaudited figures, was \$83,000. The Medical College deficit, originally estimated at \$114,655, was likewise cut to less than \$35,000.

Similarly, the auxiliary enterprises and wholly owned subsidiaries, which have at times had substantial deficits, last year showed favorable results, and as a whole have added appreciably to their reserves. In other words, 1949-50, which began in financial gloom, ended on an encouraging note.

However, there has been hurt; there has been reduction that presses against the hopes and the needs of the institution. I need hardly point out that on this campus we have a highly trained staff, men who have given themselves devotedly to the education of American youth, who are maintaining families, upholding their dignity while living on salaries that in terms of 1939 are a little frightening and disconcerting. For the coming year, we were able to raise more salaries than I had thought possible. We were able to step up the group life insurance in many cases by 50 per cent. We were able to produce a base for assistant professors that gives them \$4,000. On the other hand, there have been educational developments that could not be undertaken, projects proposed by creative minds that could not be supported, important facilities and equipment that could not be obtained. There is still much to be done.

In other words, we still have, not simply in this institution but in American education as a whole, the greatest need for support in improving our financial position. To our intense gratification, we have had demonstrated in the Greater Cornell campaign the assurance of generous support that the alumni wish to give us and will continue to give to maintain the American system of higher education. We are approaching \$11,000,000 in the proceeds of this campaign.

Important though the material results of such a campaign may be, the assets cannot be measured in dollars alone. We have been able to observe continuously and accumulatively the great benefits that have accrued to Cornell. I am sure that our public relations have immensely improved, that many alumni who had lost touch with their alma mater have come once again to understand the incomparable assets that this institution contains. Although the Greater Cornell campaign has officially closed, I think we have gained momentum in our relationships with our constituency as a whole, and particularly

with the alumni, from which we are sure to reap benefits spiritual and moral as well as material.

Partly because of the Greater Cornell campaign and partly as the result of other developments, we are radiating to new areas, making significant contacts with business, great corporations, and foundations. Very important, perhaps in a sense most important, Cornell is taking an increasingly prominent place in the thinking of people not associated directly with the University. Cornell is not simply an Ivy League college, but one of the great people's institutions in this country, an asset that I think sometimes we are inclined to underrate.

I think we should recognize that this institution has leadership in this country not merely in terms of its science, not only in terms of great, prosperous undertakings like our College of Agriculture or our fine School of Hotel Administration, but in terms also of an influence that is sometimes intellectual, often spiritual and moral. People want such an influence to radiate out of this University particularly, because it has been here and they expect it. Part of our responsibility, I think, is to bear that in mind. Frequently it is not a building or a machine or even necessarily a curriculum that radiates that influence. It is that caliber of men whom we may attract and hold in this institution.

In support of this vein of thought, I should like to put before you, almost as if by a photographic technique, a few vignettes—a few looks upon the life of the campus, bringing to focus a few of the events, of the undertakings, of the achievements of this year. I should like to focus your attention on the coming to this campus of a great and distinguished American and the reaction of the students to his coming. This man was Robert Frost. He is one of the great poets of our generation, but particularly is he someone who has found in himself the genius to express certain parts of our life and feeling in words. Having been called upon to act as chairman on that occasion, I went, a little unreflectively perhaps, expecting to find Bailey Hall half full or one third full. Instead, it was packed, not out of curiosity because a great name was present, but rather by students who were sensitive to what Robert Frost had to say. Let us not forget, then, that although one of the obligations of an institution of this sort is to prepare people for active life professionally, industrially, and commercially, we have also our responsibility to give to them those means of appreciation, those means of feeling that are spiritual and aesthetic in character.

In this connection reference should also be made to Anabel Taylor Hall, Myron Taylor's gift for a new Interfaith Center. Ground has

been broken, and work is going ahead in converting the idea into reality. It is our expectation that this Center will focus attention upon those problems of our society which bring instability and conflict to people and which at the moment underlie much of the challenge to world peace.

I would like to shift my little camera to Sage Chapel on a Sunday afternoon when our very energetic Music Department staged St. Matthew's Passion. They had an accompanying orchestra; they had brought to the campus soloists from outside; but what was outstanding, and incomparably outstanding, in that performance was the beauty of the student choir. It was a difficult undertaking, but I can honestly say that nowhere, whether it be San Francisco, Washington, New York, or Paris did I have—and I was not the only one—a stronger feeling of a superb aesthetic experience. It was a stellar performance, and it shows the aesthetic life that goes on within this institution, which receives no publicity, which does not express itself in the curriculum, about which we do not draw up catalogues.

A remark about Statler Hall. Discerning people on this campus had been looking forward to the completion of the building for a long time—not because we want to add building upon building to the campus; actually, we have come to the point where we have to look at each building with the greatest of care and make up our minds that we can maintain the buildings properly without putting new charges upon our present income. But that building has a special meaning on the Cornell campus. It is one of those facilities that is calculated to integrate the diversity of Cornell and to make it possible for the members of its community to achieve a true family relationship. If that is absent, the condition is serious and even dangerous. The Faculty Club in Statler Hall is one of those agencies that is making Cornell what it once was when it was smaller: in outstanding degree coherent with a family relationship, with ease of communications, with a knowledge by one individual of the other. We need that; we need that very much.

Another significant event of the year was the consummation of an arrangement whereby the Sloan-Kettering Institute became, for educational purposes, a division of the Cornell Medical College in New York. Look at the components in that achievement, for which President Day and Mr. Arthur Dean are particularly responsible—the Medical College, the Sloan-Kettering Institute, the New York Hospital, and the Memorial Hospital. You will see there the makings

of the outstanding research and teaching center in cancer and allied diseases in this country and, I would be sure, in the whole world.

Parallel to the arrangement above is the significant progress made during the year by the Cornell Committee for Air Safety Research. This group, mobilizing the facilities of the University at Ithaca, the Medical College, and the Aeronautical Laboratory at Buffalo, provides an excellent example of educational effort directed at one of the urgent needs of modern society. The interest in and support for this project continue to grow. There is every reason to believe that this activity will increase in importance.

The School of Nutrition continues to grow and prosper. Anybody who reads even the daily newspaper recognizes that headline news ever since the war—and the same condition will prevail for a generation to come—has featured nutrition and human health through nutrition. We have a leadership in this field that we must maintain, and with the resources that we have here, I am confident that we can maintain it.

It is only appropriate to pause here and pay tribute to H. E. Babcock whose interest in nutrition and whose active support helped make the School possible. In a sense its existence is a tribute to his memory.

One of the outstanding features of the year's work has been the growing contact between Cornell and the State University staff. We have become acquainted and have learned to work together in a spirit of friendly cooperation. The relationship is, of course, a young one, and continued understanding is very important. Although there were some who did not agree with the establishment of a state university, there has been little question that the development of educational institutions in the State of New York was inevitable, that integration and the addition of new facilities were greatly needed, and that we would be lacking in our sense of responsibility and in our understanding of opportunity if we did not assist in every reasonable way.

Now, to be sure, we have much that must be protected, that must be defended. We can take great pride in the circumstance that there is an unusual alliance, or fusion, if you please, between what we call the contract schools and the endowed schools. The personal relationships are intimate. I rely as quickly upon the judgment of the deans on that part of the campus as I do on that of the deans on the endowed part of the campus. We talk about the same sort of problems and have the same sort of understanding. We have great strength in the so-called state schools. We have, I believe, a sound understanding

of what the State University system wishes to do, of what it can do, of how we can make contributions to its success, and how we can over the years maintain our own strong place in the educational life of this state, as we can maintain our strong place in the educational life of the nation. Therefore, I can say gladly that our relationships with the administration of the State University system are cordial and co-operative. They are learning the habit, and for us I think it is a very complimentary habit, of turning to us for advice and assistance. They are drawing upon our strength, and that is how I feel it should be.

On the other hand, we should at the same time remember that there is an institution overriding and dominating all of the institutions of the campus, which is Cornell University. I think that we should proceed even more vigorously than we have in the past in bringing about cooperation, fusion, and integration among all the institutions that exist on this campus, because in the final analysis not merely is it Cornell University we are discussing, but Cornell University as the land-grant institution of the State of New York.

Cornell continues to be attractive to students throughout the country, with only one dip in enrollment in one part of our college system.

TABLE A. NUMBER OF STUDENTS ENROLLED BY COLLEGES AND SCHOOLS IN THE ACADEMIC YEARS 1938-39 TO 1949-50 INCLUSIVE

	<i>Entire University Excluding Duplicates</i>				<i>Separate Colleges and Schools</i>											
	<i>Arts</i>	<i>Sci.</i>	<i>Eng.</i>	<i>Arch.</i>	<i>Ag.</i>	<i>Home Econ.</i>	<i>I & R</i>	<i>Hotel</i>	<i>Vet.</i>	<i>Nutr.</i>	<i>Adm.</i>	<i>Bus. & Pub.</i>	<i>Law</i>	<i>Med.</i>	<i>Eng.</i>	<i>Grad.</i>
1938-39	7055	1886	1145	136	1616	479	...	291	163	...	...	186	288	...	...	1050
1939-40	7174	1827	1269	140	1651	479	...	326	164	...	...	207	296	...	...	1000
1940-41	7315	1881	1384	147	1568	492	...	326	160	...	...	191	295	...	...	967
1941-42	7148	1894	1580	142	1458	512	...	319	157	...	...	162	314	...	...	722
1942-43	6850*	1815	1689	118	1214	529	...	251	199	...	...	68	309	169	...	596
1943-44	4320*	1355	821	67	460	649	...	70	41	...	...	49	42	320	...	612
1944-45	4783*	1552	661	86	552	684	...	105	148	...	...	53	68	364	...	625
1945-46	7928*	2075	1556	162	1127	640	173	287	154	...	...	229	327	270	...	1050
1946-47	10560	2522	2667	208	1660	640	277	417	133	20	41	355	322	233	...	1217
1947-48	10830	2551	2648	229	1619	632	316	414	145	42	94	378	315	213	...	1391
1948-49	10673	2482	2367	220	1725	619	345	430	189	54	120	377	319	122	...	1505
1949-50	10689	2573	2068	223	1765	638	347	425	197	47	121	411	346	152	...	1594

*Civilian students only are included in the figures for these four years.

We continue to hold strong enrollment figures, and the prospects are very encouraging.

The last large class of undergraduate veterans received degrees in June, making the total for the year the second largest in the University's history, as shown in Table B.

We are not yet having serious difficulty in attracting a sufficient number of new students to keep total enrollment stable. Better than that, of course, is the circumstance that the caliber of students is high.

Here we must express very strong appreciation for the cooperation of alumni in selecting students, identifying good students, and helping us weed out the very good from the not so good. There has not been any drop in the standards and the achievement of Cornell students since the war. The special motivation of the veterans has been carried on in the attitude of the normal undergraduate student.

TABLE B. NUMBER OF DEGREES GRANTED BY COLLEGES AND SCHOOLS IN THE ACADEMIC YEARS 1938-39 TO 1949-50 INCLUSIVE

	Entire Uni- versity	Arts & Sci.	Separate Colleges and Schools										Bus. & Pub.		Nurs- ing			Grad
			Eng.	Arch.	Agr.	Home I &		Hotel	Vet.	Nutr.	Adm.	Law	Med.					
						Econ.	L R											
1938-39	1493	404	148	25	254	87	..	49	40	..	..	53	63	..	..	370
1939-40	1581	441	158	14	268	104	..	44	43	..	..	55	70	..	..	384
1940-41	1647	411	185	15	287	121	..	71	38	..	..	52	63	..	..	404
1941-42	1439	349	217	17	240	104	..	48	43	..	..	59	75	..	..	287
1942-43	1384	360	204	18	201	107	..	53	37	..	..	28	75	10	..	291
1943-44	1213	287	287	12	86	129	..	9	79	..	..	17	75	19	..	213
1944-45	1250	293	246	14	69	198	..	14	32	..	..	9	156	19	..	200
1945-46	1288	303	217	12	116	160	..	17	67	..	..	20	80	16	..	280
1946-47	1931	544	355	23	221	108	11	78	35	1	..	51	83	54	..	367		
1947-48	2595	639	507	33	246	170	81	89	1	11	33	106	78	74	..	527		
1948-49	2798	612	567	44	325	145	81	109	41	28	50	148	68	36	..	544		
1949-50	2764	611	480	45	414	149	87	95	51	13	51	99	78	27	..	564		

The students, like the staff, face problems. There is the matter of remaining in touch with the spirit of this University. Students do not come to an institution, certainly not to an institution like Cornell, merely to become engineers, or business economists, or teachers. They also come for those almost indefinable things that appeal to the whole man. However, after the war, because we have expanded and perhaps because we sometimes have been inattentive, the students have had their difficulties of communication, of uncertain access to the thinking and the spirit of Cornell University. On that problem a great deal of work, effort, and anxiety have been expended. A few of the devices that we are using will illustrate the sense of responsibility that the campus is trying to show to its students. There was set up a year ago a small organization known as the Student-Administrative Group. In regular meetings student leaders joined with the President, Vice Presidents, and other members of the administrative staff. Serious and frank questions were asked by students and administration. Answers were off the record but complete and sympathetic. Each group took the other into its confidence. The administrative staff was fluctuating in character, as the problems which the students were concerned with themselves were fluctuating in character. We were able to siphon off opinion, sentiment, and comment of the students, and to offer authentic information and interpretations of the philosophy

of Cornell, that have had an immensely stabilizing effect upon the student population.

The modern student is not in an easy position. He is very sensitively aware, even though he may not say a great deal about it, of the condition of his world. The past war, I think, has done that not merely to veterans but to the younger students as well. They are disturbed about the impact of our financial policies in this country, our international relations, upon their lives and prospects. Therefore, we mustn't be surprised that when those pressures are added to the normal pressures of a campus, study, extracurricular activities, etc., anxiety develops and occasionally expresses itself in untoward behavior.

The University wishes to address itself to this problem of student instability. Again the theme emphasizes the whole man and the whole woman. Quietly, but I think with extraordinary effectiveness so far, a committee, composed of the Dean of Men, the Dean of Women, and prominent members of the Faculty, has been trying to see what it is that we as an institution can do to produce that stability of mind and of purpose in our students that will make them sounder citizens.

There is often comment about radicalism in the student population of any university. May I say this: one expects a certain measure of radicalism in young and experimental minds. Although we do recognize that at this moment in our nation's history and in world history problems of unusual political or economic behavior are evident, nevertheless, we should never desert the freedom of thought, the freedom of expression that is part of the ethics of this university and of the society to which it belongs. Speaking for myself, I feel that we can avoid or prevent what is experimental in a young man from becoming dangerous in an adult by giving him guidance about his point of view, not in order to dominate it but to provide direction and instruction while he is a member of this institution.

So far I have emphasized what the Faculty and administration are trying to do for the students. But it would be incorrect to conclude that the students are becoming pampered. Far from it. A great deal of enterprise and initiative characterizes our students. As a matter of fact, they are very resolute in trying to take care of their own affairs as far as possible. Of the tributes we have had this year, one among many is that the Interfraternity Council was selected as the outstanding interfraternity council in the United States, a symbol of the self-help, the independence, the self-regard of the undergraduates throughout this year.

The Student Council has assumed a growing responsibility for representation and leadership in campus affairs. On the whole students have shown an increasing tendency to seek out adequate information on student problems in order that the resulting action might contribute to the betterment of the institution. The fine records of the athletic teams are widely known. The young men deserved every word of praise spoken to them for their sportsmanship as well as their accomplishments. Student initiative has been reflected in other things, such as the formation of dormitory clubs, a new freshman orientation program, and a high level of academic accomplishment.

The University, like all aspects of American life, in the years following 1945 entered upon a period of postponed expansion, of new problems presented by the great postwar demand, and of a striving toward the consolidation and unity that had been neglected somewhat due to emergency needs. It now seems that the years since the end of World War II, although very full, have also passed very quickly.

When in June the tensions present in the cold war burst forth into the Korean conflict, plans were undertaken that Cornell might present its maximum contribution should it be called upon. Committees were established with these responsibilities:

1. To survey existing University programs and facilities of value to military or other governmental agencies;
2. To discover and classify staff members and students according to reserve status and to suggest procedures to be followed in the event of mobilization; and
3. In the light of experiences in the last war, to suggest such policies and practices as may be needed for Cornell to utilize or modify its program to function on an emergency basis.

In taking such action we have been guided by certain assumptions:

1. That there is a basic difference in the attitude of Communism and democracy with regard to the dignity of man, the principles of government, the concept of liberty in its social, spiritual, and economic aspects;
2. That the forces of Communism will undertake armed aggression against the members of the Free World; and
3. That such aggression may be prolonged and that ways must be found whereby the United States may be strong without stopping or weakening the total development of the American people.

Cornell has prided itself throughout its history upon its reputation

as a pioneering institution. The time for pioneering is still with us; indeed, there is an opportunity facing America that is greater than any in the history of our nation. In this continent, but especially among the peoples of Asia and Africa, there are masses restless with energy, eager for expression, who are looking for guidance from any source. We must appreciate that our way of life is in competition with the ideology of Soviet Russia for the good will and active support of these thousands of people. Their decision and the subsequent course of world affairs will depend upon the material example set for them and upon the concepts and ideas which they accept as characteristic and desirable in one way of life or the other. Cornell's stature dictates that this University recognize its responsibility in this world crisis. Educational institutions which have always been concerned with ideas must seek out methods of relating them more effectively to the issues of today, suggesting solutions for the morrow. The instruments of this action must always be men and women, people who, working with ideas, make democracy live. Cornell must provide an atmosphere which will stimulate creative thinking with such force that her students and staff, when called upon to play their roles, will demonstrate that the University stands as an enduring instrument for the welfare of all people.

CORNELIS W. DE KIEWIET,
Acting President of the University.

SUMMARY OF CHANGES IN THE BOARD OF TRUSTEES

To the President of the University:

SIR: I have the honor to report the following changes which occurred in the membership of the Board of Trustees, its committees, and its representation on administrative boards and on advisory councils during the academic year 1949-50:

BOARD MEMBERSHIP

The Board unanimously re-elected Neal Dow Becker as Chairman of the Board for the term beginning July 1, 1950, and extending to the end of his current term as Trustee on June 30, 1952.

Cornelis W. de Kiewiet was re-elected Acting President of the University, effective for the academic year 1950-51, and is therefore continued in his capacity as ex officio Trustee for that period.

The death of Francis T. Spaulding, Commissioner of Education of the State of New York and a member ex officio of the Board of Trustees, on March 25, 1950, was reported with sorrow. He had held this position since September, 1946.

Earl B. Clark was replaced by Fred H. Sexauer of Auburn, New York, as President of the New York State Agricultural Society on January 18, 1950, and, by virtue of this position, Mr. Sexauer also replaced Mr. Clark as an ex officio member of the Board of Trustees.

The Board elected Francis H. Scheetz as a Trustee to complete the five-year term of Frank E. Gannett, resigned, which term expires on June 30, 1953.

Trustees Howard E. Babcock, John L. Collyer, and Maxwell M. Upson were re-elected by the Board for five-year terms beginning July 1, 1950.

The Cornell Alumni Association elected Walker L. Cisler and Dr. Preston A. Wade to succeed George R. Pfann and Willis H. Carrier as Trustees, both for five-year terms, beginning July 1, 1950.

Joseph P. Ripley was reappointed to the Board by the Governor of New York State for another five-year term, effective until June 30, 1954.

The Governor also reappointed Arthur H. Dean as a member of the Board of Trustees for another five-year term, effective July 1, 1950, until June 30, 1955.

Stanton Griffis resigned as a Trustee appointed by the Governor on March 22, 1950, after serving nineteen years on the Board, and the Governor appointed George R. Pfann to fill the vacancy thereby caused on the Board, effective March 22, 1950, until the expiration of this term on June 30, 1951.

Trustees Frank S. Columbus, Louis Hollander, and Thomas A. Murray were re-elected members of the Board from the field of New York State Labor, for one-year terms beginning July 1, 1950.

Harold M. Stanley was re-elected a member of the Board of Trustees for a one-year term beginning July 1, 1950, by the Executive Committee of the New York State Grange.

TRUSTEE EMERITUS

The Board elected Stanton Griffis a Trustee Emeritus at its meeting of April 22, 1950. Mr. Griffis resigned as a Trustee appointed by the Governor after nineteen years of service on the Board.

STANDING COMMITTEES

The Trustees elected to the respective Standing Committees served for the entire academic year 1949-50, with the following exceptions:

Executive Committee: A vacancy existed in the elective membership of this Committee until the meeting of the Board on October 21, 1949, at which time Larry E. Gubb was elected to complete the term until June 30, 1950.

Planning and Development Committee: Howard E. Babcock resigned as Chairman of this Committee in April, 1950, and Vice Chairman, Larry E. Gubb was elected Chairman in place of Mr. Babcock, until June 30, 1950.

On June 12, 1950, the Board reconstituted the membership of its Standing Committees for the year beginning July 1, 1950, as follows (re-election indicated by *):

(The Chairman of the Board and the Acting President of the University are ex officio members of all Committees.)

Executive Committee: Chairman, Arthur H. Dean*; Vice Chairman, Mary H. Donlon*; Howard E. Babcock, Harold M. Stanley,* Harry G. Stutz,* Maxwell M. Upson,* Dr. Preston A. Wade; and the following ex officio members: Chairmen of the other Standing Com-

mittees: Joseph P. Ripley,* John S. Parke,* Larry E. Gubb, George R. Pfann.*

Investment Committee: Chairman, Joseph P. Ripley*; Vice Chairman, Horace C. Flanigan*; Matthew Carey,* John L. Collyer,* Arthur H. Dean,* Victor Emanuel, Nicholas H. Noyes,* Walter C. Teagle,* Maxwell M. Upson.*

Buildings and Grounds Committee: Chairman, John S. Parke*; Vice Chairman, Edward E. Goodwillie*; Walker L. Cisler, Frank S. Columbus,* Ruth F. Irish,* George R. Pfann,* J. Carlton Ward, Jr.*

Planning and Development Committee: Chairman, Larry E. Gubb*; Vice Chairman, Francis H. Scheetz; Howard E. Babcock,* Victor Butterfield, Albert K. Mitchell,* Robert E. Treman,* J. Carlton Ward, Jr.*

Law Committee: Chairman, George R. Pfann*; Vice Chairman, Mary H. Donlon*; and Elbert P. Tuttle.*

SPECIAL COMMITTEES

Changes were made in the following Special Committees of the Board:

Audit Committee: The Audit Committee was reconstituted by the Board on January 28, 1950, effective for the period until January, 1951, to include Trustees J. Carlton Ward, Jr., to succeed himself as Chairman; Jacob G. Schurman, Jr., to succeed himself; and Victor Butterfield, to succeed W. D. P. Carey.

Board Membership Committee: On June 12, 1950, Edward E. Goodwillie was elected Chairman and J. Carlton Ward, Jr., was elected Vice Chairman for one year beginning July 1, 1950. New members elected to the Committee at that time were Herbert F. Johnson, whose term extends from July 1, 1950, to June 30, 1954, and W. D. P. Carey, whose term extends from July 1, 1950, to June 30, 1955. The fifth member of this Committee is Horace C. Flanigan, whose term expires June 30, 1953.

GREATER CORNELL COMMITTEE

At the meeting of the Board on June 12, 1950, the terms of all members of the Administrative Group of the Greater Cornell Committee and members-at-large of the Greater Cornell Committee were

extended from July 1, 1950, until the autumn meeting of the Board in 1950, at which time the Greater Cornell Committee shall terminate, and the University Council shall commence operations as its successor. Robert E. Treman and Victor Emanuel are Trustee members of the Administrative Group, and all members of the Board are members-at-large of the Greater Cornell Committee.

ADMINISTRATIVE BOARDS

The following appointments of Trustees to the administrative boards of the University were made on June 12, 1950, to become effective July 1, 1950:

Joint Administrative Board New York Hospital—Cornell Medical Center: Acting President Cornelis W. de Kiewiet to succeed Edmund E. Day for a three-year term, and Arthur H. Dean to replace Joseph P. Ripley, resigned, for a one-year term.

Board on Physical Education and Athletics: George R. Pfann to succeed himself and Robert E. Treman to succeed Edward E. Goodwillie for one-year terms.

Board on Student Health and Hygiene: Howard E. Babcock and Robert E. Treman to succeed themselves and George R. Pfann to succeed William B. Cornell for one-year terms.

Board of Governors of Willard Straight Hall: Elbert P. Tuttle to succeed Victor Butterfield for a three-year term.

COLLEGE COUNCILS

The following appointments of Trustees to the College Councils of the University were made on October 21, 1949, to become effective on that date:

Medical College Council: William B. Cornell to succeed Alice Blinn until June 30, 1953.

Council for the Cornell University-New York Hospital School of Nursing: Ruth F. Irish to succeed Edmund E. Day until June 30, 1952.

Council for the New York State School of Industrial and Labor Relations: George R. Pfann to succeed John S. Parke, not from the field of Labor, until June 30, 1950.

The following appointments of Trustees to the College Councils of the University were made on June 12, 1950, to become effective July 1, 1950:

College of Architecture Council: Victor Butterfield and Herbert F. Johnson to succeed themselves for one-year terms.

Medical College Council: The entire Board of Trustees was constituted as the Council of the Cornell Medical College, and the group formerly functioning as the Medical College Council was renamed the Medical College Advisory Committee, in accordance with the amendments to the by-laws of the University.

Medical College Advisory Committee: Jacob G. Schurman, Jr., to succeed Stanton Griffis for a four-year term.

Council for the Cornell University-New York Hospital School of Nursing: Dr. Preston A. Wade to succeed Neal Dow Becker for a three-year term.

Council for the New York State College of Agriculture and the Agricultural Experiment Stations: Albert K. Mitchell and George R. Pfann to succeed themselves for one-year terms.

Council for the New York State College of Home Economics: Mary H. Donlon and Ruth F. Irish to succeed themselves for one-year terms.

Council for the New York State Veterinary College: Howard E. Babcock and George R. Pfann to succeed Earl B. Clark and Robert E. Treman for one-year terms.

Council for the New York State School of Industrial and Labor Relations: John L. Collyer, Mary H. Donlon, and George R. Pfann to succeed themselves and Victor Emanuel to succeed Walter C. Teagle, not from the field of Labor; Frank S. Columbus, Louis Hollander, and Thomas A. Murray to succeed themselves, from the field of Labor, all for one-year terms.

ROBERT B. MEIGS,
Secretary of the Board of Trustees.

APPENDIX I

REPORT OF THE VICE PRESIDENT FOR UNIVERSITY DEVELOPMENT

To the President of the University:

SIR: I have the honor to present the report of the activities of the Office of University Development for the academic year 1949-50.

During the past year, the staff of the Office of University Development has devoted its primary efforts to the following:

1. Continuation of the Greater Cornell Fund Campaign.
2. Promotion of bequests, life income agreements, special gifts, and grants-in-aid to the University.
3. Co-operation with the President and Trustees of the University in planning the long-range development program of the University, including the provision of an organization to insure an effective means for adding to the available financial resources of the University during the years ahead.
4. Conduct of a special program to raise funds to erect a laboratory building and to meet the costs of the initial operation of the Cornell Research Laboratory for Diseases of Dogs.

GREATER CORNELL FUND CAMPAIGN

The Greater Cornell Fund Campaign was initiated in July, 1948, as a thirty-month program of the Greater Cornell Committee to raise \$12,500,000. The stated objectives of this special campaign are as follows:

Faculty Salaries.....	\$ 3,000,000
Medical College.....	2,500,000
Engineering Buildings (further step in Engineering Development Program).....	2,000,000
World War II Memorial and Interfaith Center (C. U. R. W.)...	1,500,000
Nuclear Studies Laboratory.....	1,500,000
Research Fund (to be used chiefly in the Social and Humanistic fields).....	1,000,000
Working Capital.....	750,000
Athletic Plant.....	250,000
TOTAL.....	\$12,500,000

At the initiation of the Greater Cornell Fund Campaign, the University employed the firm of Marts and Lundy of New York City as fund-raising counsel to assist in the organization and conduct of campaign activities. A decision was reached by the Planning and Development Committee of the Board of Trustees in November, 1949, to dispense with the assistance of the professional fund-raising counsel. Beginning in January, 1950, therefore, the University undertook the continuation of the Greater Cornell Fund Campaign under the direction of the Vice President for University Development, utilizing members of the Development Office staff in the employ of the University. As of June 30, 1950, the campaign had been in operation for a period of twenty-four months. The total of subscriptions received as of this time is approximately \$10,750,000; oral promises increase this amount by approximately another \$100,000; of the total amount subscribed, approximately \$1,750,000 has been raised during the period from January 1, 1950, to June 30, 1950.

The amounts subscribed by alumni and friends of the University have been designated for campaign objectives and other purposes by subscribers as follows:

Unrestricted	\$ 3,581,042.67
Gifts to Endowment Funds—Income Unrestricted	152,875.86
Faculty Salaries	315,780.45
Medical College	121,025.05
Engineering Development	121,591.46
Interfaith Center and World War II Memorial Building Endowment and operating funds	1,802,764.96
Laboratory of Nuclear Studies	1,000,000.00
Humanities	518,250.85
Athletic Plant—Men's Sports Building	1,500,000.00
Athletic Plant—Other	18,785.00
Gifts for Deferred Objectives of Greater Cornell Fund	24,512.60
Gifts to Greater Cornell Fund for Other Objectives	112,025.00
Gifts Reported for Greater Cornell Fund Credit	57,338.39
Gifts Other Than Cash (Including Annuities, Bequests and Trust Agreements)	422,798.41
Gifts for Greater Cornell Fund Campaign Expenses	1,584.78
Unclassified	1,000,000.00
TOTAL	\$10,750,375.48

It is now planned to complete the Greater Cornell Fund Campaign by December 31, 1950. During the next few months solicitation of large gift prospects and certain other special activities will go forward.

PROMOTION OF BEQUESTS, LIFE INCOME AGREEMENTS, GIFTS FOR SPECIAL
PURPOSES, AND GRANTS FROM FOUNDATIONS

During the past twelve months the University has received numerous requests for information and assistance from individuals interested in making bequests to the University. These have been handled in co-operation with the University Counsel by way of furnishing information relative to the needs of the University and in some cases drafting specific clauses for wills.

The office has co-operated with various departments of the University in approaching individuals and organizations to obtain gifts for special purposes. In addition, the office has co-operated in preparing and making proposals to foundations for support of various research projects and other special activities of the University.

During the year, consideration was given to the advisability of continuing the Cornell Gift Annuity Program. On recommendation of the Planning and Development Committee of the Board of Trustees, specific action was taken to cease writing Cornell Gift Annuity contracts. The action was taken in recognition of the fact that this program has not proved attractive to prospective donors and has created problems from the standpoint of investment of funds. During the year, however, three annuity contracts were written in the total value of \$11,279.77, having a gift value of \$5,079.69.

Opportunities have presented themselves from time to time to promote Life Income Agreements, whereby individuals make gifts to the University providing for payment of income on the principal sum of the gifts to the donors and survivors in one generation. New Life Income Agreements and additions to existing Life Agreements in the amount of \$27,699.52 were written during the year.

TOTAL GIFTS TO THE UNIVERSITY FOR 1949-50

During the academic year 1949-50, Cornell has been most fortunate in receiving bequests, gifts, and grants-in-aid from organizations and foundations in support of research and other activities. All bequests, gifts, and grants-in-aid received have been reported to the Board of Trustees at regular meetings. These reports have shown the purposes for which gifts have been made, and the funds

to which gifts and bequests have been assigned. The total amount of gifts received by the University during 1949-50 is \$6,529,318.25. A summary follows:

Gifts by Corporations and Business Enterprises	\$ 809,934.65
Gifts by Foundations and Charitable Groups	1,171,049.21
Bequests and Income from Trusts under Wills	1,971,978.08
Gifts by Individuals	2,576,356.31
TOTAL	\$6,529,318.25

Attached to this report is a detailed summary of gifts, bequests, and grants-in-aid classified by purpose and restriction.

ORGANIZATION FOR LONG-RANGE DEVELOPMENT AND FUND RAISING

The Cornell University Council

Recognizing that the Greater Cornell Fund Campaign will draw to a close within a few months, officials of the Greater Cornell Committee and Trustees of the University have been devoting considerable attention to making plans for Cornell's long-range development program.

In this connection, it has seemed wise to have an organization which will consist primarily of alumni and will include also some Trustees and officials of the University to give careful thought to fund-raising projects and coordination of our fund-raising activities, as well as other University Development problems. The University must develop a thoroughly coordinated fund-raising program, including annual giving by alumni through the Alumni Fund, annual giving on the part of corporations, promotion of a bequest program, special gifts, and conduct of certain special fund-raising projects which are necessary in order to maintain the University in a position of leadership.

Action has been taken by the Trustees to create what will be known as the *Cornell University Council*. In reality this involves merely the change of name of the Greater Cornell Committee organization and making some modifications in its regulations. It is felt by Trustees, officials of the campaign, and alumni that the Greater Cornell Committee has become so identified with our Greater Cornell Fund Campaign that a new name will be advantageous. The new organization will consist of a minimum of 150 persons to be appointed by our Trustees. While the Trustees of the University took action in June, 1950, to establish the Cornell University Council as an organization to coordinate all fund-raising activities of the University, it is not planned that this new organization will begin to function until some months hence. In the meantime, the Greater Cornell Committee will continue to function as in the past.

Special Program for College of Medicine

In recognition of the special problems of development and fund raising for financial support of medical education and research and in recognition of the fact that the Cornell University College of Medicine is located in the City of New York, action was taken during the past year to establish a branch of the office of University Development at the Cornell University College of Medicine.

Mr. J. B. McKee Arthur, Jr., was appointed Assistant to the Vice President for University Development in charge of the office at the Medical College. It is his responsibility to give particular attention to the financial needs of the Medical College and to co-operate with the Dean of the College and the members of the faculty in a long-range development effort which will add to the available financial resources of the College.

It is planned that Mr. Arthur will devote part of his time to the public relations of the Medical College and that he will inaugurate an expanded program of annual giving on the part of the alumni of the College. During the next academic year a long-range development program for the Medical College must be formulated and implemented.

Long-Range Program

Recognizing that a sound program of development and fund raising is essential to the sound future growth of the University, every effort has been made to focus attention on a sound long-range development program.

Efforts have continued to inform members of the Greater Cornell Committee concerning the University's activities, policies, and programs. In addition, many conferences have been held with members of the committee and other alumni to inform them of programs of the University and its financial needs. The Vice President for University Development has continued to hold many conferences with officers and faculty to learn their plans and desires regarding the necessary growth and development of the departments and divisions of the University for which they are responsible.

In addition, considerable attention has been given to promotion of good public relations with alumni. This has involved meeting the various alumni groups and clubs to tell them of the on-going programs and plans for University development. It has also co-operated with the Office of Public Relations in the handling of a number of releases and matters concerned with eliciting a favorable response on the part of the general public and alumni. Particular attention has been devoted to those aspects of the Public Relations Program of the University which have an impact on Cornell's fund-raising potential.

CORNELL RESEARCH LABORATORY FOR DISEASES OF DOGS

The Planning and Development Committee of the Board of Trustees in August, 1949, approved the raising of funds to erect a laboratory building for the conduct of research on diseases of dogs, a kennel for an Isolation Disease-Free Dog Colony, and funds to meet the cost of operation for the first five-year period of the existence of the laboratory. As of June 30, 1950, the \$100,000 fund needed to erect the laboratory building was completely subscribed; \$15,000 was subscribed to build the kennel for the Isolation Disease-Free Dog Colony; and nearly \$70,000 to meet operating costs. The program is continuing.

ACTIVITIES OF THE COMMITTEE ON PLANNING AND DEVELOPMENT
OF THE BOARD OF TRUSTEES

The Vice President for University Development serves as an executive officer on the Planning and Development Committee of the Board of Trustees. It is the function of this committee to consider, for recommendation to the Board of Trustees, policies relative to the long-range problems of development of the University, and to make recommendations to the Board of Trustees on appropriate projects for fund raising.

During the past year this committee has held seven meetings and has devoted attention to consideration of the following:

1. Approval of policies concerning acceptance of certain bequests.
2. Approval of these fund-raising projects:
 - a. Cornell Research Laboratory for Diseases of Dogs.
 - b. Revision of plans for Medical College Dormitory as part of the Greater Cornell Fund effort.
 - c. James E. Rice Poultry Memorial Library.
 - d. Approval of recommendations concerning alternative plans for providing additional library facilities for the University.
3. Consideration and approval of finances and budgets for fund-raising efforts of the University.
4. Consideration of broad policy matters as follows:
 - a. Financial requirements of the University in terms of present size and plans for future development in order to determine priorities of new projects involving fund raising. (This ultimately became a program of task forces to consider individual problems of development and make recommendations to the Planning and Development Committee.)

- b. Obtaining of funds from the New York State Dormitory Authority for provision of dormitories. (This involved report and review of student housing.)
- c. Relationship of Cornell University and the State of New York in operation of a Laboratory for Animal Virus Research on Snyder Hill.
- d. Continuation of the Cornell Gift Annuity Program.
- e. Reorganization of the Greater Cornell Committee, and coordination of Alumni Fund activities with Development Office; incorporation of budgets of all fund-raising activities and Alumni Association budgets as a responsibility of the Development Office.
- f. Determination of policies to cover overhead costs pertaining to gifts, restricted funds, grants-in-aid, and fellowships in research.
- g. Review of Cornell's position concerning endowments and gifts as compared to other similar institutions with a view to developing broad policies on needs of the University.
- h. Revision of regulations pertaining to fund-raising activities to establish a long-range, fund-raising organization and to replenish financing of University needs (Cornell University Council).
- i. Consideration of the advisability of borrowing funds from the Federal Government to erect self-liquidating dormitories.

STUDENT HOUSING

In connection with long-range planning, the Office of University Development has devoted considerable attention to the problem of providing adequate housing for male students of the University.

A special Committee on Student Housing has completed compilation of data on needs and has reported to the Committee on Planning and Development concerning these needs. The special committee appointed to consider this problem and make recommendations consists of the following members: George F. Rogalsky, Dean Lucile Allen, Dean C. C. Murdock, Dean R. S. Stevens, Professor A. W. Gibson, Mr. R. M. Mueller, Mr. M. R. Shaw, Dean F. C. Baldwin, and Asa S. Knowles, Chairman.

ACKNOWLEDGMENT OF GIFTS AND REPORTS ON USES MADE OF GIFTS

The Vice President for University Development is charged with the responsibility of handling and supervising the acknowledgment and acceptance of gifts received by various departments of the University and the acknowledgment of gifts and subscriptions in support of approved fund-raising projects.

Since July 1, 1949 individual letters of acknowledgment have been prepared and sent to nearly 20,000 individuals and organizations acknowledging gifts received and payments on subscriptions to the Greater Cornell Fund. The Office of University Development has assisted also by way of coordinating letters of acceptance and acknowledgment of gifts directly by various other offices and departments of the University. Within the limitations of time, special efforts have been made to inform donors of the uses made of gifts. This is a part of our work which will be expanded this coming year.

RECORDS

Since the Office of University Development is relatively new, considerable attention has been devoted to perfecting the records of the office and control of various campaign activities. This has involved keeping accurate records of all gifts received, as well as intentions of donors to make gifts, recording additions to existing funds and recording the wishes of donors with respect to use to be made of gifts, keeping up to date the roster of Greater Cornell Committee members, and the maintenance of proper records for control of expenditures by the Office of University Development and those incident to the Greater Cornell Fund Campaign.

STAFF OF THE OFFICE OF UNIVERSITY DEVELOPMENT

The staff of the Office of University Development during the past year has consisted of the following:

Asa S. Knowles, Vice President for University Development
David Palmer-Persen, Assistant to the Vice President for University Development
Howard A. Thompson, Assistant to the Vice President for University Development (resigned March 15, 1950)
J. B. McKee Arthur, Jr., Assistant to the Vice President for University Development at the Medical College, New York City
George Green, Accountant and Auditor
Carmen Canestaro, Gifts Records Office Manager
Weyland Pfeiffer, Manager of the New York Office of the Greater Cornell Fund
Eric Carlson, Field Staff Representative
Lyford Cobb, Field Staff Representative
Walter Schoggen, Field Staff Representative
Joseph Minogue, Field Staff Representative

Throughout the year, the office has had a clerical staff adequate for handling the work of the office.

It is a pleasure to express once again my gratitude to the officers of the Greater Cornell Committee for the time and effort they have devoted to matters of University Development and for the formulation of policies in connection with the conduct of the Greater Cornell Fund Campaign.

In addition, I wish to express my sincere appreciation to the Officers of the Greater Cornell Fund Campaign who have given so tirelessly of their effort and time during the past two years in the conduct of affairs of the Greater Cornell Fund Campaign. They are John L. Collyer, President of the B. F. Goodrich Company; Nicholas H. Noyes, Chairman of the Finance Committee of the Eli Lilly Company; and William L. Kleitz, President of the Guaranty Trust Company.

I have enjoyed working with you personally as Acting President of the University in our planning and development work and fund-raising activities. Your advice and counsel in connection with handling the work of this office has been most helpful and has contributed enormously to the effectiveness of our total program.

ASA S. KNOWLES,
Vice President for University Development.

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SUMMARY OF GIFTS, BEQUESTS, AND GRANTS-IN-AID BY PURPOSE AND RESTRICTION

JULY 1, 1949—JUNE 30, 1950

<i>Purpose and Restriction</i>	<i>Total Amount 1949-50</i>
Ahrens Publishing Co. Inc. Scholarship.....	\$ 200.00
(Hotel Management Scholarship in Memory of J. O. Dahl)	
Daniel Alpern Memorial Prize.....	508.00
Daniel Alpern Memorial Scholarship.....	2,000.00
Allied Chemical & Dye Corp. Fellowship.....	1,650.00
Alumni Endowment Fund.....	194.07
Alumni Development Fund—Detroit.....	100.00
Alumni Prize—College of Agriculture.....	25.00
Anonymous Discretionary Fund.....	12,500.00
Anonymous Endowment No. 3.....	1,750.00
Anonymous Endowment No. 5.....	24,000.00
Anonymous Endowment No. 7.....	101,787.50
Anonymous House Fund.....	52,375.00
Anonymous Furniture Fund.....	710.00
Apiculture Research Fund.....	22,516.52
Architectural General Expense.....	506.69
Cyrus D. Bachus Endowment Fund.....	250.00
Juanita Bates Loan Fund.....	100.00
Earl W. Benjamin Jr. Memorial Endowment.....	2,000.00
Bequests—Allocated.....	48,179.28
Bequests—Unallocated.....	62,628.06
Edward L. Bernays Foundation Fellowship in Social Sciences.....	2,500.00
Della S. Bishop Endowment.....	50.00
Boat House Fund.....	5,270.00
Bordens I & LR Scholarship.....	1,500.00
Brazilian Library Collection.....	18,902.60
A. R. Brand Scholarship—Agriculture.....	600.00
R. T. Brunson Loan Fund.....	2,000.00
Charles K. Burdick Scholarship Fund.....	395.00
W. Atlee Burpee Scholarship—Agriculture.....	200.00
Burr Book Fund.....	200.00
Carey Exhibition Prize.....	219.64
Chemical Engineers Loan Fund.....	160.00
Chemical Engineers General Expense.....	274.20
Class of 1901 Endowment.....	100.00
Class of 1903 Endowment.....	612.00
Class of 1915 Fund.....	200.00
Class of 1916 Endowment.....	19,961.88
Class of 1944 Income.....	7.50
Class of 1949 Endowment.....	432.49
Class of 1951 Scholarship.....	1,250.00
Class of 1953 Book Scholarship.....	150.00
Bess Berlow Cohan Award.....	100.00
Cornell Aeronautical Lab. Fellowship.....	7,200.00
Cornell Charities Scholarship.....	556.00
Cornell Club of Buffalo Regional Scholarship.....	1,341.50
Cornell Club of Chicago Regional Scholarship.....	1,650.00
Cornell Club of Lehigh Valley Regional Scholarship.....	650.00
Cornell Club of Maryland Regional Scholarship.....	800.00
Cornell Club of Nassau County Regional Scholarship.....	600.00
Cornell Club of New England Regional Scholarship.....	492.75
Cornell Club of New York Regional Scholarship.....	9,005.50
Cornell Club of Philadelphia Regional Scholarship.....	2,406.16
Cornell Club of Pittsburgh Regional Scholarship.....	583.00
Cornell Club of St. Louis Regional Scholarship.....	600.00
Cornell Club of Syracuse Regional Scholarship.....	600.00
Cornell Faculty Club Fund.....	1,901.68
Cornell Hotel Association Scholarship.....	100.00
Cornell Plantations Donations.....	470.00
Cornell Research Lab. for Diseases of Dogs—Building Fund.....	94,893.14
Cornell Research Lab. for Diseases of Dogs—Operating Fund.....	28,500.00
Cornell Research Lab. for Diseases of Dogs—Sponsored Research.....	15,000.00
Cornell Special Donors' Portfolio.....	8,225.00
Cornell Library Associates.....	614.42
Cornell United Religious Works Expense Account.....	10,000.00
Cornell University Press.....	445.00
Frances S. Crofts Scholarship Endowment.....	2,500.00
Frederick S. Crofts Prize.....	150.00
William Nelson Cromwell Fund.....	50,000.00
Dairy Marketing Scholarship.....	1,600.00
Ruth Darville Memorial Scholarship.....	3,389.00
Davis Colorado Endowment.....	1,050.00
Dean of Women's Grant.....	452.33
Departmental Development—Medical College.....	21,725.34
DeWar Loan Fund.....	33.16

PRESIDENT'S REPORT

<i>Purpose and Restriction</i>	<i>Total Amount 1949-50</i>
Frank J. Doft Memorial Scholarship—Hotel Admin.	250.00
Drummond Fund	3,497.45
duPont Chemical Engineering Fellowship	2,800.00
duPont Postdoctoral Chemistry Fellowship	4,500.00
duPont Postgraduate Chemistry Fellowship	2,200.00
duPont Mechanical Engineering Fellowship	2,800.00
Edith A. Ellis Endowment	750.00
Engineer Development Fund	113,055.00
Engineering Coop. Training Plan	10,000.00
Eso 4-H Scholarship—Agriculture	550.00
Federation Scholarship	2,366.50
W. Benjamin Fite Loan Fund	5,000.00
Foreign Students Scholarship	556.00
Foundry Educational Scholarship—Engr.	12,000.00
Foundry Educational Foundation Fund	10,000.00
Jerome Frank Endowment	25.00
Henry A. Gaertner Scholarship	440.00
Simon H. Gage Fellowship Endowment	100.00
General Scholarship Fund	9,025.00
Gifts Other than Cash	159,889.75
Robert Gould Research Foundation Fellowship	1,500.00
Anna Fieldon Grace Endowment	12,932.65
Greater Cornell Alumni Fund—Unrestricted	1,282,679.97
Greater Cornell Fund—Restricted to Fund Objectives	174,978.10
Greater Cornell Fund—Campaign Expense	1,584.78
Greater Cornell Fund—Restricted to Established Fund	(1,082,173.03)
Greater Cornell Fund—Gifts Other Than Cash	(87,539.00)
Mrs. Walter Douglass Scholarship	150.00
Griffis Endowment	7,000.00
Grolier Society Scholarship (B. & P.A.)	2,000.00
William C. Geer Fund	12,500.00
Guiteau Loan Fund	2.00
Guiteau Loan Fund Income	15.38
William F. E. Gurley Fund—Life Income	72,710.40
William F. E. Gurley Fund	2,410.78
Claude C. Harding Scholarship (B. & P.A.)	1,000.00
Harris, Kerr, Forster & Co. Scholarship—Hotel Admin.	200.00
David Albert Hauck Memorial Endowment	100.00
John A. Heim Endowment	6,828.06
Sidney Hillman Memorial Scholarship	2,000.00
Duncan Hines Scholarship—Hotel Admin.	1,000.00
Home Economics Alumnae Association	500.00
Maurice Hoopes Endowment	5,000.00
Hotel Admin. Summer School Scholarship	900.00
Henry Hudson Hotel Scholarship—Hotel Admin.	100.00
Hotel Red Book Scholarship	300.00
Hunter Loan Fund	10.00
Hydraulic Analogue	600.00
Industrial and Labor Relations Scholarship	1,000.00
Infirmity Library Fund	820.00
Invitation Club Loan Fund—Hotel Admin.	500.00
Irvine Lecture Endowment	57.00
Irvine Lecture Endowment Income	57.00
Albert and Olive Jonas Fund	1,618.20
William C. Kammerer Fund—Life Income	9,000.00
Kappa Alpha Professorship	2,755.00
Kappa Alumnae of Alpha Epsilon Scholarship	1,000.00
Father William J. Kelly D.M.I. Scholarship—I. & L.R.	3,600.00
Lenard B. Kieffer Scholarship Endowment	12,000.00
Mrs. Francis King Scholarship	300.00
Otto and Hernie F. Kinkeldey Fund—Life Income	2,000.00
Randolph Dickson Knott Scholarship	500.00
Koehl, Landis, and Landon Scholarship	150.00
Carl E. Ladd Memorial Endowment	4,700.00
Law Alumni Scholarship	465.00
Law School Anonymous Award	100.00
Law Library Expense	370.00
William Lidell & Co. Scholarship—Hotel Admin.	2,000.00
Sigmund Livingston Fellowship	2,000.00
Cedric Major Fund—Medical College	5,300.00
Albert and Mary J. Mann Endowment	5,204.81
McCormick & Co. Scholarship—Hotel Admin.	600.00
Asher D. McCowan Endowment	50.00
John McMullen Scholarship Endowment	133,090.69
Men's Dormitory #1 Fund	5,890.00
Milbank Memorial Fund	15,000.00
Miller Scholarship Endowment	80,476.38
Leonard T. Milliman Co-op. Law Income Scholarship	643.20
Paul H. Minton Endowment	374,387.60

UNIVERSITY DEVELOPMENT

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<i>Purpose and Restriction</i>	<i>Total Amount 1949-50</i>
Miscellaneous—Allocated.....	15,000.00
Moakley House Fund.....	720.00
Morrison Poetry Prize.....	200.00
National Association of Thoroughbred Breeders Scholarship.....	250.00
National Scholarship Fund.....	400.00
Needham and Grohmann Scholarship.....	200.00
Floyd Newman Fund.....	45,750.00
N.Y.S. Bankers Scholarship—Agr.....	400.00
New York State Hotel Assn. Scholarship.....	955.00
New York State Vet. Med. Society Prize.....	50.00
Walter L. Niles Memorial Endowment.....	3,068.21
Nottingham Scholarship.....	50.00
Noyes Brochure Account.....	1,500.00
C. P. Oberndorf Library Endowment.....	350.00
Ohio Hotel Assn. Scholarship.....	250.00
James Parmelee Fund.....	4,950.00
Partridge Club Scholarship.....	600.00
John F. Passmore Endowment.....	533.57
Woodford Patterson Endowment.....	33.63
Pennsylvania Hotel Assn. Scholarship—Hotel Admin.....	100.00
Phi Kappa Phi Fellowship.....	200.00
Phi Kappa Psi Scholarship.....	200.00
Pick Hotel Scholarship—Hotel Admin.....	400.00
President's Fund Income.....	250.00
Procter & Gamble Fellowship.....	600.00
Psi Upsilon Professorship.....	10,780.00
Chas. J. Quillman Fellowship.....	4,401.22
Radio Corporation of America Fellowship.....	2,500.00
John & Maude St. John Reamer Memorial Endowment.....	3,000.00
Research Grants—Endowed Colleges.....	349,441.00
Research Grants—Medical Colleges.....	685,073.01
Research & Investigatorship Grants—State Colleges.....	212,773.71
Martin Sampson Fellowship—Arts & Sciences.....	250.00
Savage Hall Construction.....	8,000.00
J. Schlitz Brewing Co. Scholarship—Hotel Admin.....	10,500.00
Paul L. Schwarzbach Memorial Endowment.....	10,000.00
Sears Roebuck Found. Scholarship—Agr.....	2,800.00
Semi-Centennial Endowment.....	100.00
Mrs. E. A. Seipp Library Endowment.....	1,150.00
Shell Fellowship in Chemical Engineering.....	2,053.00
Shell Fellowship in Geology.....	1,500.00
Sigma Xi Fellowship.....	500.00
Fred A. Simonsen Scholarship—Hotel Admin.....	500.00
Ruby Green Smith Scholarship Endowment.....	2,000.00
Standard Oil Co. of Indiana Fellowship.....	3,400.00
Standard Oil Co. of Ohio Fellowship.....	2,500.00
Nellie A. Stanton Loan Fund.....	200.00
Statler Fund.....	265,000.00
Statler Hall—Kitchen Equipment.....	500.00
Jos. L. Stichter Fund.....	3,805.87
Student Aid—Medical College.....	34,050.02
Student Relief Fund.....	150.00
Anabel Taylor Hall.....	500,000.00
Teagle Foundation Scholarship.....	40,440.00
Waldo F. Tobey Fund.....	888,256.87
Todd Professorship.....	4,750.00
Chas. M. & Jessie B. Thorp Memorial Fund.....	9,950.00
Trautwine Fund for Civil Engineering.....	2,060.26
Robert H. Treman Memorial Fund.....	50.00
Cora L. Tyler Scholarship Endowment.....	5,000.00
Union News Co. Scholarship—Hotel Admin.....	200.00
United States Rubber Co. Fellowship.....	2,700.00
University Library for Books.....	50.00
University Counsel & Sec'y Corp. Office.....	35.00
Van Cleef Memorial Dinner Endowment.....	500.00
Westinghouse Educational Foundation Fellowship.....	1,000.00
Horace White Fund.....	63,750.00
J. du Pratt White Professorship.....	28,035.00
Henry Shaler Williams Memorial Fund.....	500.00
Woodruff Professorship.....	36,586.82
Wordsworth Centenary Celebration Expense.....	375.00
World War II Memorial Loan Fund.....	100.00
GRAND TOTAL.....	\$6,529,318.25

APPENDIX II

REPORT OF THE VICE PRESIDENT—BUSINESS

To the President of the University:

SIR: I have the honor to submit the annual report of the Vice President—Business for the year 1949–50.

With a few minor exceptions, the auxiliary enterprises of the University had a successful year financially.

The Residential Halls Department, under the management of Mr. Milton R. Shaw and his staff, after paying its interest and sinking fund charges, increased its cash reserves for repairs and replacements from \$150,110.94 (July 1, 1949) to \$242,829.06 (June 30, 1950). In addition, substantial progress was made in the dormitory rehabilitation program.

The Purchasing Department, under the management of Mr. George S. Frank and his staff, also operates Chemical Stores, College Stores, Print Shop, Electronic Stores, Surplus Property, Typewriter Division, and Campus Delivery System. The net reserves of this group totaled \$174,925.52 (July 1, 1949), after deducting capital expenditures of \$11,110.56, and a loss of \$22,659.95 in Electronic Stores, and a donation of \$20,000 to the University's income account, were decreased to \$171, 811.96 (June 30, 1950), a net loss of \$3,113.56. The operations of Electronic Stores were adversely affected by a write down of surplus inventory and a gratuitous design and repair service, now corrected. The great variety and substantial amounts of electronic and other valuable material, collected by our Purchasing Department from United States Government surplus at little cost, has been of enormous value to our teaching, research, and operating divisions.

The following auxiliary enterprises are controlled by separate boards or directors, of which the Vice President is a member:

The Cornell University Athletic Association, managed by Mr. Robert J. Kane and his staff, closed its books on June 30 with a credit balance of \$25,720.59, which was applied to the reduction of its debt of \$84,007.94, reducing the same to \$58,287.35. This debt represents largely the balance due on the West steel stands on Schoellkopf Field, built in 1948 at a cost of \$151,255.69.

The Infirmary and Clinic, under the management of Dr. Norman S. Moore and staff, increased its cash reserves from \$68,893.86 (July 1, 1949) to \$104,636.26 (June 30, 1950). Substantial reserves in this division are necessary to take care of periods of heavy hospitalization occasioned by epidemics—the meticulous medical attention given our students has fortunately kept such from our community during the year under review.

The Cornell Co-operative Society, under the management of Mr. Ralph C. Avery and his staff, after making its customary contributions to the University, increased its surplus from \$270,326.94 (July 1, 1949) to \$276,101.71. Its value to our Faculty and student body continues to be seriously restricted by lack of adequate space in which to conduct its business.

The Comstock Publishing Company and the University Press are continuing profitably to widen the scope of their activity under the management of Mr. Victor Reynolds. The surplus and net equity of these enterprises were increased by \$27,783.07 at the end of the fiscal year (June 30, 1950) and amounted to \$170,695.30 as of that date.

Willard Straight Hall and the Johnny Parson Club, under the management of Mr. Foster M. Coffin and associates, came through the year with a net gain in their reserves of \$9,401.35, thereby increasing their accumulated reserves to \$348,023.84 (June 30, 1950).

Radio Station WHCU, under the management of Mr. Michael R. Hanna, after capital expenditures of \$5,841.34, increased its cash reserve from \$76,491.37 (July 1, 1949) to \$97,049.41 (June 30, 1950).

As for our Buildings and Grounds Department, it has had an extraordinarily busy year, marked by the completion of Statler Hall and a virtual doubling of the capacity of our central Heating Plant. It is not generally realized that this department has the responsibility for the care and upkeep of over 300 separate buildings and structures on our campus at Ithaca, scattered over 3,500 acres of lands, some 14 miles of streets and roads, and more than double that in walks and paths, as well as the operation of our central heating system, water works, electric power generation and distribution, and all the sanitary and storm sewer lines in our area. It has, over the years, done as good a job as possible, considering the fact that its staff has been kept down to a minimum and that the department never has had adequate funds to keep our extensive plant in first-class condition. Except for funds for new construction, neither the Trustees nor the administration have deeply concerned themselves over funds for adequate maintenance. This state of affairs now has been forcefully brought to the surface, largely through the efforts of Trustee John S. Parke, the Chairman of the Committee on Buildings and Grounds of the University Trustees, who, as executive Vice-President of the Presbyterian Hospital in New York City, has had a long and notably successful experience in the construction, care, and maintenance of that hospital's extensive plant.

The year under review also marked the retirement on June 30, under the age limit, of Mr. Hugh E. Weatherlow, who, as Superintendent of our Buildings and Grounds Department, has been its head since 1937. A graduate of our College of Civil Engineering with the class of 1906, he came back here with a long and varied career in building and plant construction. He also had a keen sense of orderliness, which manifested itself in a continuous improvement in the landscaping of our grounds, the development of our gorges, and the beautification of our campus. As for the maintenance of our buildings, he stretched his departmental funds to the limit. He consistently advocated the establishment of a building maintenance reserve fund in the University's annual budget, which would require the obligatory appropriation of monies, based on a fixed percentage of the replacement cost of each academic building, from which major repairs and replacements could be made when necessary. Such maintenance reserve fund has been in successful operation in our Residential Halls department for many years. However, the exigencies of the academic budget and other pressing demands have kept the Trustees and the University administration from putting such plan in operation. It is hoped that, under the vigorous and determined leadership and guidance which Chairman Parke and his committee are giving to our problems, this feature may soon become established in all future University budgets.

In a quiet and unassuming way, Mr. Weatherlow managed his department with effectiveness and skill. With complete loyalty to the University himself he inspired a like loyalty and devotion throughout his entire staff. He explored each of his many problems with painstaking care; his judgments were sound; he continuously endeavored to make each dollar buy the maximum in materials and services. In a department which touches every member of the University's extensive staff more intimately than does any other, he withstood the more or less petty harassments flowing from both teachers and students, with a degree of calmness and sympathetic understanding that was remarkable. We all owe him a debt of gratitude. That this was recognized by the University Trustees is evidenced by the following resolution of the Board, passed at its last meeting on June 12, 1950:

"Resolved that the Board of Trustees hereby expresses its thanks and appreciation to Mr. Weatherlow for his unswerving devotion to the interests of the University, his tactful cooperation with management and faculty, and his efficient and effective services. For all this and because of our personal devotion we extend to him our genuine good wishes for many years of health and happiness in the new life upon which he now embarks."

Anent our Buildings and Grounds Department, I also want to pay tribute to the splendid services rendered to the University by Dean Gilmore D. Clarke

of our College of Architecture, who headed our Architectural Advisory Council for many years, up to his resignation as Dean on July 1, 1950. A notable figure in the architectural world, Dean Clarke gave to our campus program his continuous personal advice and guidance. Its orderly and pleasing development is largely due to his initiative and leadership.

This report concludes the services of the undersigned as Vice President—Business. I want to express my sincere appreciation to all my associates in the various nonacademic activities of the University listed above, for the unwavering loyalty and devotion with which they have carried out their responsibilities. Also, I feel a deep sense of gratitude to the University Trustees and administration for their always helpful counsel and advice, as well as for their kindly forbearance, which I have enjoyed over the years.

GEORGE F. ROGALSKY,
Vice President—Business.

APPENDIX III

REPORT OF THE VICE PRESIDENT FOR RESEARCH

To the President of the University:

SIR: I have the honor to report on the activities of the Office of the Vice President for Research for the academic year 1949–50. In April, I presented to the President and the Board of Trustees a rather complete report entitled "Research at Cornell." It appears desirable that some of the tables appearing in that report should be reproduced here in order that these may be preserved in this more permanent type of record. You will, I believe, be interested to know that the April report was distributed quite widely to university presidents, to Cornell staff, and others and that the reception of the document was uniformly good.

VOLUME OF RESEARCH AT CORNELL

Our research effort in terms of money value of sponsored projects was about nine and one-half million dollars, the subdivision of which between units of the University, for this year and last, is shown in Table I.

TABLE I

Group	Location	1948–49 Millions of Dollars	%	1949–50 Millions of Dollars	%	% of Change
Endowed Colleges	Ithaca	1.6	17	1.6	17	0
State Colleges	Ithaca	2.9	32	3.3	35	14
Medical College	New York City	1.1	12	1.0	10	-10
C.A.L.*	Buffalo	3.6	39	3.6	38	0
Total		9.2	100	9.5	100	3

*Cornell Aeronautical Laboratory

In order to measure the entire research effort of the University, there should be added to the amounts shown above, sponsored by outside agencies, the research which is conducted as a part of the regular duties of the staff. It will be recalled that in the University budget salaries of staff are listed under the heading "Instruction and Research." It is my intention to evaluate this latter effort during the coming year. It varies greatly between individual staff members and between departments, but I am confident that it will be found that the total amount in this category is such that we are safe in saying that the

over-all research effort of Cornell for the year 1949-50 was well over ten million dollars.

SOURCES OF IMPLEMENTING FUNDS

Table II shows the extent of government sponsorship of our research programs:

TABLE II

	<i>Last Year</i>	<i>This Year</i>
Endowed Colleges	67%	62%
State Colleges	87% (State 76; Fed. 11.)	93% (State 78; Fed. 15.)
Medical College	31%	24%
C.A.L.*	89%	87%
University average	77.3%	79%

*As part of the balance that is contracted with industry is in the form of subcontracts on the government prime contracts awarded to the companies, these percentages really amount to: 96% for last year and 92% for this.

It will be seen that 79 per cent of sponsorship comes from government sources, including state and federal. This leaves 21 per cent derived from other sources, and Table III gives amount for each of these.

TABLE III

	<i>Last Year</i>	<i>This Year</i>
Corporations	9.2%	8.8%
Trade associations	1.2%	0.9%
Individuals	3.5%	2.8%
Foundations	6.5%	5.7%
Cornell budgets	2.3%	2.8%
Total	22.7%	21.0%

In the case of Cornell budgets the 2.8 per cent for this year reflects definite appropriations approved in the budget for research and does not include the indefinite amount to which I referred above as coming under the general responsibilities of our staff for research in conjunction with their teaching activities.

A number of economic considerations lend weight to the need for a determined effort to increase the amount of research sponsorship from corporations. It is believed that such an effort may result in obtaining an appreciation by corporations of their obligations in this regard and that the mutual advantages to companies and the University are such that the percentage from corporations as compared to government can be increased. The establishment of research centers at Cornell will make known the proficiencies which we possess in areas where there is some common denominator but which are campus-wide in scope. I am inclined to believe that through this means we can effectively bring to the attention of corporations and others that Cornell is a desirable place to foster research in such areas of knowledge. Considerable progress has been made in establishing such centers at Cornell.

FIELDS OF ENDEAVOR

The research effort of a university should concentrate on work of a fundamental character. The amount of legitimate applied research varies between the various parts of Cornell, but, as shown in Table IV, the average for the University (excluding the Aeronautical Laboratory) is about two-thirds.

PRESIDENT'S REPORT

TABLE IV

Colleges	Fundamental	Applied
	%	%
Endowed	85	15
State	35	65
Medical	90	10
Subtotal—Average	65	35
C.A.L.	14	86
	—	—
	—	—
Grand Total—Average	45	55

As related to areas of human interest, the spread of our research activities is shown in Table V comparing the figures of this year in dollars and percentage with those of last year.

TABLE V

Field of Endeavor	Last Year		This Year	
	Dollars	%	Dollars	%
Aeronautics (C.A.L. only).....	3,594,000	39.2	3,636,000	38.4
Agriculture.....	2,569,000	28.1	2,804,000	29.7
Engineering.....	466,000	5.1	496,000	5.2
Humanities.....	30,000	0.3	32,000	0.3
Medicine and nutrition.....	1,260,000	13.8	1,135,000	12.0
Physical sciences.....	776,000	8.5	730,000	7.7
Social sciences.....	384,000	4.2	440,000	4.7
Veterinary medicine.....	76,000	0.8	186,000	2.0
Total.....	9,155,000	100.0	9,459,000	100.0

COMPARISON OF RESEARCH EFFORT TO OTHER ACTIVITIES OF THE UNIVERSITY

We are satisfied that in general there is an appropriate balance between research and teaching at Cornell. Admittedly, there are areas where more research is desirable and possibly a few where there should be less research than at present. The actual percentages for this year and last are shown in Table VI.

TABLE VI

Colleges	Research Effort (Sponsored Plus Budgeted) in Millions of Dollars		University Budget (Less Budgeted Research) in Millions of Dollars		Total (Research Plus Academic and Business) in Millions of Dollars		Percentage (Research to Total)	
	Last Year	This Year	Last Year	This Year	Last Year	This Year	Last Year	This Year
Endowed.....	1.6	1.6	6.3	6.6	7.9	8.2	20.0	19.5
State.....	2.9	3.3	7.6	8.3	10.5	11.6	27.6	28.5
Medical.....	1.1	1.0	1.2	1.3	2.3	2.3	47.8	43.4
Total.....	5.6	5.9	15.1	16.2	20.7	22.1	27.1	26.7

Notes: The last year's approximations are based on actual results of the year's operations. C.A.L. figures are not shown as substantially the entire effort of that Laboratory is devoted to research.

In round figures, the above indicates that the percentages of research to total budget for the three major divisions of the University are 20 per cent for the Endowed Colleges, 30 per cent for the State Colleges, and 40 per cent for the Medical College. The nature of the work and the source of supporting funds seem to me to justify these in each case.

IMPACT OF RESEARCH ACTIVITIES ON THE UNIVERSITY BUDGET

In addition to the performances of a public service and the extension of the boundaries of human knowledge to which our research effort contributes, we should not lose sight of the fact that a very real gain accrues to the University budget-wise. The amount of income to Cornell derived from sponsored research projects during the past several years in the Endowed Colleges is shown in Table VII in terms of recovered budgeted salaries and overhead.

TABLE VII

	Overhead			Budgeted Salaries	Total*
	From Recovered Salaries	From University Budgeted Salaries	Total	Recovered through Government Reimbursement	Income from These Sources Affecting University Budget
1946-47	26,000	66,000	92,000	47,000	139,000
1947-48	38,000	112,000	150,000	75,000	225,000
1948-49	62,000	141,000	203,000	125,000	328,000
1949-50	77,000	179,000	256,000	130,000	386,000
1950-51 (Est)	54,000	135,000	189,000	111,000	300,000
Approximate percentage (used in estimated figures)	18%	45%	63%	37%	100%

*In the Medical College the income from these sources has varied from about \$45,000 in 1945-46 to a peak of \$75,000 in 1947-48 and has stabilized at about \$54,000 in 1948-49. Thus in 1948-49 the total return to the University in all colleges (but not including C.A.L.) was \$382,000.

RESEARCH POLICIES AND ORGANIZATION

The statements of policy affecting research, including acceptability, patents, fellowships, etc., have remained about as they were initially prepared and distributed a year ago. A few additions have been made, and I am pleased to report that we have received practically no complaints or suggestions for change during the year. Other universities have been frank in their statements of the help they were rendered by opportunity to study the approved policies in effect at Cornell.

The organization for research at Cornell has proved effective, and the co-operation with this office by professors throughout the University has been uniformly good. In all, we have some nine hundred projects, counting those in all divisions of the University. There is a tremendous breadth of coverage with practically no field of human endeavor left out. The wisdom of creating a central administrative office to handle the business phases of an undertaking of such magnitude has been substantiated.

In the tables given heretofore the *Cornell Aeronautical Laboratory* at Buffalo has been included in most instances. This off-campus activity has progressed most satisfactorily during the year, having at present its largest backlog of work—about three and a half million dollars. The Laboratory is conducted as a business enterprise, being entirely self-sustaining. Income from research projects, most of which are on a cost-plus-fixed-fee basis, is plowed back into internal exploratory research or is used for support of fellowships on the campus in Ithaca. Although the problem of the large wind tunnel is a very real one, we have been able to tide over the past lean months, and, because of extensive equipment additions, including a propeller dynamometer, sponsored by the U. S. Air Force, we look forward to a much better year for this facility than we experienced last year.

The affairs of the *Cornell Research Foundation* are in quite a satisfactory condition. Of principal concern is the outcome of the suit instituted against one of our Dyce Honey patent licensees. We are, however, facing termination,

during the next two or three years, of some of the patents which have resulted in good income in the past.

The affairs of *Associated Universities, Inc.*, and of its main facility, the Brookhaven National Laboratory, have progressed, but completion of equipment has not been as rapid as had been hoped. However, all of the unique facilities, such as the Reactor and the Cósmotron, will be completed during the year 1950-51, so that the real benefits which this cooperative arrangement make available to the universities and colleges in the northeastern part of the United States may be realized. The Cornell staff has participated substantially, however, in the research activities of the Laboratory this year.

Good progress has been made in the work of the *Cornell Committee for Air Safety Research*, notably in our success in interesting one of the large foundations in sponsoring an Aviation Safety Center at Cornell. The work of this center will get under way this summer.

OTHER ACTIVITIES

In my previous report to you I indicated that several other activities have been handled by the Vice President for Research, notably those involving aviation. In addition to serving on several government committees in this field, I have served on the Board of Directors of Robinson Airlines and am very pleased to report substantial progress by that company. There remains for us the needed task of interesting city or county officials in the establishment, with federal aid, of a municipal or county airport suitable for scheduled air transportation use and based on the procurement and improvement of the present airport owned by the University.

All in all, I am of the belief that our research activities are in a satisfactory state. I would also like to express my appreciation of the opportunity I have been afforded of entering into University affairs in general to a greater extent this year than heretofore.

T. P. WRIGHT,
Vice President for Research.

APPENDIX IV

REPORT OF THE REGISTRAR

To the President of the University:

SIR: I have the honor to submit herewith the annual report of the Registrar. It covers the academic year 1949-50, including the Summer Sessions of 1949 and, for convenience, work between the end of the Spring Term 1949 and July 1, 1949, but excluding work between the end of the Spring Term 1949 and July 1, 1950.

TABLE I

TERMS OF INSTRUCTION FOR THE YEAR 1949-50

AT ITHACA:	<i>Days in Session*</i>
Summer Session, University July 5-Aug. 13	31 †
Summer Session, Architecture July 5-Sept. 10	60
Summer Session, Chem. E. June 13-Sept. 2	70
Summer Session, Engineering (Industrial Cooperatives) June 13-Sept. 17	84
Fall Term Sept. 19-Feb. 1	101
Thanksgiving Recess Nov. 23-27	(subtracted)
Christmas Recess Dec. 22-Jan. 4	(subtracted)
Midyear Recess Feb. 2	(subtracted)
Spring Term Feb. 3-June 6	99
Spring Recess March 26-April 2	(subtracted)
Spring Day, a holiday May 13	(subtracted)
 AT NEW YORK CITY:	
<i>Medical College</i>	
Summer Term (for 4th year students) July 11-Sept. 3	48
Fall Term Sept. 13-Dec. 6	70
Columbus Day, a holiday Oct. 12	(subtracted)
Thanksgiving Recess Nov. 24-26	(subtracted)
Winter Term Dec. 7-March 8	67
Christmas Recess Dec. 22-Jan. 2	(subtracted)
Lincoln's Birthday, a holiday Feb. 13	(subtracted)
Washington's Birthday, a holiday Feb. 22	(subtracted)
Spring Vacation March 9-15	(subtracted)
Spring Term March 16-June 8	72
Memorial Day, a holiday May 30	(subtracted)
 <i>School of Nursing</i>	
Third Term May 9-Oct. 1, 1949	123
(Memorial, Independence, and Labor Day subtracted)	
First Term Oct. 3-Jan. 21	92
(Columbus, Thanksgiving, Christmas, and New Year's Day subtracted)	
Second Term Jan. 17-May 7	94
(Lincoln's and Washington's Birthdays subtracted)	
Third Term May 15-Sept. 30, 1950	117
(Memorial, Independence, and Labor Day subtracted)	

*Sundays excluded throughout.

†Saturdays also excluded, excepting Saturday, July 9, and Saturday, Aug. 13.

TABLE II

ATTENDANCE FOR THE ACADEMIC YEAR 1949-50

The cross totals for the year in Ithaca include (a) "double registrants" (i.e., students registered in two divisions of the University at the same time; see tabulation below) and (b) students registered in one division for the Fall Term and in another for the Spring Term. The grand totals exclude all duplicate registrations (see tabulation below).

IN ITHACA:

College	Fall Term			Spring Term			Total for Year		
	M	W	T	M	W	T	M	W	T
Agriculture.....	1,510	173	1,683	1,411	161	1,572	1,588	177	1,765
Architecture.....	174	48	222	158	42	200	175	48	223
Arts and Sciences..	1,742	723	2,467	1,699	705	2,404	1,823	750	2,573
Business and Public Administration..	118	3	121	113	3	116	118	3	121
Engineering.....	1,990	12	2,002	1,676	11	1,687	2,054	14	2,068
Graduate School..	1,177	208	1,385	1,214	204	1,418	1,360	234	1,594
Home Economics..	0	634	634	0	594	594	0	638	638
Hotel Administration.....	361	16	377	360	16	376	406	19	425
Industrial & Labor Relations.....	265	43	308	253	46	299	296	51	347
Law.....	398	13	411	387	12	399	398	13	411
Nutrition.....	22	18	40	27	16	43	29	18	47
Veterinary Medicine	192	4	196	190	4	194	193	4	197
Total Registrations	7,951	1,895	9,846	7,468	1,811	9,279	8,440	1,969	10,409
Double Registrants	76	7	83	75	7	82	81	7	88
Less double registrants.....	7,875	1,888	9,763	7,393	1,804	9,197	8,359	1,962	10,321
Other duplicates	...	...	...	...	...	...	117	13	130
Total enrolled (less all other duplicates).....							8,242	1,949	10,191

IN NEW YORK CITY:

	First Term		Second Term		Third Term				
	M	W	M	W	M	W			
Medical College....	302	24	302	24	302	24	302	24	326
School of Nursing..	...	109	...	152	...	144	...	152	152
	302	133	302	176	302	168	302	176	478

GRAND TOTALS

(Excluding duplicates)..... 8,544 2,125 10,669

DOUBLE REGISTRANTS

	Fall Term			Spring Term			Total for Year		
	M	W	T	M	W	T	M	W	T
Arts—Business Administration.....	19	1	20	19	1	20	19	1	20
Arts—Law.....	28	2	30	27	2	29	28	2	30
Arts—Medical.....	16	..	16	16	..	16	16	..	16
Agriculture—Nutrition.....	9	..	9	11	..	11	13	..	13
Agriculture—Veterinary Medicine..	..	..	..	1	..	1	1	..	1
Engineering—Business Administration	3	..	3	1	..	1	3	..	3
Home Economics—Nutrition.....	..	4	4	..	4	4	..	4	4
Hotel—Business Administration.....	1	..	1	1	..	..	1	..	1
TOTAL.....	76	7	83	75	7	82	81	7	88

TABLE II-(CONT.)

OTHER DUPLICATES

(Registered both terms but in different divisions of the University)

	Fall Term			Spring Term		
	M	W	T	M	W	T
Agriculture.....	30	1	31	7	..	7
Architecture.....	..	2	2	..	..	..
Arts and Sciences.....	18	6	24	32	3	35
Business and Public Administration....	1	..	1	..	..	..
Engineering.....	63	1	64	20	1	21
Graduate.....	1	..	1	46	4	50
Home Economics.....	..	3	3	..	1	1
Industrial and Labor Relations.....	2	..	2	8	4	12
Law.....	1	..	1	..	..	..
Nutrition.....	1	..	1	2	..	2
TOTAL.....	117	13	130	117	13	130

TABLE III

ATTENDANCE AT SUMMER SESSIONS, ETC., 1949-50

	Men	Women	Total
6-Week Summer Session.....	1,311	730	2,041
Graduate Students (included above).....	244	131	375
Unit Courses.....	172	82	254
TOTAL (excluding duplicates).....	1,483	812	2,295
Architecture Summer Session.....	45	1	46
Chemical Engineering Summer Session.....	10	0	10
Summer Survey (Engineering).....	84	0	84
Industrial Cooperative (Engineering).....	37	0	37
Extramural Courses (Summer).....	88	4	92
Personal Direction (Graduate School).....	414	28	442
Personal Direction (Nutrition).....	1	0	1
Honorary Fellows.....	1	0	1
Resident Doctors.....	3	0	3
Candidates for Degree Only.....	78	17	95
Extramural Courses (Academic Year).....	344	160	504
Short Courses (Agriculture).....	158	4	162
Summer Camp in Civil Engineering.....	85	0	85

PRESIDENT'S REPORT

TABLE IV
MATRICULANTS 1949-50

	<i>Men</i>	<i>Women</i>	<i>Total</i>
Undergraduates from Secondary Schools.....	1,397	493	1,890
Undergraduates from other Higher Institutions.....	281	86	367
Graduate School (not including Summer Session).....	412	94	506
Graduate School (Summer Session).....	42	39	81
Aeronautical Engineering.....	8	..	8
Business and Public Administration.....	28	..	28
Law.....	121	2	123
Medicine.....	51	2	53
Nursing.....	0	67	67
Nutrition.....	4	4	8
Veterinary Medicine.....	33	1	34
Special Students (excluding 2 year Agriculture).....	67	21	88
2-Year Agriculture.....	114	3	117
	2,558	812	3,370

For comparison the totals of matriculants for the past three years follow:

1948-49.....	2,382	736	3,118
1947-48.....	2,422	654	3,076
1946-47.....	2,353	642	2,995

TABLE V
GEOGRAPHIC DISTRIBUTION OF STUDENTS IN ITHACA

For the academic year 1949-50 students enrolled at Ithaca represented every state in the Union and the District of Columbia, four territories, and sixty-three foreign countries.

<i>States</i>	<i>Men</i>	<i>Women</i>	<i>Total</i>
Alabama.....	12	5	17
Arizona.....	5	1	6
Arkansas.....	10	0	10
California.....	73	15	88
Colorado.....	18	1	19
Connecticut.....	186	32	218
Delaware.....	27	8	35
Florida.....	55	13	68
Georgia.....	17	4	21
Idaho.....	5	1	6
Illinois.....	145	20	165
Indiana.....	35	7	42
Iowa.....	18	5	23
Kansas.....	9	4	13
Kentucky.....	24	6	30
Louisiana.....	12	2	14
Maine.....	30	9	39
Maryland.....	115	25	140
Massachusetts.....	258	57	315
Michigan.....	82	17	99
Minnesota.....	32	5	37
Mississippi.....	8	0	8
Missouri.....	45	3	48
Montana.....	2	2	4
Nebraska.....	17	4	21
Nevada.....	1	0	1
New Hampshire.....	31	7	38
New Jersey.....	610	111	721
New Mexico.....	9	2	11
New York.....	4,867	1,320	6,187

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North Carolina.....	16	4	20
North Dakota.....	8	1	9
Ohio.....	231	45	276
Oklahoma.....	13	5	18
Oregon.....	12	1	13
Pennsylvania.....	520	76	596
Rhode Island.....	18	8	26
South Carolina.....	12	0	12
South Dakota.....	5	1	6
Tennessee.....	25	4	29
Texas.....	36	7	43
Utah.....	26	0	26
Vermont.....	21	4	25
Virginia.....	57	16	73
Washington State.....	22	1	23
West Virginia.....	33	7	40
Wisconsin.....	44	5	49
Wyoming.....	4	0	4
District of Columbia.....	55	21	76
TOTAL.....	7,916	1,892	9,808
<i>U. S. Territories</i>			
Alaska.....	2	0	2
Hawaii.....	18	3	21
Panama Canal Zone.....	1	0	1
Puerto Rico.....	10	3	13
TOTAL.....	31	6	37
<i>Foreign Countries</i>			
Afghanistan.....	8	0	8
Arabia.....	1	0	1
Argentina.....	3	0	3
Australia.....	2	0	2
Austria.....	0	1	1
Belgium.....	0	1	1
Bermuda.....	1	0	1
Bolivia.....	1	0	1
Brazil.....	8	0	8
Burma.....	1	0	1
Canada.....	74	15	89
Chile.....	1	0	1
China.....	40	11	51
Colombia.....	3	0	3
Costa Rica.....	5	0	5
Cuba.....	2	2	4
Cyprus.....	1	0	1
Czechoslovakia.....	1	0	1
Denmark.....	5	0	5
Dominican Republic.....	1	0	1
Egypt.....	3	0	3
England.....	11	2	13
Equador.....	0	1	1
Ethiopia.....	3	0	3
Fiji.....	2	0	2
France.....	2	0	2
Germany.....	7	1	8
Gold Coast.....	1	0	1
Greece.....	4	0	4
Guatemala.....	1	0	1
Haiti.....	1	0	1

TABLE V (CONT.)

<i>Foreign Countries</i>	<i>Men</i>	<i>Women</i>	<i>Total</i>
Holland.....	3	0	3
Honduras.....	1	0	1
Iceland.....	2	0	2
India.....	19	3	22
Iran.....	2	0	2
Iraq.....	7	0	7
Israel.....	1	0	1
Italy.....	4	0	4
Jamaica B.W.I.....	3	1	4
Japan.....	1	0	1
Korea.....	3	1	4
Lebanon.....	1	2	3
Mexico.....	13	0	13
Nepal.....	1	0	1
Netherlands W.I.....	2	1	3
New Zealand.....	0	1	1
Nicaragua.....	0	1	1
Norway.....	6	3	9
Pakistan.....	1	0	1
Panama, Republic of.....	1	0	1
Peru.....	1	0	1
Philippine Islands.....	8	1	9
Poland.....	1	0	1
Scotland.....	1	0	1
Siam.....	7	1	8
South Africa.....	1	0	1
Sweden.....	3	0	3
Switzerland.....	1	0	1
Turkey.....	2	0	2
Uruguay.....	1	0	1
Venezuela.....	4	2	6
Wales.....	1	0	1
TOTAL.....	295	51	346
GRAND TOTAL.....	8,242	1,949	10,191

TABLE VI

UNDERGRADUATE AVERAGES

In the summer of 1949 the Registrar's Office again computed the undergraduate averages for the preceding academic year. This practice was begun in the summer of 1938 at the urgent request of the National Interfraternity Conference who, for some years, had regarded the University as "stand-offish" because of her non-participation in the Conference's annual nationwide survey of fraternity scholarship. The year 1948-49 again made significant increases as shown by the following table which includes the averages of a decade ago for the sake of comparison.

<i>Group</i>	<i>1938-39</i>	<i>1946-47</i>	<i>1947-48</i>	<i>1948-49</i>	<i>Net Change in 10 yr. interval</i>
All Undergraduates.....	75.21	76.73	76.88	77.42	+2.21
All Men.....	74.48	76.36	76.46	77.05	+2.57
All Women.....	77.81	78.00	78.48	78.94	+1.13
Fraternity Men.....	73.79	76.04	76.08	76.65	+2.86
Sorority Women.....	77.20	77.77	78.19	78.78	+1.58
Independent Men.....	75.15	76.56	76.74	77.42	+2.27
Independent Women...	78.28	78.10	78.70	79.09	+0.81

TABLE VII

DEGREES

September 1949; February 1950; June 1950

Degrees	Men	Women	Total
Bachelors of Arts.....	479	132	611
Bachelors of Science (a)*.....	382	32	414
Bachelors of Science (b)*.....	0	149	149
Bachelors of Science (c)*.....	93	2	95
Bachelors of Science (d)*.....	82	5	87
Bachelors of Science in Nursing.....	0	27	27
Doctors of Veterinary Medicine.....	50	1	51
Bachelors of Architecture.....	43	3	46
Bachelors of Fine Arts.....	5	4	9
Bachelors of Civil Engineering.....	97	0	97
Bachelors of Science in Civil Eng'g.....	4	0	4
Bachelors of Mechanical Engineering.....	117	0	117
Bachelors of Science in Mech. Eng'g.....	11	0	11
Bachelors of Science in Admin. Eng'g.....	55	0	55
Bachelors of Electrical Engineering.....	162	0	162
Bachelors of Chemical Engineering.....	81	1	82
Masters of Nutritional Science.....	2	7	9
Masters of Aero. Engineering.....	5	0	5
Masters of Food Science.....	3	1	4
Masters of Business Administration.....	46	0	46
Masters of Public Administration.....	3	2	5
Bachelors of Laws.....	98	1	99
Masters of Arts.....	57	30	87
Masters of Science.....	81	43	124
Masters of Science in Agriculture.....	27	0	27
Masters of Science in Education.....	28	16	44
Masters of Science in Engineering.....	7	0	7
Masters of Science in I. & L. R.....	10	1	11
Masters of Fine Arts.....	4	0	4
Masters of Regional Planning.....	2	0	2
Masters of Education.....	4	0	4
Masters of Chemical Engineering.....	3	0	3
Masters of Civil Engineering.....	12	0	12
Masters of Electrical Engineering.....	12	0	12
Masters of Mechanical Engineering.....	15	0	15
Doctors of Philosophy.....	183	27	210
Doctors of Medicine.....	67	11	78
TOTAL.....	2,330	495	2,825

*(a) means Agriculture; (b) Home Economics; (c) Hotel Administration; (d) Industrial and Labor Relations.

TABLE VIII
TABLE SHOWING BY YEARS THE NUMBER AND KINDS OF DEGREES GRANTED BY
CORNELL UNIVERSITY

	DEGREES						Total
	Before 1946	1946	1947	1948	1949	1950	
Architects.....	1						1
Bachelors of Arts.....	13,556	303	544	639	612	611	16,265
Bachelors of Agriculture.....	30						30
Bachelors of Architecture.....	813	11	21	26	29	46	936
Bachelors of Chemistry.....	823						823
Bachelors of Chemical Engineering.....	83	3	43	51	67	82	329
Bachelors of Civil Engineering.....	285	20	55	97	110	97	664
Bachelors of Electrical Engineering.....	110	29	25	74	87	162	487
Bachelors of Fine Arts.....	38	1	2	6	15	9	71
Bachelors of Landscape Architecture.....	82			1			83
Bachelors of Laws.....	2,582	20	51	106	148	99	3,006
Bachelors of Letters.....	264						264
Bachelors of Literature.....	52						52
Bachelors of Mechanical Engineering.....	313	26	78	127	148	117	809
Bachelors of Philosophy.....	484						484
Bachelors of Science.....	3,712						3,712
Bachelors of Science (College of Agriculture).....	3,636	116	221	246	325	414	4,958
Bachelors of Science (College of Home Economics).....	1,976	160	108	170	145	149	2,708
Bachelors of Science (Hotel Administration).....	656	17	78	89	109	95	1,044
Bachelors of Science (Indust. & Labor Relations).....	563	11	24	68	118	55	839
Bachelors of Science in Admin. Engineering.....	357						357
Bachelors of Science in Agriculture.....	123						123
Bachelors of Science in Chemical Engineering.....	63	3					66
Bachelors of Science in Chemistry.....	9						13
Bachelors of Science in Civil Engineering.....	32	28	28	13	9	4	114
Bachelors of Science in Electrical Engineering.....	36	29	30	19			114
Bachelors of Science in Mechanical Engineering.....	116	67	72	54	22	11	342
Bachelors of Science in Natural History.....	4						31
Bachelors of Science in Nursing.....	48	16	54	74	36	27	255
Bachelors of the Science of Agriculture.....	127						127
Bachelors of Veterinary Science.....	4						4
Chemical Engineers.....	91						91
Civil Engineers.....	3,066	1					3,067
Electrical Engineers.....	813						813
Forest Engineers.....	17						17
Graduates in Pharmacy.....	1						1
Mechanical Engineers.....	6,282						6,282
Pharmaceutical Chemists.....	2						2
Masters in Forestry.....	86						86
Masters of Aeronautical Engineering.....				2	6	5	15
Masters of Architecture.....	46			2	6		54
Masters of Arts.....	2,132	50	51	79	86	87	2,485
Masters of Arts in Education.....	84						84
Masters of Business Administration.....				33	48	46	127
Masters of Chemical Engineering.....	8		3	5	2	3	21
Masters of Chemistry.....	23						23
Masters of Civil Engineering.....	309	6	10	9	8	12	354
Masters of Education.....	3	1			3	4	11
Masters of Electrical Engineering.....	55	2	1	5	13	12	88
Masters of Fine Arts.....	8	1	1		1	4	15
Masters of Food Science.....			1	3	14	4	22
Masters of Landscape Architecture.....	8						8
Masters of Landscape Design.....	21						21
Masters of Law.....	66	3	1	1			71
Masters of Letters.....	9						9
Masters of Nutritional Science.....				8	14	9	31
Masters of Mechanical Engineering.....	285	4	5	2	5	15	316
Masters of Public Administration.....	3	1	3	7	4	2	20
Masters of Regional Planning.....	10						10
Masters of Philosophy.....	1,566	70	102	131	137	124	2,130
Masters of Science.....	483	19	28	44	37	27	638
Masters of Science in Agriculture.....	19						19
Masters of Science in Architecture.....	282	22	46	58	38	44	490
Masters of Science in Education.....	138	24	19	20	16	7	224
Masters of Science in Engineering.....		1	1	8	10	11	31
Masters of Science in Ind. & Labor Relations.....	1						1
Masters of Veterinary Medicine.....	2						2
Doctors of Law (Honorary).....	2,653	80	83	78	68	78	3,040
Doctors of Medicine.....	3,370	76	95	156	178	210	4,085
Doctors of Philosophy.....	20						20
Doctors of Science.....	8		1				9
Doctors of the Science of Law.....	1,324	67	35	1	41		1,468
Doctors of Veterinary Medicine.....							
TOTAL DEGREES.....	54,272	1,288	1,931	2,595	2,798	2,825	65,708

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TABLE IX

TABLE SHOWING THE NUMBER OF STUDENTS IN EACH COURSE IN THE PAST FIVE YEARS

	1945-46	1946-47	1947-48	1948-49	1949-50
Agriculture.....	1,127	1,660	1,619	1,725	1,765
Architecture.....	162	208	229	220	223
Arts and Sciences.....	2,075	2,522	2,551	2,482	2,573
Business and Public Administration.....	...	41	94	120	121
Engineering.....	1,556	2,667	2,648	2,367	2,068
Graduates.....	1,050	1,217	1,391	1,505	1,594
Home Economics.....	640	640	632	619	638
Hotel Administration.....	287	417	414	430	425
Industrial and Labor Relations.....	173	277	316	345	347
Law.....	229	355	378	377	411
Medicine.....	327	322	315	319	326
Nursing School.....	270	233	213	122	152
Nutrition.....	...	20	42	54	47
Veterinary Medicine.....	154	133	145	189	197
TOTAL, excluding Duplicates.....	7,928	10,560	10,830	10,673	10,669
Architecture Summer Session.....	...	47	56	60	46
Chemical Engineering Summer Session.....	...	...	21	18	10
Engineering, Science, and Management War Training Program.....	...	...	...	...	...
Extramural Courses (Academic Year).....	218	150	295	411	504
Extramural Courses (Summer).....	...	...	48	19	92
Graduate Courses, Summer.....	197	617	521	524	442
Industrial Cooperatives (Engineering).....	...	...	...	20	37
Law Summer Session.....	...	205	176	84	...
Short Courses, Agriculture.....	...	...	285	223	162
Short Shop Course, College of Engineering.....	...	...	51	...	...
Summer Camp in Civil Engineering.....	...	...	92	103	85
Summer Session.....	1,093	2,541	2,795	2,739	2,041
Unit Courses.....	138	250	282	301	254
Student Officers, Diesel Engineering.....	48	...	...	...	...
Student Officers, Steam Engineering.....	26	...	...	...	...

TABLE X

AGE AT GRADUATION

The age of Cornell students at graduation has been recorded at ten-year periods from 1870 to 1900 and at five-year periods since 1900. For the sake of brevity, the ages for only two of the latest periods have been printed annually since 1940; anyone wishing a longer view of these statistics may obtain it from earlier reports.

In general, the median age of the class of 1950 is noticeably more advanced (especially among the men) than the median age of the class of 1945. For this there are two reasons: (1) the class of 1945 in most divisions of the University had advanced the time of their graduation by war-time "acceleration"; (2) the class of 1950 contained a good many men whose time of graduation had been retarded by war service.

	Class of 1945			Class of 1950		
	Minimum	Median	Maximum	Minimum	Median	Maximum
Agriculture						
Men.....	20-1	22-10	29-10	18-11	23-11	37-10
Women.....	20-0	21-10	40-4	20-4	21-4	33-3
Architecture						
Men.....	19-6	21-7	30-9	21-8	25-1	29-11
Women.....	19-11	22-6	23-9	20-11	22-1	22-7
Arts & Sciences						
Men.....	18-11	21-	35-8	19-11	22-6	33-2
Women.....	19-1	21-	37-1	19-11	21-7	26-7
Engineering						
Men.....	19-	20-10	31-3	21-3	24-2	33-4
Women.....	20-4	20-11	21-5	28-10	28-10	28-10
Home Economics						
Men.....	29-9	22-	22-5	19-11	21-8	54-4
Women.....	19-	21-	26-2			
Hotel Administration						
Men.....				20-8	24-8	32-8
Women.....				22-9	24-2	25-7
Industrial & Labor Relations						
Men.....				20-3	24-2	34-10
Women.....				20-7	21-9	26-5
Veterinary Medicine						
Men.....	21-2	22-6	28-11	22-0	28-10	39-5
Women.....	24-9	24-9	24-9	35-3	35-3	35-3
Masters						
Men.....	19-11	27-1	66-2	21-2	25-7	56-3
Women.....	20-5	26-10	63-3	22-3	24-3	41-2
Doctors of Philosophy						
Men.....	22-7	29-5	56-11	24-3	30-0	46-10
Women.....	28-8	38-	45-9	24-6	28-11	36-4
Law						
Men.....	23-2	24-7	26-2	21-10	26-4	35-5
Women.....	21-5	23-4	30-8	23-4	23-6	23-9
Medicine						
Men.....	22-9	24-7	31-10	22-4	25-10	35-4
Women.....	23-1	24-10	26-10	22-2	25-4	37-1
Nursing						
Women.....	20-6	22-11	31-2	21-10	23-9	25-5

THE BUSINESS MACHINES

The year 1949-50 was the third in which the Electric Accounting Machines have been used in connection with certain functions of the Registrar's Office. This adaptation to the work of the office, and the necessary adjustments in the methods and practices of the office to the use of the machines, have been accomplished with a facility and a rapidity that exceeded our original expectations. To be sure, we are not yet making full use of the machines; for example, time must be allowed to pass before our student records are all on the new form which is directly posted by the I.B.M. tabulator. Some must still be posted by hand on the old form. But in this single operation of posting, to mention no other, the transition from old to new is at least a year in advance of what we had projected in the initial planning. Out of the 9,500 records which had to be posted each term in the academic year just passed nearly 6,000 are on the new form and machine-posted.

Not only is the speed of the machine posting very much greater than the old hand method, but the content and appearance of the record has been vastly improved. This enables the office to send out to former students, to other institutions, to prospective employers, or to governmental agencies, transcripts that are more useable and better representative of Cornell University. There is no virtue merely in the making and storing-up of records; the important job is to get them out promptly into the hands of those who want to use them. Now we can almost keep up with the demand; under the old system we presented to the world, alas, the appearance of a perpetual "bottle-neck."

This is no place for a detailed description of the uses which the Registrar's Office makes of the Machines or of the processes which get the results. The Associate Registrar, Ernest Whitworth, plans such a detailed description later on when the uses and the processes have become standardized more fully than they yet are. One use of the Machines, though, ought to be noted here: their great service in getting student records where they are needed in time for the several faculties to clear candidates for their degrees before Commencement. And here, too, should be recorded the splendid cooperation of the faculties in reporting grades promptly to the Registrar's Office. In June 1950, for example, before the end of the second day after the final examination, 99.7% of all grades had been reported.

E. F. BRADFORD,
Registrar.

APPENDIX V

REPORT OF THE DEAN OF THE UNIVERSITY FACULTY

To the President of the University:

SIR: I have the honor to present the report of the University Faculty for 1949-50.

There were included in the Faculty membership during part or all of the year 1,293 persons whose rank and place of service are shown in the following table. Under the heading, "Administration," are listed only those officers who do not have academic titles in addition to their administrative titles.

	<i>Professors Emeritus</i>	<i>Pro- fessors</i>	<i>Assoc. Professors</i>	<i>Asst. Professors</i>	<i>Adminis- tration</i>	<i>Total</i>
<i>Residence</i>						
Ithaca	97	389	250	203	20	959
Geneva	8	18	26	6	..	58
New York City . . .	17	40	82	106	..	245
Elsewhere	26	..	4	1	..	31
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	148	447	362	316	20	1,293

Ten members of the Faculty died during the year: William Sargent Ladd, Professor of Clinical Medicine, on September 16, 1949; Fred Stillman Rogers, Professor of Machine Design, on October 2, 1949; Roy A. Olney, Professor of Rural Education, on October 7, 1949; James Nathan Frost, Professor of Veterinary Surgery, on October 28, 1949; Annette Warner, Professor of Home Economics, Emeritus, on November 10, 1949; Harry M. Fitzpatrick, Professor of Plant Pathology, on December 8, 1949; Virgil Snyder, Professor of Mathematics, Emeritus, on January 4, 1950; Paul Russel Pope, Professor of German, Emeritus, on January 12, 1950; Fred Asa Barnes, Professor of Railroad Engineering, Emeritus, on April 5, 1950; and Walter Rodney Cornell, Professor of Mechanical Engineering, on May 27, 1950.

Eighteen members of the Faculty retired from their official positions during the year and were elected to the emeritus status: Mildred Carney, Associate Professor of Textiles and Clothing, (June 30, 1950); Russell L. Cecil, Professor of Clinical Medicine, (June 30, 1950); Eugene Floyd DuBois, Professor of Physiology, (June 30, 1950); Dayton James Edwards, Professor of Physiology, (June 30, 1950); Victor Raymond Gage, Professor of Mechanical Engineering, (June 30, 1950); Frank Bonar Howe, Professor of Soil Technology, (June 30, 1950); Harley Earl Howe, Professor of Physics, (June 30, 1950); Elise Strang L'Esperance, Professor of Clinical Public Health and Preventive Medicine, (June 30, 1950); Grace Morin, Professor of Home Economics, (June 30, 1950); Otto August Reinking, Professor of Plant Pathology, (April 30, 1950); Byron Burnett Robb, Professor of Agricultural Engineering, (June 30, 1950); Charlotte Robinson, Associate Professor of Home Economics, (June 30, 1950); Nancy Roman, Professor of Home Economics, (June 30, 1950); Oscar M. Schloss, Professor of Clinical Pediatrics, (June 30, 1950); Alexander Duncan Seymour, Professor of Architecture, (June 30, 1950); George Walter Tailby, Associate Professor of Animal Husbandry, (June 30, 1950); Clarence Ellsworth Townsend, Professor of Engineering Drawing, (June 30, 1950); and Ernest Van Alstine, Professor of Soil Technology, (June 30, 1950).

During the year eighty-four members left the ranks of the Faculty either by resignation or because of termination of the contract period. Sixty-nine members were on sabbatic leave during the year and twenty-one were on special leave.

ELECTIONS

The Faculty elected Herbert W. Briggs as a member of the Committee on University Policy, Lloyd P. Smith as a member of the Board on Physical Education and Athletics, and H. M. Giff as a member of the Board on Student Health and Hygiene.

In the spring the Faculty voted to make the Committee on the Economic Status of the Faculty a standing committee and elected Andrew Schultz, jr., F. A. Long, Perry Gilbert, G. P. Adams, jr., and Herrell DeGraff as members of that Committee.

NEW ADMINISTRATIVE ORGANIZATIONS

From time to time the University Faculty has taken actions which resulted in the organization of divisions of the University to serve the University as a whole. Action of this sort was taken in 1934 when the Cornell University Summer School was organized under the general supervision of the University Faculty. The legislation provided for the appointment of a Director responsible to the President and for an Administrative Board selected so as to represent various interests. This organization proved very satisfactory, and neither the University Faculty nor its committees have had further occasion to exercise the supervision which the legislation provides.

During the course of the academic year the University Faculty has taken actions which have resulted in the setting up of two organizations on the same pattern. In both cases there was confusion because of diverse interests on the campus.

In 1946 the University Faculty made recommendations to the Board of Trustees which resulted in the organization of the University Testing Service. About the same time there was organized in the School of Education the Bureau of Educational Research and Service. These were two distinct organizations having to a certain extent overlapping functions. During the course of the years, the demands upon these services have increased and there has been a considerable amount of confusion regarding them. The University Faculty, with the consent of the Faculty of the School of Education, has recommended to the Board of Trustees that the two be merged into a single organization known as the University Testing and Service Bureau. This has been organized very much like the University Summer School, with a Director and an Administrative Board and will carry on the activities of the two merged organizations.

An Orientation Program for freshmen was inaugurated by action of the University Faculty in 1942. It did not function during the war years, but in 1946 the Faculty passed legislation under which it has been operating to the present time. There are diverse interests involved in this program. Students are interested, and without their help the program would not be a success. The several colleges of the University are interested as are the officers responsible for student welfare. By action of the Faculty the Orientation Program has now been reorganized under the directorship of the Dean of Men and the Dean of Women and an Orientation Advisory Board which will include in its membership representatives of the administration, the faculty, and the student body.

It is to be hoped that these new organizations will carry on as effectively in their fields as the Cornell University Summer School and the Division of Extramural Studies have in theirs.

THE COMMITTEE ON ECONOMY

During the summer of 1949 there was appointed by the President, at the suggestion of the University Faculty, a special Committee on Economy. The appointments were made from a slate recommended by the Committee on University Policy. This Committee has been very active during the year searching for ways by which the budget of the endowed colleges might be reduced with minimum sacrifice to academic objectives. The Committee has served jointly with a Committee composed of the Deans of the endowed colleges and a Committee appointed by the Board of Trustees to advise the President. The three Committees have frequently met as a Plenary Committee. From the point of view of those members of the University Faculty who have had part in this operation, this organization has been highly satisfactory. It has been repeatedly suggested that this Plenary Committee might well serve as a pattern of organizational procedure which could profitably be used for other problems which involve both administration and faculty.

MILITARY CURRICULA

The faculty of each college has jurisdiction with respect to the course offerings of the departments of the college. In the case of two of the independent departments committees elected by the University Faculty exercise such jurisdiction on behalf of the Faculty. There has been no such provision for the departments of Military Science, Air Science, and Naval Science. The curricula of these departments are specified by the Department of Defense in Washington. There has been in the past no provision for bringing criticisms of the curricula to the attention of those who are in a position to effect changes. On the other hand these departments have been isolated from the faculties of the University and have found it difficult to make changes requiring faculty approval.

The University Faculty has established a new standing committee, the Committee on Military Curricula, to serve as liaison between the military departments and the faculties of the University in matters relating to curricula, facilities, and credits and to study the curricula of the military departments for the purpose of making recommendations for such changes in them as seem desirable. The chairman of these departments are *ex officio* members of the Committee, and such changes as are within their jurisdiction may be made directly. Changes outside their jurisdiction are to be recommended to the University Faculty for transmission to the Department of Defense.

THE STANDING COMMITTEES

The Committees on Student Conduct and Student Activities have granted to the Interfraternity Council initial jurisdiction with respect to the fraternities which constitute its membership. All rules enacted by the Council are subject to the approval of the Committee on Student Activities, and all actions taken by the Judiciary Committee of the Council may be appealed to the Committee

on Student Conduct. The plan has been in active operation throughout the academic year, and the relations between the Faculty Committees and the Interfraternity Council have been cordial. Several actions have been taken, and none have been appealed to the Conduct Committee. The Judiciary Committee of the W. S. G. A. has continued its successful operation in conduct cases involving women.

The Committee on Student Conduct has this year considered twenty-eight cases involving individual student responsibility. In a number of these more than one student was implicated. A single case was reviewed which involved two student organizations. The penalties imposed were: expulsion, 1; parole, 14; reprimand, 15; deprivation of driving privileges, 4; disbanding of student organizations, 2. In five cases, the Committee found no cause for action. In addition to these the Chairman of the Committee reprimanded 53 students which actions were subsequently approved by the Committee in each case. The total number of cases brought to the attention of the Chairman was larger this year than last, but this is in part attributable to the efficiency of Proctor McCarthy and to an improved cooperation between the Conduct Committee and other individuals, administrative offices, and committees having to do with student affairs.

The Committee on Student Activities has completed a classification of present student organizations, which number 287 as of June 1, 1950. To facilitate its own work and that of the Deans of Men and of Women, it has adopted an official statement of the standards for recognition of student organizations, and, in cooperation with the Deans of Men and of Women, has prepared for distribution a statement of these standards and of the procedures to be followed by the officers of student organizations in obtaining and maintaining official recognition. The Committee plans for the next academic year a careful study of the charters and practices of selected student organizations to determine whether they meet the established standards for recognition. This study will probably also result in changes in the classification of some of these organizations.

The Committee on Calendar has initiated legislation which the University Faculty has passed whereby, beginning in the fall of 1951, the daily schedule of the University will revert to the pre-war plan of providing a single hour, free from classes, in the middle of the day. Specifically, the Committee suggested that the period from 12:50 to 1:40 p. m. be cleared of all academic exercises, and that the laboratories be permitted to begin at 1:40 p. m. only when necessary.

The Committee on University Lectures sponsored this year twelve lectures on the Goldwin Smith Foundation, fourteen lectures on the Schiff Foundation and two series on the Messenger Foundation of six lectures each. In the month of October Otto E. Neugebauer delivered six lectures on "The Exact Sciences in Antiquity"; and in May, Vincent du Vigneaud delivered six lectures on "A Trail of Research."

During the year, the Committee on Music sponsored two series of concerts. The Bailey Hall Concert Series consisted of six recitals: Jussi Bjoerling, tenor; the Buffalo Philharmonic with Seymour Lipkin, pianist; Benno Moiseiwitsch, pianist; the Cleveland Orchestra; Issac Stern, violinist; and the Rochester Civic Orchestra with John Kirkpatrick, pianist. A series of five recitals was presented in the Willard Straight Theatre. This series consisted of the Pro Musica Antiqua; and the Walden, Stuyvesant, Modern Art, and London String Quartets.

CARLETON C. MURDOCK,

Dean of the University Faculty.

APPENDIX VI

REPORT OF THE DEAN OF THE GRADUATE SCHOOL

To the President of the University:

SIR: I have the honor to present the report of the Graduate School for the year 1949-50:

I

I cannot report solutions for many of the problems previously identified. The preoccupation of members of the Graduate Faculty with budget revision and ancillary concerns has, in the main, prevented them from examining educational methods and policies in the light of growth and change in structure of the University.

With regard to admissions, there has been progress. Though the table below does not compare with that of a year ago because we have changed accounting methods, the number of applications for admission and for fellowships and scholarships has increased about 25 per cent over the number a year ago. I hazard the guess that the period of phenomenal increase is over. With the adoption of new methods for handling and judging applications, the number of complaints has substantially declined. At the same time these methods have reassured professors in the various fields that a proper selection of incoming classes is being made. The Graduate Office could not, on its budget, have handled the increased load if faculty members and departmental staffs had not given additional time, even though they, too, are hard pressed.

The reliability of credentials, however, continues to deteriorate, especially with the elimination of accrediting by the Association of American Universities and the rapid growth in number and size of faculties which prepare students for graduate work. With the cooperation of Professor Glock and the University Testing Service, we have joined the Educational Testing Service in a study of the validity of its tests, while we are also engaged in a local study of the Graduate Record Examinations and other standardized tests for our use.

Increased desire for graduate work is the trend of the times; but there are several reasons for the more than normal interest in this Graduate School. First, the addition of new schools and faculties has somewhat increased the number of major fields of graduate instruction, and a new kind of interest is developing in certain old fields. Second, the faculty have zealously maintained and developed their principles of sound scholarship, despite an increasing burden of committee and other quasi-instructional duties. Third, the University has maintained the prewar ratio of faculty to students, despite a kind of pressure to which a number of universities have had to succumb. And fourth, the efforts of the faculty, which have been successful thus far, to adhere to a pattern of personalized resident instruction despite a contrary national trend are receiving favorable recognition.

I have tried, so far as time and opportunity have allowed, to inquire about these matters with our own candidates and faculty; with applicants, and with faculty members and officials of other schools. These inquiries convince me that we need to sustain and enhance those four elements if our Graduate School is to produce adequately educated scholars and scientists. As we know, our University lacks many material advantages which are usually considered requisite. I refer to the inadequacies of the University Library, the decline in real and relative values of our fellowships and scholarships, our lack of even minimal housing for graduate students, and the steady decline for twenty years in funds available for individual research. Nevertheless, I sincerely believe that our present class of candidates has never been eclipsed in diligence, sincerity, and aptitude; though their preparation in the three R's and the basic arts and sciences leaves something to be desired.

II

Though re-enforcement of three of the four elements named above may have to wait upon another day, decisions throughout the country and in the University necessitate consideration of resident instruction now. If I preface my remarks with a statement of accepted principles of education, I do so because recent decisions have been made without specific recognition of these principles.

About half our students are registered as candidates for the degree of Doctor of Philosophy. The single aim of a doctoral program is training a scholar or scientist. A candidate cannot become a scholar or scientist without intensive and independent mastery of a special science; and no candidate should attain the status of the doctorate without this demonstration. Courses and credits, by their nature, can never demonstrate such intensity and independence. Conversely, the candidate cannot become a reliable scholar and scientist as long as his view is so limited to a special science that he cannot see its part in totality. The garment of philosophy, or science, is woven of one thread. Training means a change in habits of thought and action, and the first principle in educating scholars and scientists is living, studying, creating, and making decisions in a philosophical environment—in the presence of the full complement of arts and sciences.

The structure of our School has revealed since its foundation these two aspects of training. The special committees, composed of specialists, are responsible for the special training. The General Committee and the Graduate Faculty are responsible for the general training, and they meet their responsibility primarily, though not exclusively, through a plan of residence requirements. There is no other assurance in an advanced degree that the recipient is trained away from that overspecialization which is denounced in the Report of President Truman's Commission and many other official publications than is represented by the requirement that the candidate reside in intimate contact with students and faculty who jointly represent and profess the totality of knowledge, in its interdependence and unity.

The demonstrated results of the sound training afforded by the nation's graduate schools since their foundation have inspired demands for such training by vocational groups and individuals hitherto disinterested. Moreover, the introduction of gargantuan apparatus into most fields of research and the increasing need for rapport between the University and government, business, and industry have wedded the graduate schools to a new group of sponsors. There is no reason why graduate training should not be desirable for work in any field: the training which has demonstrated its validity in some parts of society can demonstrate an equal validity in others. But occasionally demands from these new groups reveal a belief that doctoral training is procurable without requisite cost. They ask that degrees be granted for fragmentary training; that is, they ask society to believe that the same end may be attained by a system of courses or credits, or other comparatively external paraphernalia, diluting the training by allowing divided interest, or by tampering with requirements of resident study.

As I say, those who do not wish to assume the costs of adhering to the established principles stigmatize them as products of inertia, conservatism, and inflexibility. They were so described in the late nineteenth century, when zealous practitioners maintained that professional training for law and medicine, for centuries taught by resident university faculties in most countries, could equally well be secured in proprietary schools where fundamental professional training was administered by practitioners whose primary contractual duties were not formal instruction. Clearly, the method was not successful, and today many states have legal controls forbidding lawyers and physicians whose training is limited to such schools to practice. The development of judicial and scientific attitudes in American law and medicine has been remarkable since the public accepted these principles. The question faced was not one of proprietorship; for the controls apply equally to nonprofit institutions. The princi-

ple written into these laws, as I understand it, is that the bulk of fundamental training must be secured from a full-time, "resident" faculty by candidates studying in residence.

The acquirement by the University of instructional facilities remote from the campus and frequently lacking a resident faculty whose primary duties are formal instruction, in an environment where the particular end must be attained without consideration of the interrelationships with other sciences creates a hazard. If we do not exercise vigilance in our educational relationships with such vital and contributive divisions of the University as the Medical School, the New York State Agricultural Experiment Station, the Cornell Aeronautical Laboratory, and the like—not to mention centers less closely bound to the University—we shall be granting degrees which presumptively identify one type of training, whereas some holders of those degrees will have received a very different type—probably no less rigorous, but designed with different purposes and commonly leading to different results.

This is not a matter of all or nothing. The practical and theoretical are as inextricably interwoven as are the special and general. The facilities made available by all branches of the University should and do fit into the educational program of the University. But violence can be done to individuals and through them to our society if these principles of sound graduate training do not determine official decisions. With such decisions now having to be made daily, I have taken this opportunity to record afresh what I believe to be demonstrated and approved educational policy. It is desirable and necessary constantly to challenge and test such principles; but it would be unfortunate if they were negated in action without due consideration. Granting a specialist the title "professor" does not make him one; he becomes one only when he learns that his first responsibility is to be professor in fact. Registering a student in candidacy so that he may study in such odd hours as are free from vocational demands does not make him a student, no matter how many years he continues; only when he has devoted his whole mind to the free search for knowledge, wherever the road may lead him, does he become habituated to science and scholarship.

It is my pleasure to report that during the past year, after conferences between committees appointed by the Graduate Faculty and the staff of the New York State Agricultural Experiment Station, an agreement for development of graduate work was worked out and approved by both units. These principles which I have reviewed were fundamental to the discussion and are implicit in the adopted agreement, which welds together the resident faculty and those directing graduate work at Geneva. I take this opportunity to express my deep appreciation for the work of all concerned, especially to the Secretary of the Graduate Faculty, who met with both groups.

III

It seems inappropriate to discuss in this report the results of budget revision as they are apt to affect the program of the Graduate School. A study was made by a committee appointed by the faculty, Professor F. E. Mineka, chairman, and duly reported to the Plenary Committee. Since the revision was instituted for the period beginning July 1, 1950, no facts regarding its effect are available. Since an appreciable part of the revision affects graduate assistants directly and another part affects research programs on which they and the staff are engaged, the effects will need to be scrutinized.

To succeed Professor Otis Curtis, whose death I noted a year ago, the Graduate Faculty elected as its Secretary Dr. Damon Boynton, Professor of Pomology.

The faculty also voted to change the time of election of members of the General Committee from May to October. Consequently, there were no changes in membership during the year.

I append statistical data.

CHARLES W. JONES,
Dean of the Graduate School.

PRESIDENT'S REPORT

TABLE I

STATISTICS OF ATTENDANCE OF GRADUATE STUDENTS

A. TOTAL ENROLLMENT		
	1949-50	1948-49
Number of students registered during:		
Fall Term.....	1,385	1,340
Spring Term.....	1,450	1,378
Number of students registered during the summer, 1949, as below.....	1,118	1,194
Summer Session.....	568	640
Personal Direction.....	455	472
Candidate for Degree Only.....	95	82
Summer Term.....	0	0
B. GRADUATE STUDENTS CLASSIFIED ACCORDING TO THE DEGREES FOR WHICH THEY ARE CANDIDATES		
	Spring Term 1950	
Doctors of Philosophy.....	762	
Doctors of the Science of Law.....	0	
Doctors of Education.....	3	
Masters' Degrees, as below		
Masters of Arts.....	132	
Masters of Science.....	180	
Masters of Science in Agriculture.....	30	
Masters of Science in Education.....	42	
Masters of Laws.....	0	
Masters of Architecture.....	3	
Masters of Fine Arts.....	8	
Masters of Landscape Architecture.....	3	
Masters of Chemical Engineering.....	8	
Masters of Civil Engineering.....	23	
Masters of Electrical Engineering.....	33	
Masters of Mechanical Engineering.....	34	
Masters of Education.....	23	
Masters of Regional Planning.....	5	
Masters of Engineering Physics.....	2	
Masters of Science in Industrial and Labor Relations.....	24	
Noncandidates, as below		
Noncandidates.....	39	
Resident Doctors.....	8	
Honorary Fellows.....	3	
Candidates for Degree Only.....	41	
Withdrawals.....	44	
Total.....	1450	

TABLE II

GRADUATE STUDENTS RECEIVING DEGREES CLASSIFIED
ACCORDING TO THE DEGREE RECEIVED

	1949-50	1948-49
Masters' Degrees		
Masters of Arts	87	86
Masters of Science	125	137
Masters of Science in Agriculture	27	37
Masters of Education	4	3
Masters of Science in Education	44	37
Masters of Regional Planning	2	3
Masters of Science in Engineering	7	16
Masters of Laws	0	0
Masters of Architecture	5	6
Masters of Fine Arts	4	1
Masters of Landscape Architecture	0	0
Masters of Chemical Engineering	3	2
Masters of Civil Engineering	12	8
Masters of Electrical Engineering	12	13
Masters of Mechanical Engineering	15	5
Masters of Science in Industrial and Labor Relations	11	10
Total Masters' Degrees	358	364
Doctors of Philosophy	210	179
Doctors of the Science of Law	0	0
Doctors of Education	1	0
Total	569	543

TABLE III

A. ADMISSIONS

	7/49-6/50	7/48-6/49
Number of applications distributed	6,280	7,000
Number of applications considered	2,432	1,835
Number of fellowship applications considered	665	500

B. NEW GRADUATE STUDENTS

	During Academic Year 1949-50	Summer 1949
Doctors' degrees	173	19
A.M. and M.S. degrees	263	49
Professional Masters' degrees	146	27
Resident Doctors	5	3
Honorary Fellows	1	0
Noncandidates	37	11
Withdrawals after Registration	23	4
Total	648	113

APPENDIX VII

REPORT OF THE DIRECTOR OF THE UNIVERSITY LIBRARY

To the President of the University:

SIR: I have the honor to submit the annual report of the University Library for the year 1949-50.

In the year just passed the University Library has established several new highs: it has circulated the largest number of books for home use and has accessioned the largest number of new volumes in its history. Home use charges are 8 per cent higher than last year, the previous high, and accessions represent an increase over the year 1948-49 of approximately 70 per cent. In the same period, the Library has been the recipient of several important gifts, has had some modest, but long needed and much appreciated physical improvements, has participated in the Wordsworth Centennial by mounting an extensive exhibit of his books and manuscripts, has studied proposed solutions of the building problem intensively with the aid of a special committee of Faculty members, and representatives of the Board of Trustees, and the administration, and has compiled and published the first comprehensive handbook of the libraries of the University.

The sections of this report will deal with these and other events and problems, including the internal operations of the University Library, the major problems confronting the University in its libraries and the customary statistical tables.

I. READERS' SERVICES

The organization and scope of the Readers' Services have been presented in detail in previous reports and there have been no major changes during the past year. Three years' experience with this plan of organization indicates that under existing circumstances it is well suited to the University's needs and results in the best service that can be provided with a limited staff and with the physical handicaps of inadequate space and lack of modern mechanical equipment.

REFERENCE

The Reference Department is charged with the responsibility of assisting readers in the use of the Library. Such assistance may take any one of several forms: it may mean showing a freshman how to use the card catalogue and fill out a call card in order to borrow a book from the stacks; it may mean the furnishing of some specific item of information; it may mean an explanation of the system of interlibrary loans, or of a bibliographic guide or index, or of the sources that must be checked to determine what has been published concerning a particular topic; it may mean a lecture and guided tour of the library for freshmen, or an informal description of the types of books shelved in the Reference Room. The kind of information or assistance given to a reader varies with the reader's needs, his understanding of the Library, and his ability to help himself. Particularly in their assistance to students, members of the reference staff attempt to show how the material or the information required can be found, instead of simply producing it. In this way the student is encouraged to rely on himself, once he has learned the basic reference techniques and tools. Thus the Reference Department serves as a catalyst by which the resources of the Library are mobilized and put at the service of the readers.

Moreover, reference service is not fully understood, if it is regarded as spoon-feeding. Many students come to the University from schools which have relatively small libraries. They have had little, if any, instruction in bibliography and no experience in coping with the complexities of a large research library. It is true that determined and persistent efforts to find their own material may finally lead to success for a few; but the majority will not make the effort.

Even those who do win through do so at great expense of time and wasted effort. Yet training in the easy and effective use of printed materials is presumably one of the objectives of the University, since without this ability the prospects of students continuing their education voluntarily through adult life are meager. The Library shares this responsibility with instructional departments. Through the Reference Department it makes available a service of bibliographic assistance to any member of the University who may have occasion to call on it.

It would be a further misconception to think of the Reference Department as a service for undergraduates only. Many graduate students and Faculty members have occasion to call on the Department for assistance in bibliographic undertakings and in tracing elusive materials and information. This is especially true in such areas as government publications, where the bibliographic controls are not as complete as is desirable, yet the volume of publication is very great.

In an effort to meet more effectively the need for bibliographic and reference assistance, the Reference Department as a separate division of the Library was established three years ago. The Department in these years has developed its services, weeded, expanded, and reorganized the reference book collection, established routine procedures for interlibrary loans and the supplying of microfilms, photostats, and photoprints, and has undertaken a program of formal and informal instruction in the use of the library. That the expansion and development of these services was long overdue and is much appreciated is attested by the favorable comments of students and Faculty members, the extensive use of the reference collection, and the many requests made of the Department. In the past year, for example, the reference staff answered over 9,000 requests for assistance, exclusive of directional questions.

The Reference Department assumed the chief responsibility, aided by various other members of the Library staff, for giving a brief lecture and tour of the Library to all students in Freshman English. The number of sections was 84, of students, 1,717.

Library Handbooks

The *Library Handbook* issued in 1948 has been another effective means of giving students the basic information necessary to the efficient use of the library. A revised edition of this handbook is now in press.

A new and far more comprehensive publication, *Handbook of the Libraries: For Graduate Students and Faculty*, was published near the close of the year. This handbook is a cooperative undertaking of all the libraries, designed to give information on the location of the chief collections of library materials on various subjects in campus libraries, descriptions of the libraries, and bibliographic information on a selected group of frequently used reference works. This handbook represents the work of a library staff committee under the chairmanship of the Assistant Director for Readers' Services, with the special assistance of the staff of the Reference Department.

Reference Collection

The active reference collection shelved in the Reference Room and on the north and east walls of the Reading Room now numbers approximately 6,000 volumes. The collection is growing steadily, but its size is limited by the shelf space available. The collection is classified on the Library of Congress classification system and is arranged by broad subject groupings for convenient use. A catalogue and shelf list of the collection is available in the Reference Room.

Interlibrary Loans

The interlibrary loan service provided by the Reference Department shows an increase both in number of volumes borrowed and in number loaned over the preceding year, thus again achieving an all time high for the Library. The Department borrowed 627 volumes, an increase of 9 per cent, from 98 libraries for the use of Faculty members and graduate students. At the same time 1,865 volumes and 96 microfilms, photostats, or photoprints in lieu of loans, were supplied to 331 other libraries for the use of their readers. The number of

volumes loaned is 23 per cent higher than the comparable figure last year. As might be expected, our borrowings were chiefly from the large university and research libraries; our loans went in largest numbers to neighboring colleges and universities, although the complete list shows that this service covers the nation and includes the research departments of a number of large corporations.

Analysis of the local group served through interlibrary loan indicates that the service was used by 34 different departments and divisions of the University and that the heaviest use of it was made by Faculty members, followed closely by Ph.D. candidates, and then by candidates for the Master's degree.

In considering the interlibrary loan program, it is customary to report the number of volumes loaned as indicative of the scope of the work. This tends to be somewhat misleading, as the number of actual loans always falls considerably short of the number of requests received. Each request must be searched and reported on, whether the volume can be supplied or not. This past year, for example, 2,400 requests were processed, even though only 1,865 volumes were loaned.

The demand for photostat and microfilm copies of library materials continues to grow steadily. Local facilities for the production of photostats are satisfactory and, except for certain rush periods in the Registrar's Office, prompt and efficient service can be provided. This is not the case with regard to microfilm, as the local facilities are inadequate. Arrangements have recently been concluded with a commercial microfilming firm, and results to date have been excellent.

Maps

The map service is organized as a section of the Reference Department, with one member of the staff assigned special responsibility for the care and service of maps. This was a new position, and its value has been clearly demonstrated, as it has enabled the Library to arrange and organize an accumulation of Army Map Service deposits which had been in the Library for some time. In addition, a beginning has been made on inventorying, repairing and correcting or supplying catalogue cards for older maps, which had not previously been recorded. As yet it has not been possible to undertake an aggressive program for the acquisition of maps, yet such a program is necessary if the University is to be assured of having an adequate collection of this type of material.

The work with maps will be curtailed during the coming year because of the reduction in the staff of the Reference Department.

CIRCULATION

The Circulation Department, in addition to recording an 8 per cent increase in home loans, has carried on several projects which will result in more accurate records and in improved service in the future. Books deposited in department and college libraries which have heretofore been located through the charge files have now had the location stamped directly on the catalogue cards. This not only gives the user the necessary information immediately, but greatly reduces the size of the charge file, thus making it an easier file to use and to maintain in good order. In all, some 25,000 cards have been stamped. The Department has also made progress in clearing and correcting its records of missing books, in inventorying the collection of Cornell University theses, and in setting up a systematic procedure for the reading of the stack shelves. While these improvements may seem small in themselves, they may frequently mean that the Department can produce a book, provide a service, or give information which it could not have done without them.

Stack Lighting

The installation of new lights in the west stack and part of the south stack represents a great improvement over the old drop cords. The remainder of the south stack and the crypt are to be relighted in the fall of 1950. Not only is the fire hazard greatly reduced, but the work of shelving and paging books is greatly accelerated and made more accurate. For the first time in sixty years

the stacks are well lighted, and as a result one Faculty member reports that he has found that the Library owns many books in his field that had never before come to his attention. Thus do physical improvements have their effect on scholarship.

The free space in the stacks secured by moving books to storage and by the subsequent readjustments within the stacks is disappearing much more rapidly than was expected and at many points the shelves are badly overcrowded, and hundreds of books must be shifted to make space for a few new volumes. This is a laborious and expensive business and frequently results in serious damage to the books themselves. If it is not possible to make any substantial approach toward solving the building problem, additional storage areas must soon be provided.

Similarly, the inadequate lighting and the noisy, decrepit chairs of the reading room cannot go unnoticed indefinitely. They are remarked daily by the students and are the source of many complaints.

Book Deposits in Dormitories

The modest beginning of a system of book deposits in various units of the women's dormitories has been noted in earlier reports. The system was expanded during the past year, nine collections being sent out in October, exchanged at Christmas time, and returned to the Library in May. The books were selected primarily by the students, with some assistance from the Library staff. The students show considerable interest in the project and seems to appreciate the special service provided. The Department hopes to continue expanding this program until deposit collections are available in all group living units in which they are desired.

Missing Books

The annoyance and serious interference with the work of Faculty members and students caused by missing books was noted in last year's report. At that time, it seemed probable that a checking system at the exit would bring the problem under control. For various reasons, chiefly administrative and financial, the proposed system was not put into effect. Despite various other measures designed to alleviate this situation, the number of books reported missing was higher this year than before. It seems clear that nothing short of the checking system recommended a year ago will make it possible to cope with this problem.

Detailed statistical reports on circulation together with comparable figures for previous years are given in a later section of this report.

Exhibits

The Library's program of exhibits has been continued and developed during the past year. Among the topics or themes around which exhibits were arranged were the following: Recent Art Books, Maps, "Fifty books of the year," Moses Coit Tyler, Jewish Book Month, Christmas Theme In Literature, Wordsworth, French Scientific Literature, Cornelliana, and Selected Prints of Muirhead Bone from the Chapman Collection. A series of small timely exhibits, devoted to various subjects and changed each week, was begun in midyear and because of the interest manifested in it, will be continued during the next year. Similarly a small exhibit of new U.S. government publications placed in the Reference Department has stimulated interest in and circulation of government documents. The exhibit program is a modest one considering the wealth of suitable material in the Library's collections, but it is as elaborate and extensive as the facilities and staff available for the purpose will permit.

The most ambitious exhibit of the year was that devoted to Wordsworth as a part of the University's celebration of his centennial. The materials displayed included manuscripts, first and rare editions of Wordsworth's works, and books from Wordsworth's personal library. The exhibit was described and a general account of the Wordsworth Collection given in a brochure prepared by Professor R. C. Bald and published through the generosity of Mr. Victor Emanuel.

Special Collections

Additions to the Icelandic Collection were not numerous, but the year was important because it saw the publication of *History of Icelandic Poets, 1800-1940*, by Professor Richard Beck of the University of North Dakota, as volume thirty-four of *Islandica*. This work and the preceding volume, *History of Icelandic Prose Writers* by Einarsson, comprise the only comprehensive history of Icelandic literature in English. Thus the significant record of *Islandica* as a series of important scholarly monographs is continued.

The Wason Collection on China and the Chinese shows a significant increase in the past year because materials purchased in China in 1948 have now been accessioned and arranged for use, even though they are not yet catalogued. The usefulness of these volumes will be greatly increased when they are fully catalogued, but this process cannot be undertaken until a special Chinese cataloguer is available.

Additions to the Dante and Petrarch collections have consisted of modern books only. An effort is made to see that all relevant new publications are secured for these collections.

Research Librarian

Two scholarly bibliographical lists on which the Research Librarian has collaborated were published during the year, and several similar contributions are now in press. The Research Librarian has also given bibliographical assistance to other Faculty members on projects which have not yet reached the publication stage.

Publications

Assistant Director Felix Reichman is the compiler of a check list on "German Printing in Maryland, 1768-1950" published by the Society for the History of the Germans in Maryland; and Miss Gussie E. Gaskill, Curator of the Wason Collection, has again compiled the annual "Far Eastern Bibliography," published by the *Far Eastern Quarterly*.

COLLEGE AND DEPARTMENT LIBRARIES

The group of college and department libraries administered as part of the University Library have experienced a successful year in which their collections and services have been more heavily used than ever before. Substantial increases in circulation figures, particularly in books for home use, were recorded and similar increases in requests for reference service were satisfactorily met. These libraries are evidently playing a vital role in the work of the departments and colleges with which they are associated and the services rendered by the respective libraries are highly valued. The importance of staffing the libraries of the larger departments and the colleges with professional librarians is clearly apparent as it ensures a high quality of service in the libraries themselves as well as the competent assistance of an experienced librarian in dealing with any problems which extend beyond the resources of the particular collection.

Coöperation

The librarians of the Engineering, Chemistry, and Physics libraries have cooperated in book selection and purchases and have developed means for keeping each other informed of new publications and of new demands which may be made on them. In a similar manner the Business Library and the Industrial and Labor Relations Library have developed acquisition policies which reduce duplication and which are designed to strengthen the total resources of the Libraries. Between these and other libraries of the University there is a constant and easy flow of information which enables all library staff members to be better informed and therefore better able to render service to faculty members and students.

Regional History and Cornelliana

The Regional History Collection added over 750,000 items, chiefly single manuscripts, dealing with the economic, political, and social development of

the state. During the past year the Cornelliana Collection has also been expanded, and important parts of it have been brought into order and organized for convenient use. Progress has been made in bringing together and arranging various uncatalogued and scattered groups of the papers of Ezra Cornell. Other important papers relating to the history of the University, including Trustee Minutes, additional papers of President Schurman, and the library correspondence of the early years of the University have been sorted, organized, and described. The staff of Regional History is able to devote only a relatively small amount of time to the collecting and arranging of University archival material. A thoroughgoing attack on this problem must await the availability of the necessary staff and facilities. It is regrettable that this undertaking has been delayed so long and must even now be postponed, as valuable and interesting records of the University's development are being lost and destroyed from year to year.

II. TECHNICAL SERVICES

The technical service, or processing, departments have kept abreast of the flow of incoming materials, have established new production records, and have made significant progress in dealing with accumulations of older materials as yet not processed or only partially processed.

ACQUISITION

The number of items added to the University Library and its departments and collections during the year was 48,270. This is an increase of approximately 20,000 over the preceding year, accounted for in considerable part by the additions to the Wason Collection. The number of accessioned items received on deposit and by gift and exchange was 6,605. The total holdings of the University Library at the close of the year were 1,063,164.

Detailed figures on the number of volumes added to the various libraries are given in a later section of the report devoted to statistical tables.

Purchases

The Acquisition Department of the University Library was responsible for expenditures on appropriated and endowed funds amounting to \$100,194.90. Expenditures of funds transferred from academic departments totaled \$1,230.41 and purchases for the School of Industrial and Labor Relations amounted to \$8,291.15. Thus the volume of purchases handled by the department was \$109,716, or \$600 less than the comparable figure for the preceding year.

Periodical Subscriptions

This year saw a continued increase in the amount of available book funds which must be devoted to periodical subscriptions. New titles are being constantly announced, and many of them must be added to the Library's subscription lists, even though every new title is carefully scrutinized. The number of new periodical subscriptions for the year is 323 for a present total of 2,352. The number of periodicals received by gift and exchange is 984. If the present tendency to launch new periodicals continues and if subscription prices go on increasing, periodicals will absorb an ever larger part of available funds, and the number of books which can be acquired each year will decrease, unless larger book funds can be made available.

Book Funds

The output of printed materials—books, newspapers, periodicals, pamphlets, and documents—is increasing steadily year after year. Although much of this material need not be acquired, there is a substantial part of it which must be added to the collection of any university library that wishes to keep pace with current scholarly work in a wide number of fields. This cannot be done on a stabilized or reduced budget. Present budget policies will inescapably create weaknesses in the book collection which can only be repaired later at increased cost.

Important Acquisitions

The Pascal Collection formed by the late Professor G. L. Hamilton was purchased during the summer of 1949. This collection, numbering approximately 1,200 volumes by and about Pascal and his associates at Port Royal, gives Cornell the strongest and most complete collection on Pascal outside that of the Bibliothèque Nationale.

No other sizable block purchases were made, but Professor Lauriston Sharp in Siam and Professor Morris Opler in India purchased small collections relating to the history and economic and social development of these countries.

These collections aside and with the exception of certain gifts noted later, the acquisition record of the year was not especially notable, although it included some important sets as well as individual works. Special attention may well be called to the purchase of a complete set of the *Archivio Veneto* (1871-date), and the *Histoire et Mémoires* of the *Académie des Sciences, Paris* (1666-1789), which completes our set. A selected list of the important titles acquired during the year includes the following:

- Addison and Steele. *The Spectator*. First collected edition. London, 1712-1715. 8 v.
 Encyclopédie méthodique. Paris, 1782-1831. 185 v.
 Frick Art Reference Library. An illustrated catalogue . . . of the works of art in the collection of Henry Clay Frick. Introduction by Sir Osbert Sitwell. Pittsburgh, 1949-
 Hind, A. M. Early Italian engravings. London, 1938-48. 7 v.
 Host, N. T. *Icones et descriptions graminum austriacorum*. Vindobonae, 1801-1809. 4 v.
 Lambecius, Petrus. *Commentariorum de Augustissima Bibliotheca Caesarea Vindobonensi*. Vienna, 1766-90. 8 v. and supplement.
 Morrison, A. Collection of autograph letters and historical documents. London, 1883-1897. 13 v.
 Encyclopédie, ou Dictionnaire raisonné des sciences, des arts, et des métiers, par une société de gens de lettres . . . Paris, Briasson [etc.] 1751-80. 35 v.
 Neufgermain, Louis de. *Poesies et rencontres*. Paris, 1630.
 Olivier, Eugene. *Manuel de l'amateur de reliures armoriees françaises*. Paris, 1924-38. 30 v.
 Tennyson, A. *Poems*. London, 1830.

Serials and periodicals:

- Académie des Sciences, Paris. *Histoire et Mémoires*, 1666- Paris, 1729-
 Archivio Veneto, a cura della R. Deputazione di storia patria per le Venezie. Ser. I, t. I- 1871- Venezia, 1871-
 Archivio Zoologico Italiano. V. 1- and Supplement. Torino, 1902-
 Archivum Franciscanum Historicum Collegium S. Bonaventura). V. 1- Quaracchi, 1908-
 Zeitschrift fuer angewandte Mathematik und Mechanik. V 1- Berlin, 1921-

Exchanges

The exchange work of the Department has been continued at approximately the same level as in the preceding year, with the exception of a special exchange arrangement with the Library of Congress which has added about 900 volumes of Russian publications to the Library. Exchanges initiated a year ago are being continued, but no attempt to establish additional exchanges has been possible. The experience of other libraries suggests that expansion of the exchange program might prove of considerable advantage to the Library and the University.

Government Documents

The Documents Section received and processed approximately 40,000 government documents. At the same time the collection of United Nations publications has been put in good order, and the transfer and reorganization of the document check records has been completed. A staff committee on documents

has functioned regularly in the selection of documents for full cataloguing. This committee has the added responsibility of developing procedures for the economical and efficient processing of those documents that do not require complete cataloguing.

SERIALS AND BINDING

The report of a year ago noted the formation of a new department in the Technical Services to which was assigned the task of developing a new serials record as well as the responsibility for the shipment and receipt of binding. The record of accomplishment for the first year is an impressive one. The new Serials Catalogue now contains the detailed record of the Library's holdings of 3,352 serial titles. Since the transfer of many of the titles involves either reclassification or recataloguing, and in some instances both, the number of titles dealt with represents a real achievement. At the present rate of growth, this new catalogue should include all but a few of the active serials at the end of another year. The ease with which this catalogue can be consulted and the economy with which new serial volumes can be added to the check cards attest the desirability of this new record. If it can be developed to the point where it includes an accurate record of all serial holdings in the several libraries, it will be a most useful tool and will save much time that is now wasted in going from one library to another in search of a needed serial.

Binding

The binding record for the year shows 11,000 volumes bound and about 1,500 volumes repaired. This represents an increase of approximately 35 per cent over the preceding year, even though it does not include the pamphlet binding which is done in the Library. The total amount spent for binding was \$21,129.

CATALOGUING

The production of the Catalogue Department likewise represents a significant increase over the preceding year. The Department catalogued 21,512 new titles and, together with the Serials Department, recatalogued and reclassified 4,998 titles for a total of 26,510 titles, an increase of approximately 24 per cent over last year. The Card Section has produced 160,000 cards for the various catalogues and 180,000 cards have been filed. Both figures represent increases of over 50,000 cards or upwards of 50 per cent. This high record of card production is the result of the full use for the first time of the multilith process of card production. In addition to producing cards for books catalogued by the University Library, the Card Section has multilithed cards for several of the college libraries, thus achieving a total of approximately 97,000 multilithed cards run.

The cataloguing of currently acquired material has been kept up to date, and no backlog of uncatalogued material is accumulating. The Pascal Collection was completely catalogued during the course of the year. At the same time some progress has been made in clearing up older accumulations. The Physics Library, for example, is being reclassified and catalogued, and the task is about half completed. Other groups of uncatalogued materials will be processed as opportunity offers, but it is doubtful if all the arrears of uncatalogued material can be handled by the regular staff in addition to current acquisitions.

Reclassification

Reclassification during the past year has been limited to those cases where it was necessary in order to make the cataloguing records clear. This must be our policy with the staff now available, even though the need for a more extensive reclassification program, as noted in previous reports, is clear.

Increased Production

Increased production in the Catalogue Department has been achieved through improved methods of work, simplification of procedures, and the provision of a small amount of additional clerical assistance. Emphasis has been

placed on assigning work of professional nature only to cataloguers, with the clerical tasks performed by clerical assistants. Unfortunately, the reduced amount of clerical assistance provided for the next year will apparently make it necessary to sacrifice some of the gains which have been made.

Card Catalogues

Since January 1948 catalogue cards for books added to the Libraries have been filed in a separate, or new, catalogue. The decision to develop a new catalogue was made in order to take full advantage of the economies made possible by close conformity to Library of Congress practice. The experience of the past two and one-half years supports the wisdom of that decision. However, the continuation of two catalogues, both of which must be used in ascertaining the Library's holdings, is not a desirable situation. At the time the new catalogue was begun, there was reason to expect that a special recataloguing and reclassification staff might be provided and thus the cards for older material added to the new catalogue. No such staff has been forthcoming, and present budget policies make it unlikely in the near future.

Faced with this situation, the library staff, especially the catalogue and reference staffs, have given much time and effort to a study of this problem and have experimented with various procedures designed to produce a single author catalogue, as a means of facilitating the location of materials. The problem is a thorny one, as the entry words vary greatly and the old cards cannot be interfiled without many corrections and changes. No final decision has yet been taken, but effort is now being directed toward devising a procedure for the transfer first of the cards representing most frequently used publications, with treatment of cards for less frequently used material deferred.

Classification by Size

In an effort to conserve stack space and to expedite processing, plans are also under way for the adoption of a system of classification by physical size for materials which will not be in great demand but which are deemed of sufficient importance to be added to the collections. Present estimates indicate that 15 to 20 per cent of the materials added each year can be processed in this way. Since classification and shelving by size permits each shelf to be filled tight, it represents a saving in shelf space of 25 to 40 per cent over classification and shelving by subject, with space left free for the addition of new volumes in each subject category.

GIFTS

This report offers an opportunity each year to express the thanks of the Library to its many friends for their interest in its welfare and development and for their many generous gifts of books, manuscripts, and funds for its increase and support. All gifts received have been individually acknowledged, but the Library wishes here again to express its sincere appreciation and gratitude to all those who have made gifts to it during the past year.

The number and variety of the gifts received precludes the mention of more than a few of them.

Trustee Herbert F. Johnson presented the Library with the funds necessary for the purchase of the library of Col. Frank R. Hull of Fortaleza, Brazil. The library, numbering about 4,000 items, is especially noteworthy for its titles dealing with the discovery, exploration, and history of Brazil and the eastern coast of South America. Arrangements for the shipment of a major part of the library are now being concluded; the remainder will be shipped at a later date.

From Mrs. Marguerite Lilly Noyes the Library has received one of the three known manuscript copies of the Thirteenth Amendment signed by President Lincoln and the members of Congress. Mrs. Noyes was also the donor of another document signed by Lincoln.

Trustee Victor Emanuel made a series of gifts to the Wordsworth Collection consisting of letters, early or first editions, association copies, and manuscripts

of Wordsworth and his close associates, thus continuing the development of this important special collection. In addition to these purchases, Mr. Emanuel made possible the publication of the catalogue of the Wordsworth exhibit.

The Library is indebted to the Frick Art Reference Library for the gift of the first three volumes of the catalogue of *The Frick Collection*. This is a lavish and monumental catalogue of the art collection of the late Henry C. Frick, being published under the auspices of the University of Pittsburgh, with Bruce Rogers serving as designer.

Dr. Otto Kinkeldey, University Librarian until his retirement in 1946, has increased substantially the fund which he and Mrs. Kinkeldey are developing for the support of the Library; Mr. Nellis Crouse has presented fifteen books and periodical volumes in the field of history in addition to his gifts in support of the Library made through the Greater Cornell Fund; Dr. C. P. Oberndorf of New York City has increased the Oberndorf Fund for the purchase of books on psychiatry by his gift of \$350; Mrs. Louise Peirce has presented \$50 for the purchase of books in the field of the Classics.

From Mrs. H. Hoevlin, Binghamton, the Library received some twenty volumes of books on art; and from Miss C. E. Lyon of Ithaca, a beautifully illustrated edition of Buffon's *Natural History* and a collection of engravings.

Mrs. Henry P. De Forest of New York gave the Library the book collection of her late husband Dr. De Forest, consisting of several hundred volumes on a variety of topics.

Mrs. Charles W. Wason of Cleveland presented the Library a copy of the beautiful work *Gardens of China*; and Charles G. French gave twenty-one volumes on landscape architecture to the Architecture Library.

James Bennet Nolan, Reading, Pa., made the Library a gift of two of his recent books, and Percy E. Clapp of New York presented several unusual volumes.

The editorial office of the *Philosophical Review* sent to the Library eighty-five books and thirty-eight volumes of periodicals dealing with philosophical and religious subjects, and the Cornell University Press presented copies of all its new publications.

Faculty Gifts

Among the many gifts received from members of the faculty were the following: from Professor Howard B. Adelmann, four French and Italian works; from Lt. Col. Joseph P. Alexander, Jr., four volumes on Japanese art; from Professor Morris Bishop, twenty volumes of English and French literature; from Professor Donald English, a large collection of corporation reports; from Professor Walter H. French, seven volumes on literary subjects; from Professor J. D. Hood, nine volumes of entomology periodicals and books; from Professor R. A. Mordoff, twelve volumes on miscellaneous scientific subjects; from Professor M. L. W. Laistner, six books and periodicals on historical subjects; from Professor David Daiches, twenty volumes of English and American literature; from Professor Mario Einaudi, ten volumes on government and politics; from Professor J. M. Cowan, four books and several periodicals on philology and related subjects; from Professor G. J. Thompson, six volumes; from Professor A. H. Wright, twenty volumes of periodicals and books on local history; from Professor Walter F. Willcox, four books and a group of statistical reports and periodicals; and from Liberty Hyde Bailey, v. 8, fascicle 11, of his *Gentes Herbarum*.

Regional History

The Regional History Collection has received various groups of manuscripts, business records, newspapers, etc., which will be acknowledged fully in a separate report. Acknowledgment should be made here, however, of the gift of the papers of George Washington Schuyler, a charter trustee of Cornell, which came to the Collection as the gift of George S. Schaeffer of New York and Mrs. John Dunlop of Pasadena, California. These papers are a significant addition to the Cornelliana Collection of the Library.

Library Associates

During the past year the Cornell Library Associates was reorganized and the following officers were elected: President, Morris Bishop; Treasurer, Nellis M. Crouse; and Secretary, Felix Reichmann. The Associates and their friends were honored with a musical program given, through the cooperation of the Music Department, in the White Library in December, the series of articles on the Library's collections was continued in the *Alumni News*, and copies of the Wordsworth brochure were distributed to all members. Former members and others were invited to join the Associates, and at present the membership is 76. The Associates made two important gifts to the Library: Hind, *Early Italian Engravings*, 7 v.; and Neufgermain, *Poesies et rencontres*, 1630. It is the hope of the officers that this organization can be developed into a strong body of friends and supporters of the Library.

III. LIBRARY PROBLEMS

BUILDING PROBLEM

Plans for the expansion of the existing library building were presented to the Planning and Development Committee of the Board of Trustees in September 1949. The Committee considered the plans unacceptable and asked that the problem be given further study. It was suggested that such a study might consider the feasibility of an off-campus storage building, the construction of a separate undergraduate library, and the possibility of adapting existing academic buildings to library use.

The Library Board studied all the suggestions made by the Committee as well as by other responsible members of the University during the fall and early winter and prepared a report recommending the construction of a new library plant to be planned and built in three or four units on the site of the President's house.

Ad Hoc Committee

Before this report was submitted and in accordance with procedures recently adopted by the Trustees regarding the planning of new University buildings, the Acting President suggested to the Library Board the desirability of expanding the Board into a much larger group, including increased and broadened Faculty representation and with administration, alumni, and trustee representation provided as well, to form an Ad Hoc Committee on the Library Building Program. The Board voted approval of this proposal by a divided vote.

The Ad Hoc Committee, with a membership, when fully constituted, of thirty, was formed in February and began work with its initial meeting of February 14. The first meeting was devoted to a review of the problem and a brief summary of the various solutions that had been proposed. A tentative procedure was adopted by the Committee, and the study began. The procedure provided that representatives of the Department of Buildings and Grounds and the Library with the assistance of a student architect should analyze the elements of each proposal, prepare rough sketch plans of the major elements, and make estimates of the cost of construction, maintenance, and operation. When these data were assembled, they were presented to subcommittees which reviewed, criticized, and evaluated them. After subcommittee consideration and revision, the plans and data were presented to the full Committee.

In a series of three meetings held at approximately monthly intervals through the spring, eight distinct proposed solutions were considered before the Committee took any definite action. At its May meeting the Ad Hoc Committee voted to recommend to the Planning and Development Committee of the Board of Trustees two projects, either one of which was considered a satisfactory solution of the problem. The Committee expressed no preference between the two proposals. The proposals were:

1. The expansion of the present library building to the north and west by approximately 1,000,000 cu. ft. to provide space for reading rooms, special

collections, and offices and work rooms for the library staff; the conversion of the present building into a book stack; and the construction of additional stack space underground;

2. The development of a new library plant on a new site, presumably the site of the President's house, to consist of three units, an undergraduate library, a research library, and a rare book and special collections library, each unit to be susceptible of separate construction and operation, but each unit also planned so that it could be integrated with the other units and thus finally form a single operating facility.

As a third choice, the Ad Hoc Committee recommended a proposal which would convert the present library building into an undergraduate library and would construct a research library and a rare book and special collections library on another site.

The report of the Ad Hoc Committee was submitted to the Acting President on May 23 and the recommended projects were presented to the Planning and Development Committee at the June Meeting. The Planning and Development Committee voted approval of the report, and the matter is now to be presented to the Executive Committee.

The cooperation and assistance of the Buildings and Grounds Department and all the members of the Ad Hoc Committee in generously giving their time and attention to this problem is gratefully acknowledged. A far better understanding of the problem and an appreciation of its complexities are now shared by a representative group drawn from all parts of the University as a result of the studies and estimates made. The willingness of this group to serve on the committee and accept the sacrifices it entailed is evidence of the importance which members attach to the solution of this problem.

OTHER LIBRARY PROBLEMS

Although the library building problem is far from solved, it seems fair to conclude that definite progress has been made and that with continued effort well directed the desired goal may be achieved. If this is a correct analysis, it may suggest a way in which other library problems may be attacked.

It suggests that means be sought by which some members of the Board of Trustees and the Administration may be brought into closer relationship with the Library's many problems. If it is assumed that the Library Board, perhaps expanded to represent more effectively the various divisions of the University, is the counterpart of the Faculty representation on the Ad Hoc Committee, then the designation of trustee and administration representatives to meet with the Board several times a year might constitute a continuation of the Ad Hoc Committee to consider other serious library problems. The trustee and administration representatives might be constituted as a subcommittee of the Planning and Development Committee, as a special committee, or in any other way that might seem suitable. If a group of this kind were formed, the Library would have the benefit of the advice and counsel of a group of men that could contribute significantly to the development of its program and could assist in the search for solutions to its problems.

As examples of problems with which such a group might concern itself, the following may be cited:

1. The continuing study of the building problem, with chief emphasis on the long range solution, but with attention also to the way in which it may relate to the renovation of existing facilities, improvement of lighting, replacement of furniture and equipment, provision of temporary storage space, etc.

2. Analysis of the financial and budgetary situation of the Library in relation not only to the general financial situation of the University, but also to its teaching and research program and the increasing volume and cost of printed materials. It is clear, for example, that unless book funds can be increased, the Library will inevitably acquire a smaller percentage of the annual output of scholarly publications.

3. Analysis of present library services, desired additional services and their cost, possibility of eliminating duplication of services and facilities, and the development of a pattern and standard of library service over the campus that can be properly supported. Faculty members and students in the College of Arts and Sciences are urging the development of open-shelf reading collections; requests are being received for listening facilities for recordings of speeches, poetry readings, and dramatic productions; and there is ample evidence of the need for a rare book department, properly staffed and equipped. All of these facilities and services would require personnel, equipment, and quarters. They can be provided, in addition to existing services, only if they are judged to be of sufficient importance to justify financial support.

4. The acquisition policies not only of the University Library, but of all the libraries should be reviewed, and a code for acquisitions should be developed. Such a code might (a) define the areas of interest of the libraries and the depth and extent of their collecting activities to the end that unnecessary duplication might be avoided and the desired coverage achieved, (b) might determine, at least tentatively, the extent to which microfilm and microcard reproductions should replace original copies and should be used to replace existing copies in the interests both of preservation and conserving space, and (c) might be concerned with the participation of the Cornell Libraries in any plans formulated for a cooperative depository library.

5. The planning of library facilities and services on a campus-wide basis. The place and effect of the new Agriculture-Home Economics Library on the general campus library situation has not been carefully weighed and fully envisaged, nor has the lesser effect of library facilities planned for various academic buildings been so considered. Appropriately enough much of this planning is done by the divisions concerned, but some means should be provided by which planning for new facilities is coordinated and made to yield the best possible results. Experience in the past has shown that such facilities are not solely the concern of the division with which they are identified, but have broader significance and usage.

6. The size and composition of the staff of the libraries, the place of this staff in the University, and the University's policies toward it. The status of the Library staff is indefinite and should be clarified in the best interests of the University and individual staff members. The present size and composition of the Library staff has not been determined by careful evaluation of the service loads and by weighing Library needs against other staff requirements of the University.

7. The means by which closer integration of the libraries may be achieved without impairment of existing facilities and services, but rather with the purpose of strengthening and expanding them through a unified approach to the library problems of the University.

The above list is not complete but is rather indicative of the scope and fundamental nature of the problems with which the libraries are confronted and to which attention at a high level might well be given. All of these problems are closely related to the academic program of the University and thus are of concern to the faculty; but all of them at the same time involve financial and budgetary considerations. This means that they cannot be dealt with as isolated academic problems, but must rather be solved in the context of other important University problems, which also have claims of high priority on the available resources.

The point to be made is that the University's policies and objectives in these matters should not be arrived at by default. The day-to-day operations of the libraries give expression and form to policies in these areas. These policies can be consciously determined and adopted after careful study, or they can be improvisations.

IV. STATISTICAL RECORDS

The various statistical records maintained by libraries are an incomplete index of their activities and services, yet they are indicators of the extent and scope of library operations.

The first table below gives the comparative record of the activities of the University Library over the past five years. It shows a consistent and healthy increase in most areas from year to year.

Through the cooperation of the librarians of the college, school, and department libraries, a group of composite tables reflecting the size, activity, and financial status of all the libraries, thus of the library system, of the University is presented in the second section.

Note may be taken in the first instance of the growth of the libraries. The total number of items added was 68,386, the highest figure ever recorded. The net growth was 65,946, thus giving a total holdings count of 1,463,968. As noted above, the increase in the year's acquisitions over last year by approximately 20,000 items is largely accounted for by the special group of Chinese books added to the Wason Collection.

The figures given in the table reporting circulation represent an over-all increase of 4 per cent and an increase of 13 per cent in loans for home use, over the comparable figures for last year.

The table of expenditures indicates that approximately \$615,000 was spent for library services and collections during the year. This is an increase of approximately \$35,000 or 6 per cent.

I. UNIVERSITY LIBRARY

<i>Cataloguing and Classification</i>	1949-50	1948-49	1947-48	1946-47	1945-46
New Volumes and Pamphlets					
Catalogued.....	32,365	29,529	27,486	17,291	15,898
New Titles.....	21,512	16,880	15,072	10,129	9328
Volumes Added to Cards.....	2149	6621	8796	6864	...
New Editions.....	278	298	225	...	...
Added Copies.....	683	994	1361	...	...
Maps Catalogued.....	121	11	9157	5131	419
Manuscripts.....	36	27	13	15	7
Volumes Reclassified and Recatalogued.....	12,901	15,452	2,358	393	224
Serial Volumes Recatalogued ...	39,040	...	...	...	...
Titles Reclassified and Recatalogued.....	4,998	4,559	568	...	...
Microfilms (Titles).....	29 on 40 reels	32 on 164 reels	38 on 96 reels	33 on 73 reels	...
Cards Filed.....	180,000	126,852	79,080	...	...
Card Production					
L. C. cards Completed.....	69,903	60,992	50,504	20,245	...
Multilithed Cards Completed..	64,993	23,175	4,020	...	...
Typed Cards.....	25,714	26,163	27,311	18,624	15,767
Stencils.....	12,179	5,108	887	...	...
Multilithed cards run.....	96,904	30,951	...	...	...
Cards Added to.....	2511	2687	7455	8414	8811
Cards Corrected.....	8422	11682	7273	3548	2445
<i>Periodicals and Binding</i>					
Periodicals Currently Received					
By Subscription.....	2352	2029	1539	1310	1205
By Gift and Exchange.....	984	1039	1465	1420	1380
Newspapers Currently Received.	58	63	35	...	...
TOTAL.....	3394	3131	3039	2730	2585
Binding					
Volumes of Serials Bound.....	5,992	5,705	4,857	3,628	3,235
Volumes Repaired.....	1,440	858	1,165	996	1,381
Books Bound.....	5,042	2,396	3,027	1,705	...
TOTAL.....	12,474	8,959	9,049	6,329	4,616

PRESIDENT'S REPORT

<i>Circulation</i>	1949-50	1948-49	1947-48	1946-47	1945-46
Loan Desk:					
Home Use (7-day 9,324).....	93,447	86,424	83,803	75,019	51,086
Reading Room.....	24,634	25,231	19,951	37,994	58,469
Stall and Seminar.....	7,346	7,693	6,439	8,875	5,095
TOTAL.....	125,427	119,348	110,193	121,888	114,650
Reserve Desk:					
Reading Room (McGraw-24, 589).....	104,027	107,308	118,540	105,008	55,783
Overnight (McGraw-1, 812) ..	8,798	12,304	8,999	...	...
TOTAL.....	112,825	119,612	127,539	105,008	55,783
Reference					
Interlibrary Loans					
Volumes Loaned.....	1,865	1,520	1,292	1,260	...
Volumes Borrowed.....	627	574	551	604	...
Reference Questions.....	9,003	8,754	9,427	...	...

II. CORNELL LIBRARIES

TABLE I

GROWTH OF THE LIBRARIES

	<i>Items Added</i>	<i>Items Withdrawn</i>	<i>Present Extent</i>
General Library*.....	27,052	541	880,535
Transfers from Seminar Collections.....	...	...	1,852
TOTAL.....			882,387
Wason Collection.....	17,836	1	64,812
Flower Veterinary Library.....	426	90	16,582
Comstock Memorial Library.....	169	1	4,632
College of Architecture Library.....	349	...	7,936
Zoology Library.....	346	3	7,625
Barnes Hall Library (Religion).....	157	...	4,997
Willard Straight Browsing Collection.....	205	80	2,220
Icelandic Collection.....	54	...	23,379
Dante Collection.....	29	...	11,048
Petrarch Collection.....	5	...	4,651
Manuscripts.....	15	...	1,153
Maps.....	1801	...	29,424
Other Separately Recorded Collections.....	31	782	4,538
TOTAL, Including Maps and MSS.....	48,475	1498	1,065,384
Law Library.....	2325	112	115,287
New York State College of Agriculture Library and Departments.....	6211	680	167,518
New York State College of Home Economics Library	1095	57	18,959
New York State Veterinary College Library.....	732	3	4963
New York State School of Industrial and Labor Relations Library.....	6240	90	22,906
New York State Agricultural Experiment Station Library, Geneva.....	515	...	23,642
Cornell Medical College Library.....	2272	...	40,712
Cornell Aeronautical Laboratory Library.....	521	...	4,597
TOTAL.....	19,911	942	398,584
TOTAL, ALL LIBRARIES.....	68,386	2440	1,463,968

Regional History Collection
(Chiefly Single Manuscripts)..... 751,711 ... 3,749,293

*Includes department and college libraries administered by the University Library.

LIBRARIAN'S REPORT

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TABLE 2
CIRCULATION*

	<i>General</i>	<i>Reserve</i>	<i>Reserve Overnight</i>	<i>Interlibrary Sent</i>	<i>Rec'd</i>
University Library.....	125,427	104,027	8798	1865	627
Department Libraries†.....	14,940	6080	777	...	...
Architecture.....	4473	1867	1505	1	...
Business.....	823	9961	603	...	...
Engineering.....	7056	2375	1439	...	...
Agriculture and Departments....	18,768	22,019	2089	462	359
Home Economics.....	12,288	66,378	5856	32	73
Industrial and Labor Relations..	14,783	27,272	3274	369	184
Veterinary.....	4061‡	...	...	75	75
Geneva Experiment Station.....	...	...	...	15	134
Medical College.....	20,460‡	...	...	184	24
TOTAL.....	223,079	239,979	24,341	3003	1476
	13% increase	4% decrease			

TOTAL RECORDED USE IN ALL LIBRARIES.....491,878
4%
increase

*Law and Aeronautical Laboratory not included as these libraries keep no circulation statistics.
†Incomplete because of lack of records in some department libraries.
‡Includes reserve and nonreserve circulation.

TABLE 3
LIBRARY EXPENDITURES

	<i>Salaries</i>	<i>Wages</i>	<i>Books Periodicals, Binding</i>	<i>Miscellaneous</i>
University Library.....	\$160,635.20	\$22,718.27*	\$ 95,628.77	\$ 20,180.89
Department Libraries.....	14,915.32	3,785.93††
Collection of Regional History	7,800.00	1,758.89	59.18	4,081.61
Architecture.....	5,050.00	599.27†	2,296.73	1,037.68
Business.....	3,489.92	.....†	2,559.32†
Engineering.....	6,420.00	1,606.82	2,249.46†
Law.....	15,020.00	.....	14,979.23	237.33
Agriculture and Departments	63,325.00	3,500.00	28,325.00	6,781.00
Home Economics.....	17,048.25	1,951.82	4,848.51	1,126.12
Industrial and Labor Relations.....	38,570.00	5,660.82	17,286.87	2,592.92
Veterinary.....	11,747.00	185.00	3,443.00	1,357.00
Geneva Experiment Station .	3,050.00	.....	3,112.22	45.77
Medical College.....	7,480.00‡	.....	6,250.00‡	.....
Aeronautical Laboratory...	.....	.....	.....	.....
TOTAL.....	\$354,550.69	\$41,766.82	\$181,038.29	\$ 37,440.32
TOTAL EXPENDITURES FOR LIBRARY PURPOSES.....				\$614,796.12
				6% Increase

*Includes Business Library.
†Included in University Library figures.
‡Not complete.

CONCLUSION

The achievements of the past year were made possible only by the generous cooperation and assistance of the Library Board, the members of the library staff, and the administration. Without the spirit of team work which characterizes the staffs of all of the libraries and their willingness to give their best efforts to the development of the University's library services, these services would be far less satisfactory than they are. I wish to express my appreciation to the members of the Library Board and to the library staff for their assistance and support.

I wish also to express my sincere appreciation for your interest in the libraries and your assistance in the working out of library problems.

STEPHEN A. MCCARTHY,
Director of the University Library.

APPENDIX VIII

REPORT OF THE DEAN OF THE COLLEGE OF ARTS
AND SCIENCES

To the President of the University:

SIR: I have the honor to submit my report as Dean of the College of Arts and Sciences for the academic year 1949-50.

It is hardly necessary for me to report to you that a major preoccupation of the administration and many of the Faculty of this College during the past twelve months has been the revision of our plans for 1950-51 made necessary by the budgetary retrenchment required to absorb a substantial portion of the accumulated deficit in the University's endowed operating budget. This difficult task has brought both reward and frustration. It was heartening to realize anew the great resources of good will and cooperation among Faculty, administration, and trustees in seeking solutions to common problems. Moreover, it is a healthy experience for any institution to be required to reconsider its objectives and the efficiency of its efforts at realizing these objectives. I am happy to report that some progress has been made in this respect, at least in certain departments of the College; and I anticipate a continuation of this review of objectives and methods as the impact of the 1950-51 budget becomes clearer. The time was too short to allow for a proper weighing of values and objectives and adequate analysis of our instrumentalities for achieving them. However, under the stimulus of the present need we hope to continue with a more systematic and considered appraisal of the work of all components of the College.

The negative and frustrating features of the retrenchment are too well known to you to require detailed discussion here. The report of the Committee on Economy summarizes them admirably. I merely wish to reiterate that failure to provide a generous margin of flexibility in future budgets for salary adjustments, many of which are long overdue, for support of research and scholarship, and for adequate maintenance of plant, equipment, and general operating expenses will shortly place this College in serious jeopardy. More concrete and specific problems of the sort indicated here will be touched upon in later sections of this report.

The staff of this College may well be proud of the fact that, in spite of the tension, anxieties, and disappointments occasioned by absorbing a 10 per cent deficit, it has continued an enviable record of achievement in teaching, in scholarly work, and in scientific research. Only a brief outline and illustrative reference can be included here.

I. REPORT ON YEAR'S WORK AND ACHIEVEMENTS.

In 1949-50 the schools and colleges of the University* gave 296,636 student hours of instruction. The College of Arts and Sciences provided about 43 per cent of this total (127,100 hours). Of all the instruction time provided by the College, 53 per cent (66,914 hours) went to undergraduates enrolled in the College, the remainder going to graduate students doing their major work under members of the College staff (7 per cent), and to undergraduates of other divisions of the University and to graduate students majoring in other divisions (40 per cent). These proportions are roughly the same as they were for the previous year, and I suspect inquiry would show they have held for some time. They have their obvious budgetary implications to which I called attention in my report of last year and I trust will be considered by the administration in its continuing study of the budget structure of the University.

The proportions here reported also have educational implications which, so far as I know, have not been adequately explored. For example, the College of Arts and Sciences is obviously doing a substantial amount of instruction for the other parts of the University, and yet it can be seriously doubted if the students of the other divisions so served are getting anything that can be considered a good basic general education as a result. The whole question of the need for and the most effective way of providing the liberal educational foundation for all the students of the University should be thoroughly studied.

Certain other figures should be reported here for consideration. This College was assigned a quota of 2,400 as a total enrollment limit last year. Late in the season it was found that registration in the College of Engineering was going to fall well under the anticipated total. The College of Arts and Sciences was therefore requested to increase its admission to make up the deficit. The lateness of the time made this difficult since most prospective freshmen of acceptable qualifications who were previously turned away had already registered in some other institution. However, we were able to increase our enrollment to 2,467. This year the quota for the College in 1950-51 was set at 2,500. Again, however, the registration in Engineering was much less than estimated, and we have increased our enrollment both of freshmen and transfer students. It is likely that our enrollment next fall will be near 2,700.

Now the College is ready and willing to give all the aid it can in an emergency. It realizes the importance of maintaining as far as possible the income from tuition. But it must insist on attention being paid to certain attendant problems. In the first place, the University administration should keep in mind that over the past two years our student body has increased by about 300 students, but our staff has actually been decreased. The fact that fewer students are enrolled in the College of Engineering gives only partial relief to this discrepancy. In the second place, it is becoming increasingly evident to us that marked fluctuations in our enrollment make it very difficult to plan for a reasonable stability in staff and budget. The University administration should therefore anticipate special requests for relief when unanticipated loads become excessive in various parts of the College. In the third place, this experience has impressed upon us the necessity for more adequate and realistic University-wide appraisal of what the total enrollment of the University should be. Merely increasing enrollment is only a temporary measure for a short-run balancing of the budget. We need a careful study to determine the optimal balance between income from endowment and tuition and the implications of this for size of student body in the various parts of the University and for requisite staff and equipment to handle the loads thus determined.

The quality of the teaching is of much greater importance than the quantity, but unfortunately we do not have the benefits of a satisfactory index of quality. However, it is my impression, gained through discussions with the staff, that the quality of our teaching has been maintained and, if anything, improved somewhat. This has been due in part to the somewhat increased availability of better qualified junior staff and assistants.

* Not including the Medical School in New York City.

In addition to this general comment on the teaching work of the College, certain related accomplishments should be cited.

1. The faculty of the College has approved the curriculum in American Studies, and beginning in the fall of 1950 this series of courses organized into programs of concentration will be available to students. The program is under the direction of a committee of the faculty with Professor Henry A. Myers as chairman. In my opinion, this is an extremely important development and merits more informed attention from our Trustees and alumni than I suspect it has received thus far.

2. A preliminary appraisal of the honors program in the English Department and an interdepartmental tutorial program for selected students has indicated sufficient promise for the training of superior students to warrant our undertaking a study of the possibilities of a more general use of such programs in the College. A subcommittee of the Educational Policy Committee has been established for this purpose.

3. During the past year, a subcommittee of the Educational Policy Committee made a careful appraisal of the instruction in modern foreign languages offered in the College. The findings of the subcommittee testify to the superior competence of the staff of our Division of Modern Languages and to the effectiveness of its instruction. To be sure, there are problems which remain to be solved, but they are clearly within our ability to deal with through cooperative efforts of the staff. Not the least of the rewards of this appraisal was the demonstration that the work of a vigorous and able staff could be studied by a committee of its peers in an atmosphere of full cooperation and good will to the benefit of the whole College community.

4. A report by Professor Burfoot on the operation and problems of the underclass advisory system in this College shows that steady progress has been made in placing this important function in its proper relation to the total educational process. Much remains to be done before the advisory function receives the necessary recognition of the staff of its importance and before it attains the level of effectiveness required, but it is a pleasure to comment here on the very real gains we have made in this area of the College operations under the understanding and able leadership of Professor Burfoot.

Aside from its teaching and related functions, the staff has maintained a vigorous program of research and scholarly production during the past year. You will be interested, I am sure, as I have been in noting the vital relevancy most of our research and scholarship has for the critical problems facing us at home and in the world community. It is not possible to do more than cite briefly some illustrative instances and to refer you to the full account in the departmental records.

THE HUMANITIES AND THE FINE ARTS

A renewal of vitality, rapid in some parts of this general division of subject matter, slower paced in others, is now apparent. If this trend continues, we may expect a substantial increase in the influence of the humanities and fine arts on the educational orientation of both Faculty and students. Broad visioned leadership and a willingness to experiment on the part of the faculties concerned will yield gratifying results.

One instance of what I have in mind is that of the American Studies program where members of the staff in the humanities and the social sciences are pooling their resources in a plan to offer an integrated educational experience. This is not and should not be the only model of effort at revitalization; there are numerous other types of integrative concentration of subject matters which will occur to anyone who shifts from a conventional perspective of traditional departmental groupings. That such shifts in perspectives are taking place and will do so with increasing frequency in the future is now evident, at least in some quarters of the College.

The potential interest and impact of a fresh approach in the humanities is suggested by the fact that enrollment in the general courses in the Division of

Literature is already taxing the staff offering these courses. It should be noted that nearly all departments in the Division of Literature are contributing some of their ablest staff to the teaching of these courses.

Gratifying evidence of a vigorous productivity will be found in nearly every departmental report. Illustrations may be selected almost at random:

1. The very creditable record of scholarly work, the widely recognized compositions, and the rich program of superior performance recorded in the report of the very modestly staffed and financed Music Department.
2. The productivity of the English Department, both in creative literature and critical scholarship.
3. The award of Guggenheim Fellowships to two members of the Department of Philosophy and a member of the Department of German Literature.
4. The stimulating experimentalism and productivity and nationally recognized leadership of our Division of Modern Languages, notwithstanding a 25 per cent reduction in their operating budget for the past year.

THE BIOLOGICAL SCIENCES

The Department of Zoology continues its outstanding record. Judged on the combined criteria of quality and volume of teaching, quality of scientific research and publication, a broad orientation as to the content of a liberal education, and economy and efficiency of operation, this department would rank as one of the two best in the College.

Of special interest is the progress made in research in ecology, physiological acoustics, endocrinological aspects of fertility and sterility, inclusion bodies of nerve cells, and in placental morphology and histochemistry. Also noteworthy is the report of substantial progress in the work of translating and editing the treatises of Marcello Malpighi, a major figure in the history of embryology.

THE PHYSICAL SCIENCES

The volume, range, and quality of research in the departments comprising this division of the College makes any summarization extremely difficult. A rough sampling will indicate something of the scope and vitality of this program.

1. The leadership of Cornell in laboratory astronomy was given gratifying recognition by the adoption of the *Manual of Astronomy*, developed by our Department, by the Teachers Committee of the American Astronomical Society as the national standard about which laboratory materials will be commercially developed.
2. Two important contributions to the geological analysis of the Bikini region will be included in a forthcoming publication by the United States Geological Survey.
3. Work in paleontology for which Cornell has been justly famous was given much needed support through the generosity of Mr. W. F. Gurley, '75, whose bequest of \$70,000 was for the "furtherance of the study of paleontology."
4. The research project in probability was concluded this year. One of the results of this project is the publication of a book on probability theory by Professor Feller.
5. This spring the synchrotron which had been at an energy level of 250 million electron volts but was limited to this level by the heating of the magnet was converted from 60 cycle operation to 30 cycle operation. With this conversion it has been possible to reach an energy level of 330 Mev with ease. It is likely that use at energies up to 400 Mev will be possible. This adds greatly to our flexibility in the study of high energy processes. Of special interest is the increased facility with which our experimental work on mesons can be done. The experimental study of the nature of nuclear energy and of high energy processes is currently centered about our three accelerating machines; the synchrotron, the 17 inch cyclotron, and the 500 Kev linear proton accelerator, and in our cosmic ray studies. The experimental and observational work is

closely integrated with the theoretical work conducted by Professors Bethe, Feynman, and Morrison and their associates.

6. Cosmic ray studies during the summer of 1950 will be focused on the study of penetrating behavior of high energy particles from celestial sources. Recording apparatus will be set up under the waters of Lake Cayuga and in the mines of the Cayuga Rock Salt Company.

7. Research is being actively pushed on the electronic behavior solids, especially insulators, semiconductors, and ionic crystals. The general purpose of this program is to determine the fundamental processes taking place within these crystals, especially electron motion and electronic transitions.

8. The electron microscopy laboratory, made possible last year by the contributions from a number of departments of the University and a substantial grant from the Rockefeller Foundation, was put in operation during the past year and is proving a highly useful facility for research and training in a number of fields.

THE SOCIAL SCIENCES

Productivity in a wide variety of significant areas of research and scholarship continues to characterize the staffs in this division of the College.

The Social Science Research Center, a University-wide organization in which many of the social science Faculty of this College are active, continues to be of great interest and utility. During the past year, the Center has demonstrated its value in stimulating the formulation of significant research programs, in providing competent critical review and constructive revision of research proposals, in mobilizing collaborative effort where needed and desired, in uncovering potential sources of support, and in giving valuable backing to research projects. The Center has now assumed active sponsorship and responsibility for an impressive list of research projects with budgets totaling well over \$500,000. Prospects are good for early addition to this figure amounting to \$250,000. The servicing of a research program of this magnitude and the importance of the Center for maintaining continuity of research opportunities for our staff underscore the necessity for active encouragement and support by the administration. Specific illustrative items of progress which bear mention are:

1. The investigative phase of the study of civil liberties and the control of subversive activity is near completion, and the writing of eight books drawn from this research is well under way. The first of these volumes will appear during the next few months.

2. Manuscripts are completed for two initial volumes on social and political problems of western Europe, a research program conducted in the Department of Government under a Rockefeller Foundation grant.

3. Professor Huzar's study of Congressional appropriations for the Army will be published this fall by Cornell University Press.

4. A revised edition of Professor Marcham's *A History of England* has been published; Professor Stephenson's revision of his *Medieval History* is nearing completion; and substantial progress has been made on Professor Gates's basic work, *The Struggle for Land*.

5. Progress reports of research on real capital formation in economic development in the Far East have attracted wide and interested attention.

6. A noteworthy appraisal and revision of its curriculum by the Department of Psychology was completed this year. The resulting changes promise to improve greatly the efficiency and the utility of instruction in that field.

7. Substantial progress was made in research on tolerance of environmental stress in animals, industrial fatigue studies, perception, motivation, and the dynamics of small groups.

8. Under the sponsorship of the Social Science Research Center members of the Department of Sociology and Anthropology are directing a notable array of highly significant studies both locally and in distant parts of the world. Most of the projects can be grouped under the following topics: Intergroup dynamics in American communities; impact of western science and technology

on non-western societies; comparative studies in social structure; social determinants of mental health; formation and change of values, attitudes, and opinions; methodological studies. During the past two years, most of these projects have been in the field study phase. Now some of them are entering the analytic phase and some systematic reports should be forthcoming during the year ahead.

II. PROBLEMS AND NEEDS

1. I have already pointed to the need for clarification of University policy on size of enrollment and the stabilization of enrollment in this College. This should be based on a careful study of the optimal balance among the major factors of income and cost.

2. Last year, I pointed to the need for efforts at a clearer definition of the values and goals of the College and for a more effective integration of activities to implement their realization. The burden of budgetary revisions prevented anything more than sporadic fragmentary efforts in this direction during the past year. However, it is my hope to facilitate a more systematic consideration of these problems during the coming year. An important specific question which has occurred to me in this connection has to do with the feasibility of reducing the number of highly specialized courses in favor of fewer more general courses. I shall urge that this problem be studied carefully in the context of our goals and their effective implementation.

3. The lack of balance in the teaching and research emphasis and the allocation of resources of the College mentioned last year remains a complicated and perplexing problem. It is strongly recommended that the situation depicted in my budget analyses during the past year be carefully studied by those responsible for uncovering new sources of support and for determining general policies of internal allocation of funds.

4. The chronic problem of adequate space confronts us as usual. However, the problem has passed the stage of mere annoyance and has become critical in some quarters. Important teaching and research work is in present danger of being severely crippled for lack of space in six departments of the College. In most instances, relatively small appropriations would obtain enormous relief. I urge that the director of buildings and grounds be requested to consult closely with me in his plans for work in this College.

5. I repeat here with renewed emphasis my urgent request of last year for budgetary provision for adequate maintenance of plant and equipment.

6. It is gratifying to note that the ad hoc committee to study the needs of the Library has concluded its work and made its recommendations. The work of this College will continue to be seriously handicapped and will actually deteriorate unless early steps can be taken to implement those recommendations.

7. More adequate regular University funds for the support of research and scholarly publication and for scholarships and fellowships are badly needed throughout the College. The need is particularly acute in the humanities and the social sciences.

8. Overshadowing all other needs and problems is that of Faculty salaries. As you know only too well the pressure of a backlog of long-delayed merited increases on the one hand and the general inflation of living costs on the other make this the number one problem to be met in the preparation of our next budget.

It is always with a sense of regret that one must conclude a report by loading additional burdens on an already grievously beset administration, but neither the urgency of our needs nor our confidence in your interest permits us to be silent at this time.

Please be assured of our genuine appreciation of your cordial interest in and constant concern for the aims and performance of this College.

LEONARD S. COTTRELL, JR.,
Dean of the College of Arts and Sciences.

APPENDIX IX

REPORT OF THE DEAN OF THE COLLEGE OF ARCHITECTURE

To the President of the University:

SIR: I have the honor to present a report of the College of Architecture covering the academic year 1949-50.

ENROLLMENT

Again this year student enrollment showed a substantial increase in all curricula. Three years ago, in 1946, I reported that the College had reached the highest enrollment in its history with 215 students registered in the fall term. That record has been broken each subsequent year, reaching a total of 248 graduates and undergraduates in residence in the fall of 1949. In architecture, with 171 undergraduates, we are operating at the maximum of our physical capacity. In Fine Arts, with 45 undergraduates in the fall, registration has nearly doubled since 1946. In the new curriculum in Land Planning an initial class of six undergraduates has been enrolled.

The number of graduate students (enrolled in the Graduate School with their major work in this College) is nearly twice as large as it was three years ago. Of the total of 26 graduate students in residence in the fall term of 1949, there were five candidates for the degree of Master of Architecture, six for the degree of Master in Regional Planning, nine for the degree of Master of Fine Arts, three for the degree of Master of Landscape Architecture, two for the degree of Doctor of Philosophy with major work in regional and city planning, and one non-candidate for a degree.

The College continues to draw its student body from many parts of the world. Undergraduates came from 29 states from Maine to California with the majority, as usual, reporting as home states New York, New Jersey, Pennsylvania, Massachusetts, and Ohio. Eleven undergraduates came from Afghanistan, Brazil, Canada, China, Haiti, Hawaii, India, Norway, Panama, Peru, and Sweden. Foreign graduate students came from Australia, Canada, Colombia, India, Siam, and Turkey.

The following table summarizes the enrollment for the two terms of the academic year, 1949-50, and for the summer term, 1949:

FALL TERM, 1949		
Undergraduates.....		222
Architecture.....	171	
Fine Arts.....	45	
Land Planning.....	6	
Graduates.....		26
Architecture.....	5	
Regional and City Planning.....	8	
Fine Arts.....	9	
Landscape Architecture.....	3	
Non-candidate.....	1	
TOTAL.....		248

SPRING TERM, 1950		
Undergraduates.....		200
Architecture.....	153	
Fine Arts.....	41	
Land Planning.....	6	
Graduates.....		23
Architecture.....	2	
Regional and City Planning.....	8	
Fine Arts.....	9	
Landscape Architecture.....	3	
Non-candidate.....	1	
TOTAL.....		223
SUMMER TERM, 1949		
Undergraduates.....		44
Architecture.....	44	
Graduates.....		2
Architecture.....	2	
TOTAL.....		46
RECOMMENDED FOR DEGREES		
September, 1949		
Bachelor of Architecture.....		10
February, 1950		
Bachelor of Architecture.....		10
Bachelor of Fine Arts.....		2
Master of Architecture.....		1
June, 1950		
Bachelor of Architecture.....		26
Bachelor of Fine Arts.....		6
Master of Fine Arts.....		4
Master in Regional Planning.....		1

SUMMER TERM

The College conducted a ten-week summer term from July 5 to September 10, 1949; only a limited number of courses were offered. In this term the majority of veterans, for whom accelerated summer work was offered, completed their studies; therefore we shall not offer a summer term during the academic year 1950-51.

FACULTY

Inasmuch as the Dean continued on part time throughout the year, Assistant Dean Mackesey assumed full responsibility for the administration of the College.

Alexander Duncan Seymour, Andrew Dickson White Professor of Architecture, retired as of June 30, 1950, and has been elected by the Board of Trustees, Professor of Architecture, Emeritus, effective July 1, 1950. Professor Seymour's retirement as head of the staff in design will be keenly felt. He began teaching at Cornell in 1926 and his service has been almost unbroken for 24 years.

In Professor Seymour's place the Board of Trustees, upon the recommendation of the Dean, appointed Frederick M. Wells to the Andrew Dickson White Professorship of Architecture, effective July 1, 1950. Professor Wells will serve as Chairman of the Department of Design.

Joseph M. Hanson was promoted to Associate Professor of Fine Arts as of July 1, 1949.

Ricardo de Bary-Tornquist was appointed Instructor in Architecture for the academic year. Mr. de Bary holds the degree of Master of Architecture from Cornell as well as an architectural degree from the University of Buenos Aires. He is considered one of the leading young architects of Argentina and we were fortunate to have him with us as a critic in design this year. Mr. de Bary has returned to his professional practice in Argentina.

James L. Steg was appointed Instructor in Fine Arts. A graduate of the State University of Iowa, where he received the degree of Master of Fine Arts, Mr. Steg studied with the eminent graphic artist Mauricio Lasansky and has been awarded a number of prizes for his etchings and engravings. Mr. Steg teaches courses in drawing and painting and, in addition, gives instruction in his special field of printmaking.

In line with the policy of the College to bring men with a fresh approach and a wide range of experience to the teaching program, three visiting critics were appointed in the spring term, 1950. These critics were practicing architects and each conducted a special problem in design during the period of five weeks he was in residence. 1) Sandford Wells, B. Arch. '31, of the firm of Wells-Poeter, New York, was critic from February 6 to March 11. Mr. Wells has designed offices, industrial buildings, and houses in New York and in Venezuela. 2) Philip C. Johnson, Director of the Department of Architecture and Design, Museum of Modern Art, New York City, served as critic from March 13 to April 22. The author of a monograph on the work of the German architect Mils van der Rohe, Mr. Johnson's latest design is the addition to the Museum of Modern Art now under construction. 3) Joseph N. Boaz of Oklahoma City, Oklahoma, was the third critic of the term, April 24 to May 27. Mr. Boaz' designs for stores and markets have been widely published in recent architectural books and periodicals.

During the summer term, 1949, Martin S. Kermacy served as Acting Assistant Professor of Architecture. Mr. Kermacy came to Cornell for the summer from the University of Texas, where he is an assistant professor of architecture.

Several members of the faculty have been on leave of absence during the year. James O. Mahoney, Associate Professor of Fine Arts, was granted sabbatic leave for both terms, 1949-50, and has been traveling and painting in Europe and North Africa. Professors Eugene D. Montillon, Donald L. Finlayson, and John N. Tilton have been on sabbatic leave during the spring term, 1950. Professor A. Duncan Seymour was granted a leave of absence during the spring term, 1950.

John W. Reps, M.R.P. '47, Lecturer in City Planning, resigned as of June 30, 1950, in order to take up a Fulbright Scholarship for study in the United Kingdom. Mr. Reps plans to make a study of the relationships between national, provincial, and local planning bodies in England and will be in residence at the London School of Economics.

Members of the staff in Fine Arts exhibited paintings in a number of galleries and museums during the year. Associate Professor J. M. Hanson held his fifth one-man exhibition at the Passedoit Gallery, New York, during January; in May the Museum of Modern Art announced the purchase of his oil, *Nocturnal Encounters*, for their permanent collection. The Bertha Schaefer Galleries of New York presented a one-man exhibition of Associate Professor Norman Daly's paintings in February. Assistant Professor Kenneth Evett's painting, *Night Flares*, was exhibited in ten leading museums in the South, while Professor Hanson and Professor Daly were both represented in the annual exhibition of American painting at the Carnegie Institute in Pittsburgh. Professor John A. Hartell was a member of the jury of selection for the thirteenth annual exhibition of Central New York Artists held at the Munson-Williams-Proctor Institute in Utica in February.

COUNCIL OF THE COLLEGE

Trustee Victor Butterfield, A.B. '27, A.M. '28, Ph.D., President of Wesleyan University, and Trustee Herbert Fiske Johnson, A.B. '22, of Racine, Wisconsin, were re-elected to the Council of the College for one-year terms expiring June, 1951.

The other members of the Council are Irwin L. Scott, B. Arch. '23, of New York City (term ending June 1952); Michael Rapuano, B.L.A. '27, of Newtown, Pennsylvania (term ending June, 1951); Professor Hubert E. Baxter, B. Arch. '10 (term ending June, 1952); and Professor Thomas W. Mackesey (term ending June, 1951).

The ex-officio members are Acting President Cornelis W. de Kiewiet, Chairman, Vice-President Asa S. Knowles, and the Dean.

FELLOWSHIPS AND SCHOLARSHIPS

In June, 1950, the firm of Skidmore, Owings and Merrill, architects and engineers of Chicago, established a scholarship of \$1,000 a year in the College of Architecture. Awards are to be made to a student entering the fifth year in Architecture on the basis of scholastic achievement and professional promise. This important addition to our scholarships will give substantial recognition to the highest performance during the first four years of the course leading to the degree of Bachelor of Architecture. Mr. Nathaniel A. Owings, a member of the firm, is a graduate of this College, class of 1927.

Robert L. Myers, B. Arch. '50, of Winston-Salem, North Carolina, has been awarded the 1949-50 Robert James Eidlitz Fellowship in the amount of \$1,000 for travel and advanced study. Mr. Myers plans to use his award for the study of historic and contemporary architecture in nine European countries during the summer of 1950. Also a recipient of the Clifton Beckwith Brown Memorial Medal for the highest standing in architectural design, and the American Institute of Architects Student Medal for the best record throughout his entire course of study, Mr. Myers has been engaged in graduate study at Harvard since graduation from Cornell in February.

Craighead Cowden, B. Arch. '49, who was awarded an Eidlitz Fellowship last year but was obliged to postpone acceptance of it, has been admitted to the Royal Academy of Fine Arts in Stockholm and will be in residence there next year.

A total of seven graduates of this College have received Fulbright awards, of which four were tenable during 1949-50 and the rest will be used next year. John W. Reps, M.R.P. '47, will study in England. Henri V. Jova, B. Arch. '49, will continue his studies in Italy; and Walter B. Van Gelder, B. Arch. '50, will study in the Netherlands.

EXHIBITION ROOM AND GALLERY

During the spring term third year students in architecture planned the re-decoration of the Exhibition Room in White Hall as a design problem. Substantial gifts for the purchase of materials were received from several alumni, the students undertook to refit the room on their own time, and we now have a room much better adapted for the display of drawings and architectural models; a student lounge occupies a part of the space. By a vote of the Faculty this room has been dedicated to the memory of Richmond H. Shreve, B. Arch. '02.

In Morse Hall the Department of Painting and Sculpture has fitted up a room to serve as a small gallery for student work and for traveling exhibitions. This task was done almost entirely without funds; students and faculty contributed their time to the project. A continuous program of exhibitions has been maintained in the gallery, including paintings and sculpture by graduate students, a selection from the Clark collection of paintings, and works of art from Ithaca collections. The last of these exhibitions was shown simultaneously with the larger exhibition of contemporary paintings at Willard Straight Hall, arranged by the Fine Arts staff as part of the Festival of Contemporary Arts held in April, 1950.

ACCREDITING BOARD

On March 8-9, 1950, the Committee of Visitors of the National Architectural Accrediting Board inspected the College and approved the curriculum leading to the degree of Bachelor of Architecture for inclusion in the 1950-51 list of accredited schools of architecture. The Committee visits Cornell every five years; the College will appear in succeeding annual lists until 1955, when it will again be inspected.

The College continues to receive attention in the periodical press. At the request of the *Empire State Architect* Professor Mackesey wrote an article on

the College and its current activities which appeared, with a number of illustrations, in the September, 1949 issue.

This is the last report that I shall be privileged to submit since on June 30, 1950 I relinquished, at my own request, the post of dean, an office I have held for twelve years. The time has come for me to retire in favor of one able to give his full and undivided attention to the affairs of the College. It is gratifying to me that the Trustees appointed Professor Thomas W. Mackesey the Acting Dean; this appointment became effective on July 1, 1950. Professor Mackesey has demonstrated clearly, during the past few years, his capacity as an administrator, and in taking my leave I feel confident that the College is in eminently competent hands. The Board of Trustees voted at their meeting in June to extend my appointment as Professor of Landscape Architecture (without salary); hence I shall continue to serve as a member of the Faculty of the College of Architecture.

GILMORE D. CLARKE,
Dean of the College of Architecture.

APPENDIX X

REPORT OF THE DEAN OF THE COLLEGE OF ENGINEERING

To the President of the University:

SIR: I have the honor of presenting the following report of the College of Engineering for the academic year ended June 30, 1950.

The senior class of 1950 was the last to pursue the four-year curricula in engineering. Henceforward those graduating will have pursued the five-year curricula. This is also the last year in which there was a large graduating class in February. These mid-year graduations were the result of irregular schedules of the returning veterans who had been obliged to leave school at various stages of their programs.

ENROLLMENT

The following tables give the enrollments in the schools of the College since 1940 and freshman enrollments during the same periods. Both tables refer to first term figures.

<i>School</i>	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
C.E.....	214	227	241	233	231	164	432	449	374	335
E.E.....	202	193	222	301	367	246	569	577	554	473
M.E.....	663	760	800	803	689	380	933	983	897	734
Chem.E....	277	337	353	310	170	83	438	392	362	357
E.Physics...	...	...	...	...	...	...	17	45	65	92
Aero.E.(Grad)	...	...	...	...	...	...	12	19	18	22
TOTALS....	1356	1517	1616	1647	1457	873	2401	2465	2270	2013

FRESHMAN REGISTRATION

	<i>First Term</i>								
1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
471	560	645	518	509	201	408	424	449	557

It will be noted from the above tables that the total undergraduate enrollment is gradually increasing. The freshman enrollment beginning with the fall of 1946 was related to the five-year curricula. The steady increase of the freshman class has been gratifying as evidence of the support given to these new curricula.

CHANGES IN STAFF

It is with profound regret that I report the death of three members of our staff during this academic year: Professor W. R. Cornell of the Department of Mechanics, Professor Emeritus F. A. Barnes of the School of Civil Engineering, and Professor F. S. Rogers of the Sibley School of Mechanical Engineering.

The following members of our staff have retired at the end of the academic year: Professors C. E. Townsend and V. R. Gage of the Sibley School of Mechanical Engineering.

The following members of the faculty have resigned during the course of the academic year: Assistant Professors C. B. Mansky and F. W. Ocvirk of the Department of Mechanics; Assistant Professors J. R. Young, W. J. Purcell, and G. W. Ehrhart of the Department of Materials; Associate Professor D. E. Donley, Assistant Professors R. G. Bond, and M. J. Willis of the School of Civil Engineering; Professors H. B. Hansteen and H. F. Mayer and Assistant Professors C. L. Seegar and G. J. Watt of the School of Electrical Engineering; and Associate Professor R. T. Hinkle and Assistant Professors C. R. Scott, T. B. Tracy, and W. J. Skinner of the Sibley School of Mechanical Engineering.

One new appointment has been made to the staff during the year: Professor J. E. Hedrick of the School of Chemical and Metallurgical Engineering.

There have been eight promotions during the year as follows: H. J. Loberg was appointed permanent director of the Sibley School of Mechanical Engineering. A. S. Schultz, Jr., was promoted to Professor, H. H. Mabie to Associate Professor, and R. M. Phelan and Sherwood Holt, Jr., both to Assistant Professor in the Sibley School of Mechanical Engineering. B. K. Hough, Jr., was promoted to Professor and C. D. Gates was promoted to Associate Professor in the School of Civil Engineering. Arthur Kantrowitz was promoted to Professor in the Graduate School of Aeronautical Engineering.

SCHOOL OF CHEMICAL AND METALLURGICAL ENGINEERING

There have been no major changes in the curriculum in chemical engineering or in the method of instruction in the several courses. The work in Chemical Plant Design has been placed under the general supervision of Professor Hedrick, with the several other professors acting as consultants on the specific projects. The essentially graduate courses on Advanced Problems in Heat Transfer and on Advanced Problems in Diffusional Operations have been well received.

There is, of course, some room for improvement in the effectiveness of instruction in the several courses. Steps are being taken to effect such improvement.

During the year 1949-50, major additions were made to the laboratory equipment for metallurgical engineering, and the laboratories were put into condition to accommodate the upper-class courses that were offered for the first time in 1949-50 or will be offered for the first time in 1950-51.

The enrollment in metallurgical engineering is small and will probably remain rather small until we have graduates in industry to establish the reputation of the course in metallurgical engineering at Cornell. In this respect, the history of the course in metallurgical engineering is paralleling that of the course in chemical engineering.

Another factor that limits the registration in metallurgical engineering is the lack of publicity usually given that branch of engineering. There is today a real need for many well-trained metallurgical engineers in industry—not only in the metallurgical industries but also in the fabrication industries, the chemical industries, and the many other industries that use metals. This need has not, however, been widely publicized, with the result that many students and even many vocational advisers in preparatory schools are not informed as to the opportunities in metallurgical engineering. It is probable that the registration in this division could be increased considerably by calling wider attention to the opportunities in metallurgy.

Comparatively few of the graduates of this School have entered the teaching profession. The salaries offered by industry are so much higher than those

available to teachers and the retirement and pension plans are so much more liberal that most graduates have preferred to enter industry. There is, however, a real need for really capable men as teachers of chemical engineering in the universities. These men should have at last two or three years of responsible experience in industry before undertaking to teach in professional courses, but they should have opportunity to get some instruction in teaching methods during their residence as graduate students. In 1950-51, a plan is being instituted that will provide such instruction under close supervision and with constructive criticism by a senior member of the staff.

During this year, the Robert Taft Brunson Memorial Room in Olin Hall used for social and recreational purposes was furnished and dedicated. Funds for furnishing the room were donated by Mr. Arthur M. Brunson of West Lafayette, Indiana, in memory of his son, Robert Taft Brunson, a former student in Chemical Engineering, who was killed in action in World War II.

The William C. Geer Laboratory for Plastics and Rubber is now being installed. The equipment and the funds required for the installation were donated by Dr. William C. Geer of Ithaca.

On May 18 and 19, a very successful conference on Research Economics and Accounting Practices was sponsored by this school. This conference was attended by representatives of about thirty of the major chemical companies.

SCHOOL OF CIVIL ENGINEERING

In every department the primary objective as listed in the department reports is to do the best possible job of teaching. On several occasions concern has been expressed in various areas that too much emphasis was being given to research phases of our work. These fears are unfounded. Even in those departments where research is most active, the research is looked upon as a means to the end of better teaching. Of course research has other beneficial effects, but better teachers and better teaching is considered a most valuable by-product of our research.

The second objective of all departments is to continually improve our basic facilities and equipment. Such improvements will serve two purposes in general: one, as tools of instruction in undergraduate as well as graduate classes; two, with adequate basic equipment the research work coupled with graduate student theses can be done without prohibitive outlays of new capital and serious delays in time.

A third objective common to all of the departments is to expand the graduate student program. Without a vigorous program which serves to explore frontiers of engineering science, it will be very difficult for Cornell to remain a leader among American engineering universities.

It should be emphasized that we still consider our primary objective to be to operate a first class undergraduate program. To do this however, Cornell must be recognized as one of the leading engineering institutions and without this recognized leadership, it may be difficult to get the selected type of student body we desire from the high schools. It is admitted that graduate work is expensive, but the cost per student could be substantially reduced if larger numbers were permitted to enter.

It is important that a head for the Hydraulics Department be appointed. When this vacancy has been filled the staff will be complete for the present.

SCHOOL OF ELECTRICAL ENGINEERING

With the inauguration of the five-year curriculum in the College of Engineering in 1946, the Communications courses were thoroughly revised. This not only consisted of modernizing the content of the courses but introducing new courses made possible by extending the curriculum in Electrical Engineering to five years. As a result of this, the student in Communications has the most up-to-date training in the country, in spite of the fact that we are handicapped by the lack of an adequate laboratory for instruction in high frequency techniques.

A similar modernization has taken place in the courses in Industrial Electronics and Servomechanisms. Students in this field are required to take two courses in Servomechanisms which gives them a thorough understanding of the theory and practice. In this connection it may be interesting to note that it is unusual even among leading schools to have Servomechanisms available to undergraduate students.

While the courses in Power have been similarly reorganized, no major change has taken place in the required undergraduate courses. Students in this field have been given an opportunity to broaden their scope of learning by the introduction of elective courses such as Motor Control, Power Systems, Transmission of Electronic Energy, Symmetrical Components, and High Voltage Phenomena.

Of particular significance are the formal graduate courses of doctoral level which have been introduced in the Communications Area. In 1946 Professors Burrows and Ballard introduced two courses on Electromagnetic Waves. These courses have since been extended to four courses by Dr. Booker, including the Theory of Electromagnetic Wave Propagation in Wave Guides, in Space and Through the Ionosphere, as well as a course in Radio Antennas. In 1947, Dr. Hamlin introduced a course on the Theory of Four Terminal Networks, of doctorate level. This course is now being taught by Professor McGaughan. Professor Ingalls has introduced a graduate course on Television Systems. Dr. Mayer introduced two graduate courses of doctorate level, one on the Pulse Techniques in Communication Systems and another on the Transmission of Information. These courses are now being taught by Professor McGaughan.

As a result of the introduction of the formal courses of doctorate level, the School of Electrical Engineering is in a position to handle economically a reasonable number of Ph.D. candidates.

The School of Electrical Engineering at present is making use of parts of seven buildings. The administrative offices, many of the faculty offices, most of the classrooms, and the laboratories in Communications, Industrial Electronics, and Servomechanisms are located in Franklin Hall. The Rotating Machinery laboratories are located on the second floor of Rand Hall. The Vacuum Tube and Pulse Techniques laboratories as well as most of the research work of the School is located in Franklin Annex. The Machine Shop of the School is located in Morse Hall. The laboratories and some of the classrooms for instruction in Electrical Engineering to non-Electricals are located in the Old Heating Plant. Ionospheric Research is carried on in the building which originally housed the transmitter of Radio Station WHCU. The research on Radio Astronomy and Solar Noise is located in a Quonset hut at the East Hill Airport.

The past five years have witnessed a great expansion in the laboratory facilities available for instruction and research, and one great loss in these facilities. The loss arose from the destruction of the High Voltage Laboratory by fire which completely destroyed much valuable equipment used in this particular field of endeavor as well as a great quantity of equipment and material stored in the building at that time.

During the year 1946-47 the School was given the sum of \$55,000 with the stipulation that it be spent for equipping the laboratories of the School. This sum was expended during the school year 1946-47. Had it not been for this donation, it is doubtful that the School could have offered satisfactory instruction under the double impact of the five-year program with its new courses and of the large student registration occasioned by returning veterans.

In addition to this fund, the School has also been fortunate in receiving valuable gifts of large equipment. The electrical laboratory facilities built during the war for the training of Navy personnel were turned over to the University by the Government and are now being used to teach electrical engineering subjects to students in other schools of the Engineering College. These facilities gave the opportunity for much-needed expansion in this particular field of endeavor. The School has also received from the Philco Radio and Television Corporation a television transmitter which will serve as the basis for the development of laboratory facilities in the more advanced phases of com-

munications engineering. Other corporations have also been very generous in contributing to the facilities of the Vacuum-Tube Laboratory which, as a result, greatly expanded the work which it is doing. The new laboratory which specializes in the study of Servomechanisms has received the sum of \$3,000 in order that it may continue to expand.

In the past four years eight major research projects have been initiated in the School of Electrical Engineering, seven of which are continuing. One of these projects has been partly supported by Cornell University, one has been supported by one of the engineering societies, and the remaining have received their major support from the various contracting agencies in the United States Government.

In response to the invitation from the Watson Laboratories of the Air Material Command to various universities to send representatives to visit their laboratories and discuss ways in which the university could cooperate with them in solving their research and development problems, Provost Arthur S. Adams, Director Charles R. Burrows, and Professor A. Berry Credle visited the laboratories in January, 1946. As a result of this contact, the School of Electrical Engineering proposed the development of a high-speed oscilloscope. This equipment was developed and experimental models delivered to the Cambridge Field Station at Watertown on September 16, 1949.

In response to the request of the Office of Naval Research for proposals on basic research of interest to staff members, the School of Electrical Engineering made several proposals, the one on radio astronomy being accepted by the Office of Naval Research, which wrote a contract with Cornell University dated November 1, 1946. The Contract has been periodically renewed and is still in force. The University, as its share in this cooperative adventure, erected the Quonset hut at the East Hill Airport to house this project. The first installation on this project was the design and construction of a large radio telescope to operate on a frequency of 200 Mc. This telescope, which has a reflector 204 inches in diameter and weighs eight tons, is the result of cooperative effort among the Schools of Civil, Mechanical, and Electrical Engineering. During the construction of the large telescope, valuable scientific information was obtained by making use of the antenna mount of a SCR-268 radar set. With this equipment, the variation of solar noise on 200 Mc. has been studied and the concentration and distribution of emitters at this frequency in our own galaxy has been determined.

We are rapidly approaching the time when we will have a well-instrumented radio astronomy observatory. Plans are well under way for modifying the reflector on the large telescope so that it will be suitable for frequencies up to 3,000 Mc. The original 268 antenna mount has been moved to a more suitable location and permanently installed on concrete piers. An additional equatorial mount entirely suitable for solar measurements on 200 Mc. has been constructed and will free the large "telescope" for other types of observations. Two radio interferometers have been installed which will allow the location of radio point sources. In addition to the external equipment, the electronic equipment, which really is the heart of a radio observatory, has been greatly improved and duplicated to the point where we have equipment to go with the various "telescopes."

As a result of our research in radio astronomy in cooperation with the Office of Naval Research, the Cambridge Laboratory of the Air Material Command asked us to install and operate a radio observatory at Sacramento Peak at Alamogordo, New Mexico, in connection with the work they are sponsoring with Harvard University's Astronomy Department on the observation of the sun in the optical frequency range. Equipment for solar measurements at 50, 200, 1,420, and 3,200 Mc. is being installed in a truck which will be shipped to New Mexico in July. It is hoped that the close cooperation of the radio scientists and the astronomers in their measurements of solar activity will result in a better understanding of the solar cause of terrestrial phenomena.

During the summer of 1948, the Air Materiel Command at Wright Field requested us to plan experiments to determine any anomalies that might exist in air-to-air propagation on the higher frequencies and make a theoretical inter-

pretation of the results. Measurements to date have shown that deviations from the standard atmosphere are sufficient to decrease the signal on clearly optical paths by as much as 20 decibels below what would be expected in the standard atmosphere. The relationship between these radio fadeouts and the meteorological conditions has been sufficiently well established that their occurrence may be predicted within a reasonable amount of reliability.

The School of Electrical Engineering has been developing electronic equipment for use by the Cornell Medical College in connection with their study of Thrombosis. Tests with this equipment both here and at Cornell Medical Center indicate that the measurement of electrical properties of blood can be used as a substitute for the tedious blood counts previously made. A very sensitive stable amplifier capable of making these measurements has been designed, built, and delivered to the New York Hospital. It is in almost continuous use.

Another method involving a resistance bridge has also been developed. Three units are being built for distribution to various hospitals. We are now developing a new stable biological amplifier which will be smaller and useful for general biological measurements. This work is sponsored by the Office of Naval Research.

The School of Electrical Engineering is studying the ionosphere, both experimentally and theoretically in an effort to improve our understanding of radio wave propagation in the Arctic. Because of its close relationship with aurora, this contract partly supports the aurora research being carried out in the Physics Department under Dr. Gartlein. The Signal Corps has furnished the School with an ionospheric sounder operating in the frequency region between 2 and 24 Mc. a sound. From this equipment, echoes have been obtained which are believed to come from the aurora.

Illumination research engaged in during the past school year included one project continued under the sponsorship of the Illuminating Engineering Society Research Fund on Visibility Measurement, and two projects shared with the Department of Psychology, one sponsored by the I.E.S. on Critical Flicker Frequency and Fatigue, and the other sponsored by the Navy on Muscle Tension as an Index of Visual Effort.

The Visibility Measurement investigation has resulted in the development of a contrast-brightness threshold meter for use in obtaining the contrast-brightness threshold curve of a seeing task "on the job," with the expectation that this curve may be an aid in prescribing optimum levels of illumination. A paper on this project is to be presented at the national I.E.S. meeting in the summer in Pasadena.

A pipeline-network analyzer has been designed, constructed, and tested at the School of Electrical Engineering. This computer solves problems involving the flows and friction pressure losses in complicated networks of pipelines used for the distribution of fluids, such as municipal water and gas systems, ventilation systems, and district steam-heating systems.

Basic research underlying the development was conducted by Professor M. S. McIlroy as the subject matter of his Doctor's thesis at the Massachusetts Institute of Technology. An award was made from Engineering College research funds at Cornell to purchase materials for constructing an actual working analyzer, and the Standard Electric Time Company of Springfield, Massachusetts, donated materials and services toward the project. Shop personnel of the School of Electrical Engineering mounted parts on the analyzer, and Professor McIlroy devoted a large share of his own time during two summer vacations and regular holidays to its design and test.

The analyzer has successfully solved all the problems assigned to it, and has been described in the Journal of the American Water Works Association for April, 1950.

DEPARTMENT OF ENGINEERING PHYSICS

The development of the undergraduate curriculum in Engineering Physics is proceeding according to plans and the first students with a degree of Bachelor of Engineering Physics will graduate in June 1951. Most students seem to follow

this curriculum with great enthusiasm. The number of freshman applications is high which proves that this department already enjoys a good reputation. A number of our students have taken summer jobs with governmental and industrial laboratories, and in general the reaction of their employers has been very favorable. The number of students being accepted for summer jobs is steadily increasing.

Also the research activity in the Department of Engineering Physics is expanding steadily accompanied by an increase in graduate students and research assistants. The past year saw the establishment by the Radio Corporation of America of a special fellowship for a graduate student in Engineering Physics. Probably the most salient feature in the development of the research facilities is the establishment of a research center for electron microscopy which was made possible by a grant from the Rockefeller Foundation. Under the supervision of Professor B. Siegel, the installation of two RCA electron microscopes with the necessary auxiliary equipment for shadowing, preparation of thin sections, etc., has been completed, and a number of research projects have been started in association with scientists from all over the campus, such as Civil Engineering, Physics, Zoology, Plant Pathology, etc. Special mention may be made of the investigation of the size and shape of clay particles of the Montmorillonite type which was undertaken in connection with the Army Engineer's Project on the Solidification of Soil. The question of the size and shape of these particles when completely isolated has been a controversial one for a long time, and with the help of the electron microscope and some new and improved techniques it now seems hopeful to finally arrive at a definite answer. In view of the general great interest in electron microscopy and the lack of trained personnel to work with these instruments, this department is offering under the guidance of Professor Siegel an intensive summer laboratory course of two weeks.

Good progress was made in the development of an instrument for the determination of moisture content and density in soil. This instrument, developed in cooperation with the School of Civil Engineering, is based on the scattering of neutrons and gamma rays and has proved successful in preliminary field tests. The Civil Aeronautics Administration is sponsoring this research and large-scale field installations are foreseen for the early fall of 1950. Other research projects partially sponsored by the Office of Naval Research deal with mechanical and electronic properties of solids. Some of these investigations are intended to bridge the gap between the engineers' and the physicists' approach to these phenomena.

SIBLEY SCHOOL OF MECHANICAL ENGINEERING

In spite of the heavy undergraduate teaching loads in most cases and the fact that we have not given teaching load credit to our men for the graduate students under their supervision, there was a reasonable amount of publication and professional society participation carried on, as indicated by the following:

"Principles of Aircraft Propulsion Machinery" by Israel Katz, Pitman Publishing Corporation.

Kent's "Mechanical Engineers' Handbook," Twelfth Edition, John Wiley & Sons; sections on "Heat Transmission" and "Engineering Thermodynamics" by C. O. Mackey.

Professor Henriksen has been awarded the Cross of the Order of Danebrog by the Danish government in recognition of his educational and scientific contributions and his active participation in the Danish underground during the war.

At the insistence of men in industry, two extramural courses were offered. Professor White gave an Advanced Time Study course for the Elmira-Corning area, and Professor Schultz gave an advanced course in Industrial Statistics to a group of I.B.M. and Ansco engineers in Endicott.

We have had repeated requests for extramural courses, and it would be an

easy matter to expand this activity if we so desired by adjusting our present teaching loads.

Members of the faculty have served on various University committees, the most important of which have been Professor Schultz's chairmanship of the University Faculty Committee on Economy, and Professor Mackey's membership on the University Policy Committee.

The fact that we are in the fourth year of the new 5-year curriculum meant that many new courses had to be given. This rearrangement of subject matter and improvement in course material created heavy demands upon the time of a large majority of our staff. They have done a very creditable job, and our curriculum content is being strengthened constantly.

In addition to offering new courses, it was necessary to crystallize our thoughts and ideas on what should and should not be included in the 5-year projects to be offered this fall. Here again the staff members devoted considerable time and thought in the planning stage so that we should be able to reach the objectives of the project during the coming year with a minimum amount of difficulty. You have seen the project outlines we developed, and apparently at this stage the students are enthusiastic about the idea.

The value of the *Sponsored Research* carried on during the year was slightly in excess of \$32,000. These projects are briefly described as follows:

"Effect of Misalignment on Plain Bearing at High Rotative Speeds", sponsored by the NACA and under the direction of Professor DuBois. Four reports were submitted during the year. A proposal for a second renewal of the project has been submitted to the NACA.

"Evaluation of the Load-Carrying Abilities of Stainless-clad Steel Bridge Roller-Plates as Compared to Carbon-Steel Plates", sponsored by Modjeski, Masters (Engineers), and the Lukens Steel Company, and conducted by Mr. Holt. The first test run has been completed; five others will be made during the summer.

"Investigation of Elemental Time Standards", sponsored by the Methods Engineering Council, under the direction of Professor White. This work has been undertaken for another quarter of a year, and we are hopeful of further extension. Research on the sol-air thermometer was continued as an ASHVE-Cornell co-operative project.

Under the direction of Professor Shepherd, a graduate student, D. T. Beecher, has been studying combustion phenomena in turbulent flow at low pressures. The Cooper-Bessemer engine in the Diesel Laboratory has been operated as a source of air for this study. It is expected that this project will be completed during the summer of 1950. In support of this project "A study of the Stability Limits for Gaseous Fuel Injection in a High-Speed Air Stream", \$660 was appropriated from the M. E. Research Fund.

Professor Shepherd proposed an investigation of the performance of a heat exchanger with airfoil tube sections arranged as turbine impulse blade elements. An appropriation of \$850 was made for this study. It was found, however, that the heat exchanger sections could not be obtained from the manufacturer at the prices originally quoted; so the project was abandoned for 1949-50. Now, however, the Carrier Corporation has agreed to manufacture the special matrix at no cost to the University. The Heat-Power Engineering Department will ask for funds from the M. E. Research Account to provide for the installation, instrumentation, and carrying out of this project in 1950-51.

A group of machine tool manufacturers have contributed \$11,000 for a metal cutting research program to be conducted during 1950-51. In addition to the money involved, the Lodge & Shipley Co. is supplying on loan a new 20-in. Model X Medium Duty Engine Lathe, and the Warner & Swasey Company a Schiess-DeFries Cutting Dynamometer complete, to assist us in this research program.

We have received unofficial word that the Salvatore Giordano Foundation is going to make a grant of \$5,000 a year for a period of five years for a fundamental study in the field of heat transfer on "Extended Surface Heat Exchangers."

As a result of a program of "commercial testing" carried out at Cornell by the Heat-Power Engineering Department for the Convector Manufacturer's Association, this Association has become interested in locating a Research Residence at Cornell. The work to be done in this residence for the CMA would be similar to the work done at the University of Illinois in one research residence sponsored by the National Warm Air Heating Association. There is a strong feeling that all work of this type should not be centered at Illinois, and if Cornell does not want this residence, it will go to another engineering college. A combination of interests, including this one, in building and housing research at Cornell led Vice President Wright to call a meeting of interested people; and a committee of four, headed by Dean Mackesey, is planning the organization of a Housing Research Center at Cornell. The CMA research residence plan will be submitted to this center as a possible project. At a recent meeting in New York, members of the Engineering Committee of the CMA informed us that they were ready to ask that association for about \$25,000 to build such a research residence at Cornell and for an annual grant of from \$10,000 to \$15,000 a year for several years to support the research project to be carried out. The total grant may well be of the order of \$75,000 to \$100,000. It is hoped that this project may receive the active support of the administration.

Professor Martinuzzi has prepared a description of a research project on inflow turbines. This project has been submitted, through proper University research channels, to the NACA. If supported, the work would be carried out in the Aircraft Engine Laboratory at the airport.

The equipment used in operating the cold room is deteriorating, and we will be faced with replacement costs before long. There is no reserve fund for equipment amortization, and this income is mentioned in order to show that the use of these facilities is earning money that should be made available ultimately for their replacement.

Also, as a consequence of the program carried out during this academic year for Conductor Manufacturers Association, Professors Mackey and Gay have been asked to prepare a paper on "Effective Heat" to be submitted to the American Society of Heating and Ventilating Engineers before October 1950. This paper would be based upon results discovered in the testing of radiators and convectors in the Cornell Cold Room.

On the occasion of the dissolution of the NACA Reciprocating Engines Laboratory, and largely through the efforts of Professor Katz, we obtained two electric dynamometers in good condition for the costs of transportation. One of these is a 100-HP cradle type electric dynamometer with a speed range from 2,000 to 4,000 rpm; the other dynamometer is a 50-HP absorption dynamometer of the eddy current type with a speed range from 2,000 to 6,000 rpm. These are fine additions to our laboratory because of their high peak speeds and because we had no eddy current type dynamometer, even though this type is being widely used for larger power absorptions. Their cost to us was approximately 5 per cent of their actual value.

As gifts of the manufacturers, several combustion engines were added to the laboratory; these additions include new Studebaker, Nash, Hercules, and Harnishfeger engines. These engines will be used in student instruction.

Additions were made to the new Heat-Transfer Laboratory; new instruments were obtained, and an electrical analogue was constructed for two-dimensional conduction of heat.

A gift of \$600 was received from Charles S. Leopold, consulting air conditioning engineer of Philadelphia, to construct an hydraulic analogue for study of periodic heat flow. This analogue is nearly completed, and will be used to study cooling load resulting from periodic heat flow through glass. The ASHVE has asked for a paper on this subject.

A vibration analyzer was purchased from the General Radio Co. to supplement the previously acquired G. R. vibration meter. This analyzer gives the magnitude of vibrations at each of the contributing frequencies, thus indicating possible sources of vibration and their relative importance for correction.

The drive for the Davis brake-test machine was changed, eliminating the

space consuming and dangerous belt and the often borrowed d.c. motor. The drive is in-line, a 25-HP A.C. motor, four-speed gear transmission, and a shaft arranged for torque measurement by SR-4 strain gages, slip rings, and oscillograph. The Davis mechanical torque arm at the wear disk is retained. Now the machine is not only suitable for wear tests and friction coefficient measurements, but the wear plates (which are water-cooled) may be used as a small dynamometer, and shaft stress measurements may be taken for student practice in instrumentation. The new arrangement does not eliminate the need for a more versatile dynamometer for tests on small mechanisms.

For photoelastic work, a set-up was made for the annealing and loading required for making frozen stress patterns for non-coplanar stress. Also, mounts were built for a polaroid disk to give larger field observation of stress-patterns, a 6-inch diameter field as against a previous 3-inch, and a greatly increased illumination, of particular aid to visual observation.

A dynamic-load bearing machine was developed by Mr. Phelan as his thesis problem. A load of 2000# may be completely reversed or superimposed upon any steady load up to 2000#. Bearing size is 1.25-in. diameter x 1.25-in. long, so the 2000# load corresponds to a pressure of 1280 psi. This is about 20 times the capacity of the only other known machine in this country for dynamic bearing tests as versatile as these. A feature of the machine is photoelectric-cell measurement of journal position in the bearing, which is an inexpensive method, although perhaps not the best.

A very valuable addition to machines in the Materials Processing Department was a new 1A Universal Hollow Hexagon Turret Lathe, valued at about \$17,000 placed on consignment here by the Warner and Swasey Company.

The Engineers' Student Lounge was formally opened in the spring. This particular project was College-wide, but the original idea and much of the planning and work was done by the student honorary societies of this School. They have raised somewhat in excess of \$1500 for the purchase of furniture and equipment. Since the opening of the Lounge, it has been used extensively and fills a real need in the School and College.

Engineers' Day, which is largely a responsibility shouldered by students was very successful. The Sibley School of Mechanical Engineering won the Engineers' Day Best Exhibit Award, presented by the Cornell Society of Engineers.

GRADUATE SCHOOL OF AERONAUTICAL ENGINEERING

To date, the School has graduated fifteen Masters of Aeronautical Engineering and two Doctors of Philosophy; by June, 1950 these numbers will have increased to twenty and to four. All of the graduates to date are now engaged in research and development engineering in the aeronautical industry or related industries, or in aeronautical scientific institutions. In addition to these, an appreciable number of students who have spent two or more terms in the School, but who have left it for financial or other reasons, without degrees, have been placed in aeronautical engineering positions.

It is clear that the School's primary objective is being realized.

The faculty attracted to Cornell for the Graduate School of Aeronautical Engineering now numbers five in professorial ranks, plus three Research Associates. All of these men are active in their profession, and are nationally and inter-nationally known. They have had their background experience in various fields, both scientific and industrial. Some of their present activities are listed, without the names of the professors, in the following:

- Member, U.S. Air Force Scientific Advisory Board and Chairman of Aircraft Panel thereof
- Member, Scientific Advisory Board Committee on U.S.A.F. Research and Development (Ridenour Committee)
- Member, National Advisory Committee for Aeronautics Subcommittee on Fluid Mechanics
- Vice Chairman, Board of Directors, Fluid Dynamics Division, American Physical Society

Member of the Council, Institute of the Aeronautical Sciences

Consultant to Project N. E. P. A.

Consultant to U.S. Air Force, Directorate of Research & Development

Consultant to U.S. Air Force, Air Engineering Development Center

Consultant to Sverdrup & Parcel, Inc.

Consultant to I.T.E. Circuit Breaker Co.

Consultant to Princeton University Research Project on Determination of Residual Stresses

Member, Editorial Committee, Journal of the Aeronautical Sciences

Collaborating Editor, Quarterly of Applied Mathematics

Two members of Board of Reviewers, Mathematical Reviews

Four members of Board of Reviewers, Applied Mechanics Reviews

Three members of this small staff have been selected to write sections of a new series of volumes on high-speed flight, which is a joint enterprise of Princeton University, the Air Force, and the Navy. One of these members has also been chosen to edit the volume devoted to Aerodynamic Theory in this series. Another professor is author of a major contribution to a new handbook of aeronautical engineering.

One of the great advantages of the Graduate School of Aeronautical Engineering, in comparison with similar schools in a number of collegiate institutions, is that it is a part of a great university, rather than an engineering school or institute of technology. It has been the intent of the faculty of the School to exploit this advantage, with the result that the School has many close ties to individuals and departments of Cornell both inside and outside of the College of Engineering. It has already been mentioned that the School has consistently attracted undergraduate and graduate students from other parts of the campus. The following table shows where these students had their major interests:

*Major Subjects of Non-aero Students Carrying Aeronautical Courses**

<i>Graduate Students</i>	<i>1946-47</i>		<i>1947-48</i>		<i>1948-49</i>		<i>1949-50</i>	
	<i>F.</i>	<i>S.</i>	<i>F.</i>	<i>S.</i>	<i>F.</i>	<i>S.</i>	<i>F.</i>	<i>S.</i>
Mechanics.....	3		2	1	4	3	2	3
Mathematics.....	1		2	1			1	2
Physics.....			2					
Engrg. Physics.....			2	2			1	1
Mech. Engrg.....	5		1		2	1	4	4
Chem. Engrg.....			6**	5**				
Civil Engrg.....							1	
Elec. Engrg.....							1	
<i>Undergraduates</i>								
	<i>1946-47</i>		<i>1947-48</i>		<i>1948-49</i>		<i>1949-50</i>	
	<i>F.</i>	<i>S.</i>	<i>F.</i>	<i>S.</i>	<i>F.</i>	<i>S.</i>	<i>F.</i>	<i>S.</i>
Mech. Engrg.....	2	21	22	10			1	1
Elec. Engrg.....			2					
Engrg. Physics.....								1

*A student taking two aeronautical courses in one term is counted twice.

**U. S. Navy officers.

Similarly, graduate students in aeronautical engineering have been encouraged to pursue course work outside of the School and outside of the College. The required program of courses for the M.Aero.E., in fact, includes courses in mechanics and mathematics, and all Ph.D. candidates majoring in aeronautical engineering courses must take their two Minor Subjects outside of the aeronautical engineering school. This is shown in the following table.

*Number of Non-aero Courses Pursued by Aeronautical Engineering Majors**

	1946-47		1947-48		1948-49		1949-50	
	F.	S.	F.	S.	F.	S.	F.	S.
Mechanics.....	2	4	9	11	13	6	7	4
Mathematics.....	9	11	11	11	12	12	14	12
Physics.....			1	2	3	2	5	3
Elec. Engrg.....								2
German.....		1						
Chemistry.....		1						
Engrg. Physics.....					2		1	
Architecture.....						1	1	2
History.....						1		
English.....						1		
Heat-Power.....								1

*A student taking two courses in the same department in one term is counted twice.

It has been possible to assist a number of these graduate students financially; this appears, in fact, to be essential to a successful graduate school, since so many promising applicants are in need of such assistance and other universities are able to offer it. Besides a limited number of positions in the School as Assistants, there have been available the McMullen Graduate Scholarships, and, in three cases, Tuition Scholarships in the Graduate School. During 1949-50 there have also been made available three temporary fellowships sponsored by the Cornell Aeronautical Laboratory, named in honor of three of their supporting companies: The Curtiss-Wright, Fairchild, and Grumman Corporations. These have made it possible to attract two very promising new candidates and to keep an advanced candidate for the Ph.D., who would not otherwise have been able to complete his residence. It is expected that these industrial fellowships will be continued in the future.

Aeronautical faculty members have consistently served on the special committees of students majoring in other fields. One member of the aeronautical engineering faculty also serves on the faculty of engineering physics and another presents a two-term undergraduate course that is required for the Bachelor of Engineering Physics and is a popular elective for other students.

These contacts through courses and students have made for close relationships between this School and the faculties of other divisions of the University, and in many cases these have been further strengthened by active participation in the research activities of other divisions. The aeronautical faculty carries its share of the work of faculty committees on the campus, and its members are active in campus faculty organizations.

One of the features of the School's activities has been the weekly Aeronautical Engineering Colloquium. This meeting, which is traditionally preceded by the serving of tea in the Aeronautical Engineering office, attracts an audience from many parts of the campus and sometimes from the Cornell Aeronautical Laboratory. The list of speakers during these four years is an impressive one and includes distinguished engineers and scientists from the Cornell faculty, from other universities, and from industry. Moreover, faculty members of the School of Aeronautical Engineering have each year presented seminar and colloquium lectures in physics, mathematics, and mechanics.

The faculty of this School has consistently believed that original research of a scientific nature is an essential feature of its educational effort. Not only is it the responsibility of a great university to contribute to mankind's knowledge, but it is manifestly impossible to "prepare the students to carry out industrial research and development engineering" unless the School is characterized by the spirit of scientific investigation that is called the "research atmosphere."

The Cornell Aeronautical Laboratory, Inc., of Buffalo, New York, which is wholly-owned by Cornell University, has proved to be a valuable asset to the Graduate School of Aeronautical Engineering. Certainly the ownership of the Laboratory has emphasized Cornell's interest in aeronautical engineering mat-

ters, and the Laboratory has helped to attract students to the School. The important contribution of the Laboratory to the University's graduate fellowship program has already been described. Other benefits that the School has derived will be described briefly below; it is believed, moreover, that these benefits have been mutual.

The relationship between the School and the Laboratory has been most successful in two categories: first, the continued contact between Laboratory personnel and members of the School faculty; and second, the Laboratory's summer employment program for students. In the first category, it may be mentioned that three of the five professors of aeronautical engineering are consultants to the Laboratory; one of the three makes weekly visits to the Laboratory and is heavily depended on in connection with the program of the variable density wind tunnel. The summer program for students has operated through each of the three summers since the School's founding and has given gainful employment and invaluable professional experience to about half of the graduate students majoring in aeronautical engineering. Some of these students upon graduation have returned to the Laboratory for permanent employment.

The Director of the School serves as a member of the Board of Directors of the Laboratory. In past years, various faculty members of the University have given extension courses in Buffalo, principally for the benefit of Laboratory employees. This teaching program, measured by the scholastic success and enthusiasm of the students, was a successful one. Nevertheless, the hardships and uncertainties of commuting from Ithaca to Buffalo in winter, together with the great cost in time, have finally discouraged the most persistent of these faculty members, and the program has been laid aside. One especially well-qualified member of the Laboratory staff gave an elective course in the School in the spring of 1948. It would be desirable to repeat this, but the same geographical difficulties are involved, besides the fact that the School has no funds to pay the instructor. Laboratory people have, however, spoken at a number of the Aeronautical Colloquia, and it is presumed that this will continue.

The size of the graduate student body in aeronautical engineering is limited by the students' thesis-research load that can be supervised by the professors. Sound graduate study is always to a great extent a matter of personal contact between the student and his advisers. Nevertheless, this limitation has not been encountered, and it is believed that the student body could expand to about 35 or 40 without further increase of the size of the teaching staff. The present size (23 students) is imposed by the number of adequately-qualified applicants. Presumably, this number will increase as the reputation of the School grows; a graduate school of aeronautical engineering having a somewhat similar program and requirements at another institution now handles 100 graduate students each year. As has already been mentioned, there is a plentiful supply of graduate students who need financial aid. It is possible that a National Science Foundation will assist many of these prospects in the future.

Since the School began instruction, graduates of Cornell's Sibley School of Mechanical Engineering have consistently been among its most successful students, and have become its highly regarded alumni. It is clear that some steps must be taken to encourage a continual flow of Cornell graduates from the Sibley School, the Engineering Physics Department, and the other engineering schools into the Graduate School of Aeronautical Engineering. The program leading to the M.Aero.E. cannot ordinarily be completed in two terms; in fact, it ordinarily requires four terms, but has in some cases been accomplished in approximately three. It seems clear that Cornell engineers should not be asked to study five years for the bachelor's degree and then two more years for the M.Aero.E.; and arrangements should be made, involving proper use of elective courses and substitution for some required courses, so that these men can accomplish the entire program in a total of six years.

A study of the Engineering Physics curriculum has shown that this can be done without difficulty by candidates for the Bachelor of Engineering Physics degree (B.E.P.). Not only does their program afford a large number of electives

but there are actually certain coincidences in the required courses for the B.E.P. and the M.Aero.E.

Cornell University, in its Graduate School of Aeronautical Engineering, Aeronautical Laboratory, Committee on Air Safety, and a number of other interests and activities, is playing an important role in aviation. This is, without question, appropriate and highly desirable, in view of the great impact of aviation upon civilization and the rapid technical and scientific progress that aeronautics involves. Surely, it is essential that aeronautical engineering education be provided in Cornell's College of Engineering, and that this activity be of the highest quality.

GRADUATE STUDENTS

The following table lists the number of graduate students at work in various parts of the College during the year just completed:

Engineering Mechanics.....	13
Engineering Materials.....	3
Chemical Engineering.....	20
Electrical Engineering.....	42
Engineering Physics.....	11
Mechanical Engineering.....	34
Civil Engineering.....	46
Aeronautical Engineering.....	23
TOTAL.....	192

The number of graduate students in the College is fixed by quota from the Graduate School. It would seem that a more efficient job could be done in Engineering by allotting a considerable increase in graduate students in the College of Engineering. The present number makes for many small classes that could be more effectively filled up if a larger quota were assigned. The College could well absorb an additional hundred graduate students.

RESEARCH

It is not easy to give in any one year a full picture of the activities of the staff in conducting and directing research. It would seem that the best measure of such activity is to list the number of projects that have been conducted during the past two years. Some overlapping at both the beginning and the end of the year exists and so the picture of operations over a two-year period will give a fair idea of the activity that has been going on during the past year.

GRADUATE SCHOOL OF AERONAUTICAL ENGINEERING

Transonic Potential Flow Near an Airfoil
 Stability of Supersonic Airplanes
 Analysis of Redundant Structures
 Interaction Between Boundary Layer & Shock Waves
 Impact Stress Propagation
 Propagation of Expansion & Compression Waves
 Experimental & Theoretical Investigation of the Turbulent Boundary Layer
 Two Practical Problems in Supersonic Flow
 Stability of Potential Mixed Flows
 An Investigation of Rotational Incompressible Flow
 Photoelastic Experiments on Wave Propagation in Solids
 A Method of Stabilizing Supersonic Flow
 The Boundary Layer on a Rotating Blade
 A Study Related to Boundary Layer Separation in a Compressible Fluid
 Configuration of Curved Shock Waves Attached to Obstacles
 Second Approximation to Supersonic Conical Flow
 The Lift of a Rapidly Oscillating Airfoil

Experiments Using a Shock Tube
 On the Theory of Elastic Swept Wings
 Configuration & Stability of Disturbed Shock Waves
 Impact Buckling of Structures
 Jet Mixing in Compressible Fluid
 Improved Molecular Beam
 A Study of Very Strong Shock Waves
 Theory of Supersonic Airfoils in Non-uniform Motion
 Aerodynamics of Supersonic Bi-Planes
 Penetration of a Jet Into a Stream
 Theory of Submerged Duct Entrance
 Re-study of Boundary Layer Shock Wave Interaction
 Finite Wing in Non-uniform Stream
 Coupling of Airplanes Through Automatic Controls
 Mach Reflection of Shock Waves
 Sharp Focusing Schlieren System
 Shock Wave in Disturbed Flow

SCHOOL OF CHEMICAL AND METALLURGICAL ENGINEERING

Chemical Methods for Recovery of Hydrogen from Gaseous Mixtures
 Properties of Steel-Molding Sands at Elevated Temps.
 Flow Properties of Pseudoplastic Fluids
 Fusion Reaction in Manufacture of Resorcinol
 Filtration Rates in Basket Centrifugals
 Manufacture of Di Methyl Aniline with Fluidized Catalyst
 Condensation of Vapors from Inert Gases
 Electrical Properties of Films of Evaporated Metals on Glass
 Non-Isothermal Operation of an Absorption Column
 Column Efficiencies in Counter-Current Liquid-Liquid Extraction
 Kinetics of Ion Exchange
 Gasification of Coal in Fluidized Form
 Flow of Suspensions of Solids in Gases
 Gasification of Coal in Steam
 Dehydration of Pyridine
 Non-Isothermal Operation of Gas-Absorption Towers
 Flow of Fluidized Solids
 Heat Transfer in Condensation of Vapors on Cooled Tubes
 Hydrogenation and Dehydrogenation
 Sulphonation of Benzene
 Study of Resorcinol Fusion
 Chlorination of Benzene
 Flow of Pseudoplastic Fluids
 Production of Di-Methyl Aniline
 Organic Reagents for Microscopic Identification of Inorganic Cations
 Lags in Instrumentation
 Elevated-Temperature Properties of Steel Molding Sands
 Heat Transfer in Condensation of Vapors on Cooled Tubes
 Extractive Distillation

SCHOOL OF CIVIL ENGINEERING

Buckling of Rigid Joint Frameworks
 Longitudinal Distribution of Tension and Bond Stresses in Reinforced Concrete
 Strength and Performance of Light Gage Steel Structural Members
 Interaction of Local and Column Buckling
 Model Studies of the Development of Beach Forms
 The Economic Effect of Highway Location on Rural Lands
 Extinction Characteristics of Physical Objects Appearing in Aerial Photographs as Influenced by Scale and Light Conditions

Wave Tank Studies of Beach Stability Related to Various Wave Characteristics
 Analytical Studies of County Road Systems as a Basic of Future Planning
 and Construction
 Airphoto Soil Mapping of the Natchez Trace Parkway in Mississippi, Tennessee,
 and Alabama
 The Development of Land Form Identification from Aerial Photographs
 Petrographic Studies of Beach Sands of the World
 The Investigation of the Determination of Soil Moisture Content by Nuclear
 Material
 Beach Accessibility and Trafficability
 Aerial Photographic Approach to the Determination of Soils Patterns
 Soil Solidification Research
 Correlation of Compactive Effort to Moisture-Density Characteristics of
 Typical Soils
 The Application of Aerial Photographs to County Road Planning
 Aerial Mapping Applied to Kentucky highway Problems
 An Investigation of Mineral Aggregate Characteristics Influencing Bituminous
 and Portland Cements
 Biochemical Oxygen Dew and Rate Studies
 Effect of Chlorination on Coagulation of Water
 Movement of Sand Bed-Load
 Development of Revisions in Test Procedures for Atterberg Limit Determina-
 tion and Specific Gravity Determinations
 Development of Devices for Measuring Pore-Water Pressure
 Research in Determination of Shearing Strength of Cohesionless Materials
 nessee, and Alabama
 Research in Permeability of Homoionic Clays
 Effects of Structure on the Compressibility of Kaolinite Clays
 A Study of Changes in Engineering Properties of Bentonite Induced by
 Ionic Substitution and an Investigation of a Theory of Physical Chemical
 Behavior of Colloidal Clay Under High Compressive Load
 Research on the Resistivity Method of Subsurface Investigation
 Seepage Model Studies
 Development of Universal Soil Testing Machine
 Gravity Waves in Shallow Water
 Transitions in Laminar Flow at Entrance to Pipe
 Sanitation and Nutrition Survey of Groton Town and Village
 The Disposal of Digested Sludge by Discharge into the Raw Sewage Flow
 Investigation of Light Gage Steel
 Investigation of Tension and Bond Stresses in Concrete Reinforcement
 The Use of Aerial Photographs for Pre-Determining Ground Conditions in
 the Arctic Regions of North America
 Studies on Inelastic Buckling
 Stresses in Channels and Z-Beams under Transverse Loads
 A Study of Analytical Procedures Involved in the Oxygen Requirements of
 Sewage
 Sedimentation
 Bed-Load Movement

SCHOOL OF ELECTRICAL ENGINEERING

Troposphere Electromagnetic Propagation Studies
 Muscle Tension as an Index of Visual Effort
 Radio Astronomy
 Solar Noise
 Thrombosis
 Ionosphere
 Critical Flicker Frequency as an Index of Effort and Fatigue
 Development of Electronic Instrumentation for Cardiovascular Research
 Investigation of Methods of Measurement Visibility of a Seeing Task
 Oscilloscope
 Pipeline-Network Analyzer

SCHOOL OF MECHANICAL ENGINEERING

A Study of the Stability Limits for Gaseous Fuel Injection in a High-Speed Air Stream
 Methods-Time Measurement Investigatorship
 Effect of Misalignment of Plain Bearings at High Rotating Speeds
 Evaluation of the Load-carrying Abilities of Stainless-clad Steel Bridge Roller-plates as Compared to Carbon-steel Plates
 ASHVE—To Determine the Effect of Size Upon the Readings of a Sol-air Thermometer
 Hydraulic Analogue for Research Study of Heat Transfer Problems
 Residual Stresses in Machined Surfaces
 The Condensing Spherical Shock Wave
 Investigation of the Performance of a Heat Exchanger with Airfoil Tube Sections Arranged as Turbine Blade Impulse Elements
 Performance of Turbine Blade Cascades at Low Reynolds Numbers
 One-Component Lathe Tool Dynamometer
 Force Analysis in Cutting and Stress Analysis in a Chip
 A Photoelastic Investigation of Pressures in a Journal Bearing
 Performance of Plain Bearings under Dynamic Loads
 Statistical Analysis, Reach, Move, and Position Times for Industrial Operations
 The Effect of Weight on Methods-Time Measurement Data
 An Investigation on the Punching of Automotive Chain Links
 Some Aspects of Production Planning and Control
 A Substitute Fuel for Diesel Engines
 Heat Transfer Rates with Baseboard Radiation
 Survey of Subject Matter and Instructional Organization of Descriptive Geometry
 Two-Cycle Topping Engine for Turbojets
 Critical Evaluation of Methods of Testing Turbojets
 Ignition Requirements of a High-Compression Two-Cycle Spark-Ignition Engine
 Panel Heating

DEPARTMENT OF ENGINEERING PHYSICS

Dynamic Elastic and Plastic Properties of Matter
 Study of the Size of Clay Particles
 Electron-microscopical Study of Thin Sections
 Resonance Absorption of F-centers
 Electron-microscopical Study of Plant Virus
 Electron-microscopical Study of Milk Bacteria
 Installation of Electron Microscope Laboratory
 Electron-microscopical Study of Fibrinogen
 Determination of Moisture and Density of Soil
 Change of Dielectric Properties of Semi-conductors under the Influence of Light
 Microwave Emission
 Time Effects in the Order-Disorder Transformation of S-brass
 Anomalous Behavior of Ultrasonic Waves in Certain Acetates
 Expansion Coefficient of S-Brass
 Generation of Power at Millimeter Wavelengths
 Development of a Vibration Apparatus for use at High Temperatures

DEPARTMENT OF ENGINEERING MECHANICS

Axially Symmetrical Plates with Linearly Varying Thickness*
 Cantilever Plate with Concentrated Load*
 Water Hammer Study*
 The Shearing of Rectangular Blocks
 The Bending Stresses in Beams of Triangular Section

Heat Transfer Through a Laminar Boundary Layer
 Dynamics of Flexible Chains
 The Effect of Induced Radial Forces on the Bending of Uniformly Loaded Circular Plates
 The Effect of Induced Radial Forces on the Bending of Circular Plates with Holes
 The Effect of Induced Forces on the Large Deflections of Rectangular Plates
 Heat Dissipation from Cooling Fins
 Non linearly problems in Engineering
 A Stress Analogy and its use in Solving Vibration Problems by the Matrix Method*
 The Effect of Axial Loads on the Large Deflections of Beams
 Heat Dissipation from an Annular Fin of Variable Thickness
 Stability of Flow in a Rocket Motor
 Fuel Injection
 Investigation of Criteria for the Stability of Control

DEPARTMENT OF ENGINEERING MATERIALS

Bond Between Cement Paste and Aggregate
 Mechanism of Frost Heaving of Highway Subgrade Soils and Resultant Spring Break-up
 Autogenous Healing of Concrete
 An Investigation of the Correlation Between Hardness and the Real Tensile Properties
 The Effect of Strain Rate and Temperature on the Fracture Characteristics of Steels
 Properties and Structures of Sand Casting Aluminum Alloy 40E
 Fingerprint Corrosion Prevention of Steel
 Size Changes of Ketos Steel During Martempering
 The Isothermal Heat Treatment of Alloy Steels
 Relaxation and Recovery in Metallic Materials
 Establishment of Standards for Nodular Cast Irons
 Determination of Hydrogen Content in Metals
 Staged Bearings for High Speed Gas Turbines
 Investigation of the Correlation Between Hardness and Real Properties of Metals
 Elastic Properties of Grey Cast Iron in Relation to Microstructure
 NOTE: See also projects listed under Department of Engineering Mechanics which are marked with an asterisk.

NEEDS

The need for additional buildings has become critical in the College. Plans for the Materials Laboratory and the Materials Processing Laboratory have been practically completed during the past year. It is earnestly hoped that construction will be permitted for these two units. It is also hoped that the High Voltage Laboratory can be replaced since the money is in hand. The College operation is scattered among a number of temporary buildings necessitating high maintenance costs and resulting in a very diffused staff. Simplicity and efficiency of operation would result and would be attended with a reduction in operating costs.

Of equal importance with a need for buildings is the need for additional equipment. Much progress has been made in recent years but the desired level of equipment has not yet been attained. Every effort must be exerted to achieve these necessary requirements.

S. C. HOLLISTER,
 Dean of the College of Engineering.

* Research carried on in cooperation with the Department of Engineering Materials

APPENDIX XI

REPORT OF THE DEAN OF THE LAW SCHOOL

To the President of the University:

SIR: I have the honor to present the report of the Law School for the academic year 1949-50.

To sustain the plea for increased financial support of the Law School, my last annual report expressed the confidence "that a calculation of the per-student cost of instruction in the University will reveal that it is less in the Law School than in any of the other endowed colleges or schools, and that Law School operations draw less than any of the other colleges upon the University's unrestricted endowment."

Figures subsequently prepared in the treasurer's office for the last year, 1948-49, established the accuracy of this prediction. After adding the per-student proportion of overhead charges to the Law School budget, the cost of instruction per student in law was down to \$737. It is true that this figure is \$137 above the \$600 tuition, and it is true, therefore, that there was a total deficit of approximately \$44,000. This was all that had to be charged against unrestricted income for the operation of the Law School for the year 1948-49.

A similar calculation for the year 1949-50 should show an even more favorable condition, for the Law School enrollment jumped from 375 in 1948-49 to 412 in 1949-50, and tuition and fees from \$650 to \$666. This produced an additional income of approximately \$25,000. Assuming that there was some increase in the University's overhead allocable to the Law School, even though there was a slight reduction in the budget of the Law School itself, it is apparent that the Law School was this past year within a few thousand dollars of paying its own way.

The progress that has been made deserves to be reemphasized. Though the Law School budget has risen from \$100,000 in 1937 to \$170,000 in 1949-50, the student body has jumped from 180 in 1937 to 412 in 1949, and the income from tuition and fees from \$77,000 to \$274,000. In 1937, income was \$23,000 short of the budgeted cost, in 1949 it was \$100,000 in excess of the increased budgeted cost.

But the Law School budget has been kept stationary for the past few years. It is not sharing in its production of increased income. This has been due, of course, to the financial condition of the University as a whole which necessitated a \$500,000 saving in the budgets of the endowed departments for the year 1950-51. But if the Law School is even to maintain the progress made and the prestige gained, there must be a program of additional support.

I believe it is not generally appreciated that the salary scale in the Law School has been almost at a stand-still for the past twenty years. In 1930, our highest faculty salaries bore a fair relation to those at other good eastern Law Schools. Then, depression economies necessitated a 10% across-the-board cut in all endowed college salaries. In the intervening years, it has been a struggle to get our salaries back up to the pre-depression level. The \$500 cost-of-living bonus, granted in 1947, raised us only just that much above the 1930 figures. On the other hand, the salaries at other law schools have risen substantially. During the past year, at least two of our faculty had offers from other institutions at salaries 50% and 80% higher than they were receiving at Cornell.

The inadequacy of the expenditures on our law library was stressed in the report for last year. Again, comparisons may be used for further emphasis. Our library budget reached a high of \$12,600 in 1941. We lost ground during the war when this was cut to \$6,000. Restored to \$10,000 in 1946, it was increased to \$14,000 in 1948 by the employment of the profits yielded by the Law School summer session, and maintained at that figure this year by increasing the fees charged law students. Approximately the same amount is being spent on

the library in 1950 as in 1941, notwithstanding the very great increase in the cost of books. In contrast, Columbia, Michigan, and Northwestern are spending about \$35,000 each for the acquisition and repair of books in their law libraries.

In 1933, we made the innovation of adding to the staff a teaching fellow to assist in the conduct of the third year problem courses. Subsequent forced economies compelled our abandonment of that modest experiment. Today, Chicago, Columbia, Harvard, Michigan, Stanford, and Yale are among the law schools that support corps of teaching fellows to personalize the first year instruction and to supervise the required legal writing of the third year. Cornell should return to the practice it originated in 1933.

Cornell's standards are high, its program and methods of instruction are sound and successful, and these have attracted recognition. Law Schools, like all educational institutions, have the competitive as well as the professional motive for excellence, and the University administrations and boards of trustees behind them must share the satisfaction of accomplishment and the desire to see every part of their university at the top. The Law School at Cornell must have further support merely to hold the reputation it has acquired.

The law student population has reached its limit—further income from that source cannot be expected. An enrollment of around 400 is as large as it should be if we are to maintain our teaching policy and our ratio of students to faculty. In fact, within a year or two a drop in enrollment should probably be anticipated, for the financial assistance which was available for a student body of 200 is not adequate for a student body of 400 and is wholly inadequate to take the place of the vanishing G. I. benefits.

An increase in the budget will, therefore have to come from a larger share of the income from unrestricted endowment or from the establishment of new professorships of law. The latter is already in prospect. As recorded in the last annual report, the University received \$250,000 from the trustees under the will of the late William Nelson Cromwell to be devoted to a Law School purpose. By action taken at its meeting in January, 1949, the University Board of Trustees established this fund as the endowment of the Cromwell Professorship of International Law. Two other professorships of law have been in gestation for several years—the J. DuPratt White and the Edwin H. Woodruff. Though, during the Greater Cornell campaign of 1949, emphasis was put upon unrestricted gifts and no direct solicitation was made for contributions to either of these funds, \$35,000 has been added to the former and \$50,000 to the latter since July of last year. The White Professorship now stands at \$140,000 and the Woodruff at \$122,000. The University administration has recently sanctioned a special appeal to law school alumni for further contributions to these two funds. In the meantime, income derived from the gifts received is being added to principal. From these three professorships, there is at the moment \$20,000 of income allocable exclusively to a law school purpose, and if the goals sought for the White and Woodruff Professorships can be reached, there will be at least \$30,000.

THE FACULTY

A most serious loss has been sustained through the resignation of Professor Arthur E. Sutherland, Jr. to accept a position on the Harvard Law School faculty. He had been appointed to the newly created Cromwell Professorship of International Law. I greatly deplore the loss of his brilliance as a legal scholar and the enthusiasm of his able cooperation as a colleague and as a member of the university community.

The vacancy thus caused has been filled for the coming year by recalling from retirement Professor Gustavus H. Robinson, whose courses in Conflict of Laws and International Law had just been taken over by Professor Sutherland and who will hold the Cromwell chair in the year 1950-51.

Assistant Professor Ernest N. Warren, whose appointment to the faculty was recorded in the last annual report, assumed his duties in September, 1949. In addition to his teaching of Personal Property, Procedure II, and Evidence, he has directed the School's placement service for graduating students.

CURRICULUM

There were no marked changes in the curriculum during the past year. The experiment with the Introductory Course was continued. The limited edition of the materials for use in that course was exhausted and, they will be revised and reprinted during the summer.

Among the students graduated this past June were the first to qualify for the degree of LL.B. with specialization in International Affairs. As a result of two years of experience with that program, there has been a further adjustment of the proportions of law and international affairs and of courses given inside and outside the Law School. I wish to make known to the President and the Board of Trustees the Law School's indebtedness to Professors Briggs, Einaudi, Fox, and Kahn, all of whom are members of the faculty of the College of Arts and Sciences, for their generous and invaluable contributions to this program. They have given to it with personal sacrifice of time and labor and without additional compensation.

The conception of a new course in Commercial Transactions was carried through its second year, but this time conducted throughout the year by Professor Willcox alone. The mimeographed materials for this course were revised by the compilers, Professors Willcox and Sutherland last summer, and, after further revision this summer, will be published by the Foundation Press and used next year in Professor Willcox's course at Cornell and Professor Sutherland's course at Harvard.

The Myron Taylor Lectureship on International Affairs brought to the School Honorable Ralph J. Bunche, Director of the United Nations Trusteeship Division, and Honorable Dean Rusk, Assistant Secretary of State in charge of Far Eastern Affairs. General William Bedell Smith was forced to cancel his engagement in February, and Honorable John Foster Dulles, after long deliberation, found himself unable to accept the invitation extended to him.

Honorable Leverett Saltonstall, United States Senator from Massachusetts, was the Phi Delta Phi lecturer on the Frank Irvine Foundation. Honorable Samuel Leibowitz addressed the School under the auspices of the Rota Society, and Honorable Charles S. Desmond, judge of the New York Court of Appeals, and Honorable J. F. Savarese, County Judge of Kings County, New York, were, respectively, the guests of the Phi Delta Phi and Phi Alpha Delta legal fraternities.

THE STUDENT BODY

As already indicated, the enrollment reached a new high of 412. There were 112 students from Cornell and 300 from 105 other institutions. The distribution according to classes was, first year 170, second year 138, and third year 104.

The Student Law Association continued active and effective. It organized, upon a permanent basis, the Moot Court Board which assumed complete responsibility for the administration of the first year moot court work and co-operated with the faculty in the conduct of the upper-class moot court. The Association continued the bi-monthly publication of the Law School Forum, which is mailed to all alumni, and for the first time published a pictorial annual, the Barrister. It participated with representations from a few other schools in organizing an inter-law school association under the auspices of the American Bar Association.

Again this year, students in the Law School won three of the seven prizes awarded by the New York State Bar Association for essays on the influence of the Constitution upon the development of American institutions.

The Boardman Scholarship, awarded to the third year student who stands highest in his class at the end of the second year, was won by Robert B. Shaad. Israel Margolis and Martin Schnorr were elected to the first and second Fraser Scholarships from a list of the ten ranking students of the third year class. The first and second W. D. P. Carey prizes for excellence in the comprehensive written and problem examinations were won by Stephen Bermas and Stewart F. Hancock, Jr.

ACTIVITIES OF THE FACULTY

Professor Schlesinger was appointed a member of the consultative commission of the new International Comparative Law Association organized under the auspices of UNESCO. He also served on the American Bar Association's Committee on Comparative Civil Procedure and Practice and Committee on European Law, and was a member of the American Law School Associations Committee on the Membership of Canadian and Latin-American Law Schools. He represented Cornell at a meeting of several leading law schools called for the purpose of considering the formation of an American Academy of Comparative Law and the publication of an American Journal of Comparative Law.

Professor Willcox's activities were chiefly in the field of labor law and relations. He was chairman of the American Law School Association's Round Table on Labor Law, and a cooperative editor of Cases and Materials on Labor Law which is being sponsored by the Association and will be published this fall. He is a member of the editorial board of the Industrial and Labor Relations Review. As appointee of the Federal Mediation and Conciliation Service, he arbitrated four labor disputes, two in Rochester, one in Buffalo, and one in Lock Haven, Pennsylvania.

Dean Stevens served as company representative on a three-man panel to arbitrate a labor dispute in the Stamford, Connecticut industry.

Professor Sutherland, as a New York Commissioner on Uniform State Laws, attended the annual meeting of the National Conference of Commissioners at St. Louis in September and the joint meeting with the American Law Institute in Washington in May. He also attended two conferences held under the auspices of the Institute for Advanced Studies at Princeton—one on Law and Atomic Energy, and the other on the Administration of Justice as a Social Institution. For a year, he served as secretary of the Trustee Faculty Committee to consider the selection of a President of the University.

Professor Larson delivered at Cornell the first lectures under the Gleason Lectureship Foundation, newly established to encourage the teaching, throughout the country of the law of workmen's compensation. He participated in a Conference of Social Security Administrators sponsored by the New York State School of Industrial and Labor Relations. He was elected to membership in the American Law Institute and appointed to its Committee on Continuing Legal Education, which administers a national program of education for lawyers after admission to practice.

Professor MacDonald continued as Executive Secretary and Director of Research of the New York State Law Revision Commission and addressed a meeting of the State's joint Legislative Committee on Interstate Cooperation. He was elected a director of the New York Legislative Service, Inc. During the year, he made two arguments before the New York Court of Appeals. In the spring he spoke at the annual meeting of the Cayuga County Bar Association.

Professor Thompson addressed a joint meeting of the Warren and Washington County Bar Associations on "Legal Education at the Mid-Century."

Several members of the faculty served as research consultants for the Law Revision Commission, as follows: Professor Farnham, Restrictive Covenants; Professor Larson, the Capacity of Unincorporated Associations to Take and Hold Property, and the Effect of the Retirement of Shares Acquired by a Corporation upon its Authorized Capital Stock; Professor Schlesinger, Recovery of Interest in Actions for Tortious Interference with Property Rights, Permissive Recording of Abbreviated Form of Long Term Leases, and Cy Pres Power of Courts to Modify Restrictions on Investment Powers; Professor Sutherland, Draft of an Act Governing Assignment of Wages (became law April, 1950), and recommendation regarding Constitutional Restrictions Affecting a Revision of the Statute of Limitations Applicable to Public and Private Bonds (became law April, 1950).

Professor Curtiss was appointed visiting Professor of Criminal Law at the University of Michigan Law School's 1950 Summer Session:

Faculty writings:

- a. Published: Stevens on Corporations, 2d. ed.
- b. To be published this summer: Schlesinger, Cases and Materials on Comparative Law; Sutherland and Willcox, Cases and Materials on Commercial Transactions.
- c. In preparation: Farnham, Cases and Notes on American Land Law; Larson, The Law of Workmen's Compensation and Social Security; Larson, Problems and Materials on Agency and Employment (3rd. ed. mimeographed); Larson, in collaboration, Readings in Business Associations, non-legal materials for students of corporation law, sponsored by Association of American Law Schools; Keffe on Evidence; Thompson, Cases and Materials on Contracts; Wilson, Cases on Torts, 3d ed.
- d. Law review articles: Keffe, "Sense and Nonsense about Judicial Notice," Stanford Law Review; Keffe, with Morton Moskin, "Codified Military Injustice," Cornell Law Quarterly; Larson, "The Welfare State and Workmen's Compensation" and "The Future of Workmen's Compensation," NACCA Law Journal; MacDonald, "New York State Law Revision Commission: A Legislative Aid," A.B.A. Journal, "The Position of Statutory Construction in Present Day Law Practice," Vanderbilt Law Review, and "1949 Amendments of Stock and General Corporation Laws," N.Y.S. Bar Bulletin; Wilson, "More About Realism in the Practice Court," Journal of Legal Education, and "Some Thoughts about Negligence," Oklahoma Law Review.
- e. Book Reviews: Farnham, Powell, Law of Real Property (Vol. I), Cornell Law Quarterly; MacDonald, Howe, Readings in American Legal History, A.B.A. Journal; Schwartz, Law and the Executive in Great Britain, Columbia Law Review, and Dillon, The New York Triumvirate, U. Pittsburgh Law Review; Sutherland, Morgenthau, Policies Among Nations: The Struggle for Power and Peace, and Hudson and Sohn, International Legislation, both in Cornell Law Quarterly; Thompson, Ferson, the Rational Basis of Contracts, Cornell Law Quarterly.

ALUMNI

Membership in the Law Alumni Association, which had more than doubled since 1947, continued to grow. For the modest dues of \$5, each member receives a subscription to the Cornell Law Quarterly, copies of the student newspaper, The Forum, which records the events of the School, and a copy of the Cornell Law List, which was published last summer under the supervision of Professor MacDonald as secretary of the Association and for the first time supplies the need of a directory of Cornell lawyers.

The annual meeting of the Association was held at the usual luncheon scheduled in conjunction with the meeting of the State Bar Association in New York City in January. After the election of officers, the Dean spoke on the progress and needs of the Law School.

During the year, the University received notice of a gift of \$1,000 under the will of Honorable George R. VanNamee, LL.B., 1902, the income to be used for the purchase of law books.

Appreciation is due to that group of alumni who continue to add to the Charles K. Burdick Scholarship and to that other group which has continued to supply the Alumni Cooperative Fund, the use of which being in the discretion of the Dean, has helped defray the cost of the preparation of new teaching materials.

At the conclusion of the Greater Cornell campaign, alumni committees were formed in Buffalo, Rochester, New York and Brooklyn to solicit further contributions to the Woodruff and White Professorships.

ROBERT S. STEVENS,
Dean of the Law School.

APPENDIX XII

REPORT OF THE DEAN OF THE MEDICAL COLLEGE

To the President of the University:

SIR: I have the honor of presenting the following report of the Medical College for the academic year ended June 30, 1950.

On September 14, 1949, the opening exercises were held for a student body of 84 first year (78 men; 6 women), 80 second year (77 men; 3 women), 84 third year (76 men; 8 women), and 78 fourth year (67 men; 11 women) students. Dr. John G. Kidd, Professor of Pathology, gave the address of welcome and the Dean awarded scholarships to a number of students.

On June 14, 1950, Commencement was held for 78 fourth year (67 men; 11 women) students who were awarded the Doctor of Medicine degree by Acting President de Kiewiet. This graduating class included members from 18 states, Puerto Rico, and the Philippines. Fifty-one graduates were veterans. Dr. Alvin C. Eurich, President of the State University of New York, addressed the class. The Hippocratic Oath was administered by Dr. Eugene F. DuBois, Professor of Physiology at the Medical College.

CHANGES IN STAFF

It is with profound sorrow that I report the deaths of four of the members of our staff during this academic year.

On September 17, 1949, William Sargent Ladd, Professor of Clinical Medicine, on our staff since 1931 and our Dean from 1935 to the time of his resignation in 1942; On October 15, 1949, John F. McGrath, Assistant Professor of Clinical Obstetrics and Gynecology, a graduate of our Medical College in 1908 and on our faculty since 1919; on December 29, 1950, Howard S. Jeck, Associate Professor of Clinical Surgery (Urology), former Director of the Cornell Urological Service at Bellevue, and on our staff since 1917; and on January 6, 1950, Jacob T. Sherman, Assistant Professor of Clinical Obstetrics and Gynecology, and on our staff since 1932.

Dr. Robert F. Furchgott, Assistant Professor of Biochemistry in Medicine, resigned as of August 31, 1949, in order to accept a position as Assistant Professor of Pharmacology in the Washington University Medical College.

Dr. John H. Dale, Jr., Assistant Professor of Pediatrics in Radiology, resigned as of September 1, 1949, in order to enter private practice outside of New York City.

Dr. Samuel W. Dooley, Assistant Professor of Pediatrics in Pathology, resigned as of June 30, 1950, in order to accept an appointment as Assistant Professor of Pediatrics at the Harvard Medical School.

Dr. Cosmo G. Mackenzie, Associate Professor of Biochemistry resigned as of June 30, 1950, in order to become Professor and Head of Biochemistry in the School of Medicine of the University of Colorado, Denver.

Dr. Gustave J. Noback, Associate Professor of Anatomy, resigned as of June 30, 1950, in order to become Professor and Head of the Department of Anatomy at the new medical school of the University of Puerto Rico.

Dr. Alfred Yankauer, Jr., Assistant Professor of Public Health and Preventive Medicine, resigned as of June 30, 1950, in order to accept a position on the staff of the University of Rochester School of Medicine and Dentistry at Rochester, New York.

Dr. George A. Schumacher, Associate Professor of Clinical Medicine (Neurology) and Director of our Neurological Service at Bellevue Hospital, has resigned to take effect July 31, 1950, in order to accept the position of Professor of Neurology at the School of Medicine of the University of Vermont in Burlington, Vermont.

Although not a member of our staff, the resignation of Dr. Roger B. Nelson,

as Assistant Director for Professional Services and Director of the Out-Patient Department is of interest to the Medical College. Dr. Nelson, who is one of our graduates in the class of 1934, will become Associate Director of the University of Michigan Hospital in Ann Arbor, Michigan, on August 1, 1950. Dr. George A. Wolf, Jr., Assistant Professor of Clinical Medicine, who received his M. D. here in 1941, has been appointed to succeed Dr. Nelson.

Dr. John W. Draper, Jr., Associate Professor of Clinical Surgery (Urology) was made Director of our Bellevue Urological Service at the beginning of the academic year to succeed Dr. Robert Hotchkiss who resigned to become Professor of Urology in the Postgraduate Division of New York University. Dr. E. Hugh Luckey, Assistant Professor of Medicine, was made Director of our Medical Service at Bellevue Hospital at the end of this present academic year. He will succeed Dr. J. J. Smith, who resigned his directorship because of the pressure of private practice. Dr. Louis Hausman, Professor of Clinical Medicine (Neurology), will become Director of our Neurological Service at Bellevue on August 1, 1950.

On July 1, 1950, the following will enter the ranks of our Emeritus Professors: Dr. Oscar M. Schloss, Emeritus Professor of Clinical Pediatrics; Dr. Elise L'Esperance, Emeritus Professor of Clinical Public Health and Preventive Medicine; Dr. Russell L. Cecil, Emeritus Professor of Clinical Medicine; Dr. Eugene F. DuBois, Emeritus Professor of Physiology; Dr. Dayton J. Edwards, Emeritus Professor of Physiology. Dr. Edwards will continue as Secretary of the Faculty.

On July 1, 1950, Dr. David P. Barr, Professor of Medicine, assumed the added responsibility of serving as Medical Director of the Russell Sage Institute of Pathology in our Medical College, a position held since 1932 by Dr. Eugene F. DuBois.

On July 1, 1950, Dr. Robert F. Pitts, who has been Professor of Physiology and head of that department at Syracuse University Medical College, became Professor of Physiology and head of the Department of Physiology and Biophysics to succeed Dr. DuBois. Dr. Pitts served as Associate Professor of Physiology with us from 1942 to 1946.

As announced in my report of last year, Dr. Robert P. Ball became Professor of Radiology in the Medical College and Radiologist-in-Chief of the New York Hospital on September 1, 1949.

On February 1, 1950, Dr. Leo W. Simmons, Associate Professor of Sociology at Yale University began his work as Visiting Professor of Anthropology in Medicine. This program for the study of medicine and nursing in relation to social sciences, especially cultural anthropology, has been satisfactorily developed through arrangements with the Russell Sage Foundation which will support this work in our Center over a two-year period.

On July 1, 1950, Dr. Thomas A. C. Rennie, who has been on our staff since 1941, was promoted to the rank of Professor of Psychiatry (Social Psychiatry). Among the promotions made to members of our staff, mention should be made of: Dr. Hervey C. Williamson, Professor of Clinical Obstetrics and Gynecology; Dr. Sydney Weintraub, Professor of Clinical Radiology; Dr. Roy W. Bonsnes, Associate Professor of Biochemistry in Obstetrics and Gynecology; Dr. George B. Brown, Associate Professor of Biochemistry; Dr. Frank R. Smith, Associate Professor of Clinical Obstetrics and Gynecology; Dr. Walter F. Riker, Jr., Associate Professor of Pharmacology; Dr. Henry L. Barnett, Associate Professor of Pediatrics; Dr. Emerson Day, Associate Professor of Clinical Public Health and Preventive Medicine; Dr. Bradley L. Coley, Associate Professor of Clinical Surgery; Dr. Hayes E. Martin, Associate Professor of Clinical Surgery; Dr. William F. Nickel, Jr., Associate Professor of Clinical Surgery; and Dr. George T. Pack, Associate Professor of Clinical Surgery. Dr. Henry D. Lauson comes to us from the Rockefeller Institute for Medical Research as Associate Professor of Physiology in Pediatrics.

We sincerely regret to report the death of John S. Lockwood late in June of 1950. Dr. Lockwood was appointed Professor of Surgery beginning July 1, 1950, and would have been the Clinical Director of the Memorial Hospital.

For a number of years he had served as Professor of Experimental Surgery at the College of Physicians and Surgeons of Columbia University.

STUDENT BODY

The final count of applications received this year shows 2,986, a slight drop over the total for the previous year of 3,222. From this group the new class has been selected, with 81 members consisting of 77 men and 4 women students. The aim this year has been to limit the entering class to 80 students. Although the list shows one above this number at present, previous experience leads us to expect that not more than 80 will matriculate in September. The members of the new class received their pre-professional training in 43 different colleges and universities, with 21 coming from Cornell. They will come from 21 states with 53% from New York, New Jersey, and Pennsylvania. The majority of the students in the entering class will be between 21 and 24 years of age with the average just over 22. Three members of the class will be 25 at the time of matriculation, one will be 26, one will be 28 and no student under 21.

Interest in the study of medicine may arise in young people who come from diverse backgrounds, but the influence is undoubtedly strong for children of physicians to make medicine their field of choice. This trend is clearly shown in the new class as twenty of the members come from homes in which one or both parents are physicians. Of other educational and professional fields represented by the parents of students in the incoming class, there are fourteen who have one or both parents who are holders of a college degree. The profession of law claims four, engineering three, college professors two, and two in secondary education. Three members of the class are sons of alumni of the medical college.

Statistical data obtained from the entire group of applicants for 1949-50 show that 82.4% represents students seeking admission for the first time this year. Of the remainder, 14% are re-activated applications from the previous year, 2.5% from students who applied for the first time two years ago and 0.2% applicants of three or more years ago. The complete group of applicants (2,986) has also been examined with the respect to the educational background, age, and sex of the individual members with the following results:

Holders of a college degree prior to 1950	21.9%
Pursuing work for an advanced degree	7.1%
Applied on the basis of three years of college	3.0%
Women applicants	4.8%

While six women were accepted, only four completed enrollment which gives 5% of the places in the class to women students—a figure remarkably close to the overall ratio of women to men applicants in the entire group.

In the years immediately following the War, applicants with service records were accorded special consideration. With successive incoming classes, however, less attention has been given to the matter of veteran status. In the class entering in next September, twenty-eight of the male students put in varying lengths of time in a branch of the service. Entitlement to benefits for these students will not be great as the majority have used up their time in completing undergraduate training. In fact, the indications of financial stress have been the most evident among those accepted for the next class of any group in recent years.

The New York State Scholarships paying \$750 a year for four years, of which 72 in medicine are available annually, were won last year by 10 of our entering class. For the class entering next fall, three are recipients of these awards.

Twenty students submitted application to transfer to advanced standing, eighteen of whom were from medical schools in this country and two from foreign institutions. In as much as the present second year class has carried 79 members during this year, only five candidates were admitted to the third year, one from the University of South Dakota; one from the University of North Carolina; and three from Dartmouth.

At the opening of school last fall, thirty-six students were awarded scholarships which totalled \$15,425.

STUDENT HEALTH

Dr. John McClement resigned on June 30, 1949, as Director of the Personnel Health Services to accept a research position at New York University. He was succeeded as Director by Dr. George A. Wolf, Jr., who resigned on June 30, 1950, to become Assistant Director for Professional Services in the New York Hospital. He will be replaced by Dr. Fred Kern, Jr.

The medical students have available the facilities of the Personnel Health Clinic. Entering medical students are examined and an extensive immunization program is carried out. During the year, one proven case of tuberculosis occurred in a fourth year student. Extended sanatorium care has been arranged. The student graduated and her internship has been postponed for a year.

Health visits of medical students:

Routine Physical Examinations.....	161
Referrals to Out-Patient Clinics.....	97
Referrals to Other Consultants.....	69
Hospitalizations.....	29
Days of Hospitalizations.....	216
Routine Chest X-Rays.....	730
Illness Visits (out of hours).....	55
Immunization visits.....	1481
Tuberculin Tests.....	308
B.C.G.....	35
Tetanus Toxoid.....	214
Typhoid Vaccine.....	261
Schick Test.....	88
Diphtheria.....	84
Vaccinations.....	89
Influenza Vaccine.....	2
Readings.....	400

Dr. Wolf prepared a very useful summary of information concerning the medical student health service which was made available to each student in printed form. It has been suggested that a general health orientation and hygiene lecture be given to the entering students each year by the Student Health Physician.

ANATOMY

The teaching in the Department of Anatomy was carried out from September 15, 1949 until March 6, 1950. We were pleased to have a visiting fellow in the Department, Dr. Orlando Aidar of the Department of Anatomy at Sao Paulo, Brazil. He had been with us in 1941-42. Dr. E. W. Lampe has held weekly sessions in Surgical Anatomy for members of the house staff and has given the course in Surgical Anatomy to third year students. During June, he gave a course for surgeons preparing for their boards.

There have been no physical changes in the Department, but we have added space in the basement floor which has been equipped for the teaching of special courses which Dr. Lampe and Dr. Liebolt offer. The work of the department was supported by grants from the Commonwealth Fund, the United States Public Health Service, Mr. C. V. Whitney, Mr. H. B. Close and members of his family, and funds from the estate of the late Otto Sussman. Mr. David Anderson, Mr. W. Gregory Cooper, and Mr. Joseph Wagner completed work for the Master of Science degree.

Dr. Berry has been using electrical techniques to trace the olfactory and optic pathways in the brain. Dr. Geohegan and Dr. Aidar used similar procedures to trace central nervous system pathways activated by impulses reaching the spinal cord over the splanchnic nerves. Dr. Geohegan has continued his work in elec-

tronic instrumentation in nucleonics and medicine. Drs. Papanicolaou, Hanlon, Seybolt, Koprowska, and Panico have continued their investigations in exfoliative cytology and early diagnosis in cancer. The program of instruction in this field has continued and there have been in attendance doctors from different parts of our own country as well as from England, France, Germany, Norway, Switzerland, Belgium, Yugoslavia, South Africa, and China. This year an experiment has been made in training disabled war veterans for screening of smears as possible future profession for them. Three men have been trained and appear to be qualified to do preliminary screening work under the supervision of a pathologist. The amount of material coming to this laboratory from the New York Hospital and the Memorial Hospital has increased greatly.

Dr. John MacLeod has analyzed the data on the characteristics of semen obtained from a large series of fertile and infertile men and three papers have been accepted for publication. Dr. Noback studied the changes in tissues and organs of the vascular and respiratory systems in neonatal life and infancy and has reported his investigations of the relations of appearance of mineral material in the aorta as correlated with the stage of ossification of the laryngeal cartilages.

Dr. Gustave Noback resigned as of June 30, 1950, in order to assume his new duties as Professor of Anatomy and Head of the Department of the new medical college in Puerto Rico. Mr. W. Gregory Cooper will be a member of his department there.

BACTERIOLOGY AND IMMUNOLOGY

The teaching of the Department included the course given to the medical students, one given to student nurses, and the special instruction to graduate students of which there were three this past year. For the present second year class, the teaching schedule was changed from that used the past few years, and the entire course was given in the fall trimester. However, the previous schedule was resumed for the first year class and a course of 55 hours was given to them in the spring term and the remaining part of 88 hours will be given next fall. It is believed that this arrangement is better from an educational standpoint as related to bacteriology and immunology itself and, at the same time, it permits the presentation of Parasitology in the second rather than in the first year.

The research activities were directed toward the following subjects: 1) Influenza Viruses by Dr. John Sugg with support of a grant from the U. S. Public Health Service; 2) Bacterial and Enzymatic Synthesis of Polysaccharides by Dr. Hehre, Miss Hamilton, Mr. Carlson and Mr. Sery which will be supported by a grant from the Corn Industries Research Foundation; 3) Streptococci from Human Cases of Endocarditis by Dr. Hehre and Miss Brewer supported by a grant from the New York Heart Association; 4) Dextran Plasma Substitutes by Drs. Sugg and Hehre; and 5) Immunological Aspects of Fungi by Drs. Neill and Hehre and Mr. Kapros and Mr. Abrahams with support of a grant from the Louis Livingston Seaman Fund of the New York Academy of Medicine and from the estate of Marguerite S. Davis.

BIOCHEMISTRY

Changes in curriculum initiated two years ago have continued satisfactorily in this department. With a whole day's laboratory period available, it has been possible to carry on types of experiments that were not possible in the old schedule. Four new graduate students have undertaken work in the department. Foreign fellows have included Dr. Walter Verly from Belgium, Dr. Johannes Mueller from Basle, Switzerland, and Mrs. Helen Davoll from the University of Cambridge, England. Two fellows from the Atomic Energy Commission, Drs. John M. Kinney and Lawrence Goodwin, spent some time in the laboratory later in the year. Dr. Cosmo Mackenzie leaves to become head of the Biochemistry Department of the Medical School of the University of Colorado and Dr. John Wilson leaves to accept a position as Assistant Professor of Biochemistry at the Medical School of the University of North Carolina.

The research work in the Department has continued along several lines. Dr. Mackenzie has carried on a program on the oxidation of the labile methyl group, Dr. Rachele has turned his attention to the mechanism of the conversion of methionine to cystine and Dr. Melville has worked on the significance of thiolimidazoles. Dr. du Vigneaud has worked mainly on the problem of the biological synthesis of labile methyl groups and on the elucidation of the chemical nature of the oxytocic and pressor hormones of the posterior lobes of the pituitary glands. Collaborative work with Professor Reyniers at Notre Dame University on germ-free animals has indicated that, biologically, labile methyl groups can be synthesized by the tissues of the rat. Twenty papers have appeared from the Department during the year.

In October of last year, Dr. du Vigneaud was invited to England where he gave a series of three lectures at the University of London, the Liversidge Lecture at the University of Cambridge, two lectures at Oxford University, and one at the University of Leeds. This spring, he gave a series of six lectures, the Messenger Lectures, at Cornell University in Ithaca under the title: "A Trail of Research." Generous support from the American Cyanamide Company has greatly aided the research in this Department.

LIBRARY

The Library Committee has forcefully presented the need for greater financial support of our library. A survey of ten similar libraries has shown that our library gives more hours of service with less help than any of the others studied. Only necessary routine work has been accomplished by the staff. Our student body has been regularly instructed in the use of the library and our librarian reports that she regrets that similar instruction cannot be made available to interns, research workers, and hospital personnel from other places who have not had such training. Memorial Hospital leans heavily upon our library so that our list of inter-library loans has grown tremendously. Costs of books and periodicals have been rising, thus making our budget inadequate. Eighty-two libraries have requested material from our list of duplicates. Of these, seven were Canadian, four English, and one each in the Canal Zone, Hawaii, and Beirut. Some were taken to Japan and more will go later.

Approximately 29,000 readers used the library; 7,923 individuals borrowed 20,262 items; there were 169 inter-library loans, and we borrowed twenty-two items from other libraries. Our accessions included 105 purchased monographs and texts, 129 gifts of monographs and texts, and 424 newly bound journals for a total of 658 new volumes.

MEDICINE

Instruction in the undergraduate curriculum has undergone few changes during the year. Dr. George Reader has been placed in charge of the Clinical Clerkships in the Out-Patient Department, and Dr. William Grace has taken over Dr. Robert Watson's position as chief tutor of the junior students on the wards. Dr. Watson is continuing to teach, but has as his principal assignment the supervision of the Vincent Astor Diagnostic Service. A course in applied bacteriology and chemotherapy has been organized for seniors by Drs. McDermott and Tompsett.

The care of ambulant patients constitutes a most important segment in the education of medical students. During this year, through the efforts of Drs. Guion and Reader, many improvements in organization were consummated. The importance of parent clinics was re-emphasized and mechanisms were perfected to place responsibility for the care of each patient upon one physician in a single clinic. Greater stress was placed on bringing the consultant to the patient, thereby improving care by permitting him to discuss problems with his physician in the parent clinic and obviating the necessity for revisits. To centralize responsibility and to aid organization, a physician-in-charge was appointed for each session of each separate clinic. As a result of a detailed study of the admitting procedures of the main Out-Patient Department on Pavilion KB, cer-

tain activities were transferred to other locations and the reception of patients was greatly improved. The use of the Cornell Medical Index, a method of obtaining a patient's history with little expenditure of the physician's time, was instituted and has been helpful in rapid evaluation of medical conditions and in accurate allocation of patients to appropriate clinics.

On November 1, 1949, a Consultation Clinic was opened for the care of patients referred for diagnosis by their physicians. Analogous to the Vincent Astor Diagnostic Service which will render diagnostic services to those who can pay full charges, the Consultation Clinic serves the same purpose for those with lower incomes. In both instances, consultants and all the facilities of the Hospital are available. Detailed reports of findings are sent to the referring physician, and every effort is made to make the service helpful to the doctors as well as to the patients of the community. Students assist in this work which has been under the direct supervision of Dr. Claude Forkner.

The Graduate Course in Internal Medicine at Bellevue Hospital has been continued during the past year. Enrollment was low during the summer months, with a minimum of 11 students. In September, Dr. A. E. Timpanelli was placed in charge of this course. Under his direction, the course was reorganized with retention, however, of emphasis on the broader aspects of internal medicine with tutorial sessions and bedside teaching. The usual series of weekly formal lectures has been continued. With the loss of both Dr. John E. Deitrick and Dr. J. J. Smith as full-time participants in instruction, it was necessary to increase the teaching load of individual instructors. Dr. J. J. Smith has continued on a half-time basis and Dr. E. Hugh Luckey has joined the staff on a full-time basis. The number of students presently enrolled is eighteen. Of these, four are fellows of the W. J. Kellogg Foundation. These men represent outstanding young internists from foreign countries who are brought to this country for a two or three year period of study. Through an arrangement with the Kellogg Foundation, it is planned that many of their foreign fellows will be initially enrolled in the course for indoctrination.

In addition to regular participation in teaching physical diagnosis to second year medical students, the staff at Bellevue offers an elective in medicine available to three fourth year medical students for one month each. These students are integrated into the House Staff and are given opportunity for careful study of clinical problems under close supervision.

The investigations in this department have a scope which includes studies of both acute and chronic diseases, of emotional as well as physical aspects of illness, and of problems of fundamental nature as well as those of practical management. Many of them are continued from year to year because they represent approaches to basic problems which can not be quickly solved. Forty-six papers have appeared from the Department during the year. Some of the important general problems under attack are various chemotherapeutic agents and their use in infectious diseases, cortisone and adrenocorticotrophic hormones in a variety of diseases with very interesting results in treatment of myosthenia gravis, effects of pituitary growth hormones, the storage of lime salts and strontium in bones, problems of the peripheral circulation, psychosomatic studies, variations in blood proteins in a number of conditions. This work is possible only because support has come from many sources; i.e., Altman Foundation; Ayerst, McKenna and Harrison, Ltd.; Wm. McCamerson, Commonwealth Foundation; Margaret Lee Crofts; Harry S. Goodman; Eaton Laboratories; Edith J. Haas; Hoffman-LaRoche, Inc.; Eastman Kodak Company; Victor Emanuel; Alice Laughlin; Lederle Laboratories; Eli Lilly & Company; Josiah Macy, Jr. Foundation; Masonic Foundation; Ruth McCabe; Memorial Hospital; Mrs. John M. Morehead; National Research Council; National Academy of Science; New York City Cancer Committee; New York Heart Association; New York Telephone Company; Nutrition Foundation; Charles Pfizer & Company; Marcus A. Rifkinson; Russell Sage Foundation; Schering Corporation; G. P. Searle & Company; Mrs. Kyle B. Steele; Helen Hay Whitney Foundation; Wyeth, Inc.; U. S. Public Health Service; Veterans Administration; and Miss Marie Zimmerman.

MILITARY MEDICINE

Under authority of General Orders Number 185, Headquarters, First Army, Governors Island, New York, the designation of this unit was changed from 1256th ASU directly under the control of the New York, New Jersey Military District to Det No. 9, 1242d ASU under Headquarters, New York Military District effective January 1, 1950.

Major Urban L. Throm, M.C., assumed the position of Professor of Military Science and Tactics on July 1, 1949, succeeding Lt. Colonel Richard S. Fraser, M.C.

The curriculum consisted of a one hour period of instruction for each of the four classes each week over the course of thirty-two weeks, and the subject matter followed with minor exceptions the subject schedule and time allocations as prescribed in current Army directives.

The mechanisms of instruction included lecture and conference usually illustrated by charts, film strips, and motion pictures. In addition, the coach and pupil method was employed for first aid, bandaging, and map reading. Four guest lecturers took over topics in which their backgrounds made them unusually well prepared.

Enrollment by class at the completion of the scholastic year is as follows:

First Year Basic Course.....	12
Second Year Basic Course.....	9
First Year Advanced Course.....	15
Second Year Advanced Course.....	11

This total of 47 students represents an increase from thirty-two enrolled during the previous school year. Two freshmen students had to be dropped because of physical disqualification and one sophomore at his own request.

During the summer of 1949, twenty-one students attended the clinical clerkship type of camp at the Army Medical Center, Washington, D.C., and reported very favorably upon this experience. One non-veteran attended the Medical Field Service School at Fort Sam Houston, Texas, and likewise was very pleased with his experience. During the summer of 1950, four veteran students will attend the clinical clerkship at the Army Medical Center, and two non-veterans will go to the Medical Field Service School.

Of the graduating class this year, eleven members received commissions as 1st Lieutenants, eight in the U. S. Army Reserve, and three in the U. S. Air Force Reserve. This is in accord with a recent pronouncement of the Department of Defense announcing co-sponsorship of the Medical R.O.T.C. program by the Department of the Army and the Department of the Air Force.

OBSTETRICS AND GYNECOLOGY

The amount of clinical teaching material has not differed greatly from the previous year. Early ambulation of both obstetrical and gynecological patients has continued with gratifying results. Early ambulation and the selective employment of sulfonamides, antibiotics, anti-coagulants, blood transfusions, and other newer therapeutic measures have made the management of the pregnant and gynecological patient safer and have decreased the necessary period of hospitalization. Arrangements have been completed to have competent nurse instructors give classes to interested expectant mothers, on both the pavilion and private services, in "preparation for delivery," sometimes inappropriately called "natural childbirth." A modified "rooming-in" plan was developed and extended during the past year. No physical changes with respect to structure or equipment have been made as yet. This plan makes it possible for patients to have their babies at their bedside except during visiting and the night hours. Most of the patients who avail themselves of these opportunities are those having their first baby. Conclusions drawn from interviews with these patients and from their letters indicate the valuable nature of the service and clearly justify the continuation and extension of present plans in these directions.

Each member of the Resident Staff has been encouraged to undertake some problem for investigation. Studies on the biochemistry of pregnancy have continued with particular concern with kidney, liver, and adrenal cortical function in normal and complicated pregnancy. An investigation of aureomycin and chloromycetin in the management of urinary tract infections has shown that, in general, they are superior to sulfonamides but are not ideal in every type of infection. At the present time, various combinations of sulfonamides and these antibiotics are being studied. Studies on the anatomy and histology of the urethra have continued and the role of the anatomical position of the urethra in incontinence further clarified. A study is now in progress on the chemistry and metabolism of the endometrium. The investigation of the various retinal changes that occur in kidney disease, hypertension, and in the toxemias of pregnancy is nearing completion. This has been done in conjunction with the Division of Ophthalmology in the Department of Surgery. Extensive experience with the use of intravenous pitocin for the induction of labor and the stimulation of desultory and prolonged labor has been gained and the evidence indicates that the method constitutes an improvement over those previously employed. In cooperation with the Department of Anatomy, an investigation of the physiology of fertility in the male has been undertaken. Experiments in the measurements of pain intensity during labor have reached the stage where the effect of various analgesic drugs can be appraised. A number of studies on various diagnostic aspects of different neoplastic diseases in the genital tract are being pursued, some of them with Dr. Papanicolaou's laboratory in the Department of Anatomy. The investigation of various measures that may be employed in the curative and palliative treatment of patients with recurrent or advanced radiation-resistant tumors of the cervix has been continued with encouraging results. The intramuscular injection of penicillin in the mother during labor or to the baby immediately following delivery has been used during the past year to replace the use of silver nitrate for the prophylactic care of the eyes of the newborn. It is planned to continue this method and to utilize the local application of penicillin to the baby's eyes. An evaluation of present methods employed in the functional classification of heart disease complicating pregnancy is being conducted. In the experience of this department, heart disease is now the single largest cause of mortality during pregnancy, labor, and in puerperium.

Two members of this Resident Staff were singularly honored by two of the outstanding organizations in their field. Dr. Thomas L. Ball was awarded the Foundation Prize offered annually by the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons. The subject of his award, "Topographic Urethrography," was presented at the annual meeting of the Association at Hot Springs, Virginia. Dr. Kermit Krantz was awarded a similar honor by the South Atlantic Association of Obstetricians and Gynecologists. His presentation of his work on smooth muscle in the human placenta was made at their annual meeting in February, 1950.

The research of this department was aided by grants from the Markle Foundation, the U. S. Public Health Service, Mr. Wallace S. Whittaker, Dr. Byron Goff, the Dazian Foundation, and the James Foundation. This department has worked in close cooperation with the Departments of Pediatrics, Medicine, Surgery, Psychiatry, Anatomy, Biochemistry, and Pathology. The first two assistant residents are now assigned to the Department of Pathology for periods of six months. The many advantages of such a close relationship between pre-clinical and clinical departments needs no elaboration.

PATHOLOGY

The courses in general and special pathology were given to second year students during the winter and spring terms along the lines laid down in previous reports. The section of the syllabus dealing with neuropathology was extensively revised. The sets of slides for microscopic study by the students were revised and enlarged, as was also the indexed album of kodachromes for teaching pur-

poses. As in previous years, the students were required to assist in at least one postmortem examination and later to recite the clinical data of the cases in correlation with the gross and microscopic findings before the class. To broaden their training further, the students were encouraged to write essays in pathology on subjects of their own choosing. Forty-eight students wrote essays, all of which were found to constitute excellent formulations of present knowledge on a wide variety of topics in pathology. The students were also given the opportunity to formulate and perform experiments under the directions of members of the staff, and to present their results to the entire class. Thirty-five students participated in twelve experiments.

The more advanced teaching responsibilities of the department were likewise discharged on a broad basis. The clinical-pathological conferences, held weekly throughout the academic year, were largely attended by students and staff. Postgraduate training in pathology was given to fourteen young physicians, including five members of the house staff from other departments of the Center. The postgraduate training was augmented by five departmental conferences conducted each week by members of the senior staff; it was broadened further by service in the laboratory of Surgical Pathology under Dr. John M. Pearce and in the Central Laboratories under Dr. Aaron Kellner.

The staff was comprised of twenty-seven members, of whom fourteen gave their full-time to research, teaching, and the postmortem service, while seven others gave substantial amounts of their time to the work of the department. It is a pleasure to acknowledge with gratitude the contributions made to the teaching program by a number of men with primary duties in other departments and institutions. Dr. Eugene Opie gave three of the lectures in general pathology; Dr. Paul Klemperer of Mount Sinai Hospital lectured on hypersensitivity and disease processes; Dr. Henry Jaffe of the Hospital for Special Surgery gave several lectures on diseases of bones and joints; Dr. Fred Stewart and Dr. Frank Foote of Memorial Hospital gave lectures on tumors; Dr. Maclyn McCarty of the Rockefeller Institute spoke on streptococcal infections; and Dr. Walsh McDermott lectured on the general manifestations of infectious diseases. Dr. Milton Helpert generously supplied anatomical specimens for teaching purposes. Dr. Sung Soo Lee of Seoul National University in Korea, Dr. Alan Thal from the University of Cape Town in South Africa, and Dr. David S. Breen from University College, Dublin, Ireland, joined the staff during the year. Four students of the third year class spent the summer in the department, participating in research and in work of the postmortem service, while four members of the fourth year class took elective work in pathology during the year. Extramurally, Dr. Kidd served on the National Research Council and as President of the American Society for Experimental Pathology, Dr. Stevenson was President of the New York Neurological Society, and Drs. Pearce and Olcott served as officers of the New York Pathological Society.

Research has gone forward on the following problems: The Intrinsic Causation of Cancer: Structural Changes Produced in Carcinoma Cells by Means of a Specific Antibody; The Mechanisms of Resistance and Immunity to Transplanted Cancer Cells; The Relations of Phospholipids to The Pathogenesis of Experimental Atherosclerosis; Myocardial Lesions Produced by Viruses; Studies of The Flow-Capacity of The Coronary Circulation; Experimental Argyrosis; The Effects of Gliotoxin on Cancer Cells and Tubercle Baccilli; Tests of Adrenal Function; and Lipolytic Enzymes in the Pathogenesis of Demyelination. These investigations were liberally supported by grants from the United States Public Health Service, the American Cancer Society, the Jane Coffin Childs Memorial Fund for Medical Research, and the New York Heart Association. Ten papers were presented at the meeting of the American Association of Pathologists and Bacteriologists in Madison, Wisconsin, April 13-15, 1950, and six papers were given at the meetings of the Federated Societies for Experimental Biology in Atlantic City, April 18-21, 1950.

PEDIATRICS

The clinical clerkship in the third year, inaugurated in 1948-49, has proved a satisfactory method of teaching. Fourth year students are assigned to three sessions a week in the pediatric outpatient department (general, emergency, and cardiac) for five weeks. This relatively short period is supplemented by abundant opportunities for elective work in the pediatric outpatient department, including the general pediatric clinic and such special clinics as emergency, pulmonary, well-baby, cardiac, hematology, renal, allergy, and premature. A large number of students have availed themselves of these electives. The contagious disease course, given jointly by the Departments of Pediatrics and Medicine, consists of three or four mornings at Willard Parker Hospital, and two mornings at the New York Hospital, with a survey at the end of each trimester. Throughout the year, weekly pediatric conferences, held primarily for the attending and house staff, are open to students who are taking pediatrics at the time. During the current academic year, three postgraduate fellows received clinical training on a full-time basis in the outpatient department. These fellowships are recognized by the Board of Pediatrics as the equivalent of one year of pediatric in-resident training. In addition, four other research fellows, one on a Cass Ledyard Fellowship, are engaged in projects which are awaiting publication.

The Division of Child Development, an integral part of the Pediatric Department, has been under the leadership of Dr. Mary E. Mercer. The emphasis has changed for the time being from the training of fellows to the training of house staff, medical students, nurses, and occupational therapy students.

In April, 1950, Dr. S. Z. Levine, Professor of Pediatrics, served as Chairman of the World Health Organization's Expert Committee on Prematurity which met in Geneva, Switzerland. Dr. Henry L. Barnett, Associate Professor of Pediatrics, was the recipient of one of the two annual E. Mead Johnson awards presented on November 15, 1949, by action of a special committee of the American Academy of Pediatrics in recognition of outstanding contributions in research on renal functions in infants.

Members of the Pediatric Staff have participated in four Institutes for Physicians (each of two weeks' duration) and Nurses (each of one month's duration) in the Care of Premature Infants. These Institutes, sponsored by the New York State Department of Health and the Children's Bureau of the Federal Security Agency, have been attended by twenty pediatricians and twenty-two nurses from New York City, New York State, and other states and territories. They are part of a program to improve the nation-wide care of premature infants.

The availability of cortisone and adrenocorticotrophic hormones for research has stimulated a number of studies in the Department. These studies have not been limited to immediate clinical results, but have been focussed on the fundamental bodily responses to these hormones in healthy children and premature infants as well as in selected diseases. The latter includes acute rheumatic fever, rheumatoid arthritis, nephrosis, and blood dyscrasias. The long-term studies of rheumatic fever by Dr. May G. Wilson and her group continue and life expectancy data are now being compiled for the fifth and sixth decades of life. Search for the basic mechanisms underlying susceptibility to this disease is providing expanding information of physiologic value. The pathogenesis and treatment of Mediterranean (Cooley's) Anemia have been studied. The evaluation of anti-folic drugs in the treatment of childhood leukemia and other neoplastic diseases is continuing. Criteria for determining the dosage of aminopterin and amethopterin are being developed. In cooperation with the Division of Ophthalmology, studies are being made on the eye disease known as retrolental fibroplasia which occurs in eight to ten per cent of all premature infants weighing less than 1,500 grams at birth. A more inclusive study of children who are prematurely born is in progress with the objective of evaluating their physical and mental growth and development in comparison with children born at term. The Pediatric Metabolism Unit has been in operation since January,

1949. This has permitted an intensive and extended study of renal and hormonal factors involved in the distribution of excretion of electrolytes in premature infants and in children in health and disease.

Other problems under investigation include toxoplasmosis, immunization with B.C.G., electrocardiographic studies of normal children in different age groups and the determination of protein-bound iodine in children with thyroid disease and other endogenous disturbances. Twenty-one papers were published during the year, and 114 addresses were delivered by staff members to medical and lay groups. There were 45 observers and visitors from many parts of the United States as well as from six Latin American countries and 23 other foreign countries.

Financial support for research and teaching activities has been received from the following sources: Pediatric B.C.G. Fund (Mead Johnson and Company), Marion R. Ascoli Fund, Rockefeller Foundation Fellowship Fund, Lewis Cass Ledyard, Jr. Fellowship Fund, Commonwealth Fund, Rheumatic Fever Research Fund, Helen Hay Whitney Foundation, Pediatric Education Fund (various donors), McHarg Fund, New York State Department of Health, Ruth Kirk Green Fund for Crippled Children, Children's Bureau of the U. S. Federal Security Agency, U. S. Public Health Service, Child Development Fund (various donors), New York Heart Association and the Pediatric Hematology Fund (various donors).

PHARMACOLOGY

There have been almost no changes in personnel during the past year and the teaching and research functions have continued with little modification. Attention has been called to the adverse influence on the teaching functions of the cut of hours which was instituted two years ago. Mr. Donald Clark received the Ph.D. degree in June and has accepted a position in Pharmacology at the Sloan-Kettering Institute. Mr. Murray Finkelstein will finish his work for the Ph.D. degree this next fall and has accepted an assistant professorship in the Department of Pharmacology at George Washington University School of Medicine. Dr. Charles Kensler spent this past year working in England, chiefly with Professor Burn at Oxford University, and will return this coming fall.

Therapy conferences have been held weekly throughout the year and a fourth volume in the series published by the Macmillan Company will appear soon. The research has continued along the lines described in last year's report and nineteen papers have been published. Twelve papers were presented at the annual meetings of the Federation of the American Societies of Experimental Biology held in Atlantic City in April, 1950. Particular mention should be made of the development of the use of 3-Acetoxy Phenyltrimethyl Ammonium Methylsulphate in man for its anti-curare activity. This was made possible by the cooperation of Dr. Joseph F. Artusio, Jr., of the Division of Anesthesia in the Department of Surgery and Drs. Walter F. Riker, Jr., and W. Clarke Wescoe of the Department of Pharmacology. During the year, industrial grants for support of the work in this Department have amounted to \$32,800 and foundations and government agencies have supplied \$80,786.

The head of the Department, Dr. McKeen Cattell, has resigned as Managing Editor of the Journal of Pharmacology and Experimental Therapeutics, but he continues as Vice-President of the Pharmacological Society, its representative on the Medical Division of the National Research Council and is a member on its Board of Publication Trustees. This summer he is serving on a teaching mission to Japan. Dr. W. C. Wescoe, a Markle Postgraduate Scholar, has continued as Assistant to the Editor of the Journal of Pharmacology and Experimental Therapeutics.

PHYSIOLOGY AND BIOPHYSICS

There were no significant changes in staff in the teaching program during the year. Plans have been developed for enlarging the lecture room of the Department and improving its ventilation. This will be carried out during the present summer.

The research of the Department has been supported by grants from the

Office of Naval Research, American Cancer Society, and the Russell Sage Institute of Pathology. The pan-radiometer, constructed by Drs. Hardy and Richards, is of fundamental value in the study of outdoor environments. Dr. Hardy and his associates have continued their study of pain and temperature sensation. Drs. Lawton and Joslin have investigated elasticity of tissues and Drs. Bird, Evans and their associates, the metabolism of bone marrow. The Crash Injury Project, under Mr. Hugh DeHaven, has been housed in the Department of Physiology for the past nine years. This work has been of particular interest in the field of aviation and has been responsible for the reduction of fatal injuries in airplane crashes. At the beginning of the coming academic year, this work will be transferred to the Department of Public Health and Preventive Medicine.

This year, Dr. E. F. DuBois retires from his position as head of this Department, one he has held for the past nine years after serving the previous thirty-one years in the Department of Medicine of which he was the head for eleven years. He has also been the Director of the Russell Sage Institute of Pathology, in which position he will be succeeded by Dr. David P. Barr. Dr. Dayton Edwards has been a member of this Department of Physiology and Biophysics for thirty-two years, and retires at the end of this academic year. Both of them have given loyal and distinguished service to Cornell. Under Dr. DuBois' leadership, there has been a tendency to emphasize the practical applications of physiology. In addition to work in aviation safety in the military services and in civilian life, a great deal of help has been given to the Navy in submarine medicine. Members of the Department have been used as consultants by heating and ventilating engineers and by those engaged in the study of clothing. Dr. DuBois will have office space in the Department of Anatomy and he will retain a close association with our institution.

It is a pleasure to report that Mrs. Graham Lusk and her children have presented to the Lusk Library in the Department a fine portrait of Graham Lusk by Mr. Ivan Olinsky. The late Graham Lusk was Professor of Physiology at Cornell from 1909 to 1932 and made outstanding contributions to the fields of nutrition and metabolism and to medical education.

PSYCHIATRY

There have been no essential changes in the undergraduate teaching of psychiatry. A considerable number of students are carrying out extra work during their elective quarter, especially in order to gain more practice in psychotherapy with adult and adolescent patients in the Out-Patient Department. Considerable interest has been shown in Child Psychiatry. Unfortunately, the limited staff in Child Psychiatry does not permit us to offer this experience to all the students who desire it. It is important that the Department of Child Psychiatry be strengthened in the Psychiatric as well as in the Pediatric Out-Patient Services. Graduate and postgraduate training programs in psychiatry have been improved by the expansion of the out-patient service. The morning session is now reserved for graduate training and the afternoon for undergraduate training. This arrangement permits a well-supervised training program in psychotherapy and in the understanding and use of social service and community resources. The postgraduate training of the Commonwealth Fund fellows in Internal Medicine has become more and more closely related to the Department of Psychiatry.

Research in psychopathology and clinical psychiatry (Dr. Diethelm and coworkers) has concentrated on experimental and clinical investigations of emotions. The significance of resentment and its relationship to paranoid features and to somatic functions has become clearer. Rorschach experiments have proved valuable for the determination of anxiety, tension, and resentment. These experiments are combined with physiologic studies. Among the many studies carried out might be mentioned investigations of psychologic factors in vomiting in pregnancy in connection with a wide interest in the psychology of pregnancy and childhood. The patients who have received ACTH in the Depart-

ment of Medicine have been studied by psychopathologic methods. The results have been unclear, and it can not be stated that the administration of ACTH, as such, produces psychopathologic changes. Studies in child schizophrenia and early adolescent disorders were carried out in the in-patient service and new methods of treatment were evaluated. In the Out-Patient Department long-term ambulatory treatment has been scrutinized in order to obtain a basis for better dynamic and individually-planned treatment of slowly improving and chronic patients. Long-term attempts at rehabilitation in the family, at work, and in the community were developed. Group psychotherapy was one of the tools used for some of these patients, but proved to be less satisfactory than had been anticipated.

In connection with the use of lobotomy to alleviate intractable pain and to help in severe chronic psychiatric conditions, intensive psychologic tests were administered. The results are still tentative. Many of these studies were carried out with the Institute for Research in Psychology at Hunter College. A review of the reliability and validity of psychologic tests in the field of psychopathology and psychiatric treatment has progressed. It is important that indications for the use of psychologic tests in medicine, especially in psychiatry, neurology, and pediatrics be clearly established. Otherwise psychological testing will be done in a haphazard way, proving very uneconomical. Investigations in physiologic and internal medical aspects (Dr. Milhorat and co-workers) included further investigations on Vitamin E. A tocopherol derivative in hog gastric mucin and in the linings of hog stomach was shown to have biologic activity in patients with muscular disease. It was possible to identify this compound and synthesize it. Comprehensive metabolic studies were carried out in patients with various muscular diseases to demonstrate the effect of ACTH. Under the direction of Dr. Harold G. Wolff, the relationship of physical disorders to emotional factors was investigated. Among the projects in progress were investigations of the mechanism of constipation, diabetes mellitus, cardiovascular disorders, gastric functions, and skin disease.

The consideration of alcoholism as a bio-social problem has led to a continuation and expansion of combined studies along psychologic and psychopathologic, physiologic, and sociologic lines. Through an analysis of 300 records of patients of the Payne Whitney Psychiatric Clinic, it was demonstrated that in most of these patients alcoholism occurred in the setting of psychoneuroses and psychopathic personalities. A small number showed no noticeable psychopathology before the onset of alcoholism. Professor Manfred Bleuler, Head of the Department of Psychiatry at the University of Zurich, was a guest in the Department during this academic year and demonstrated the role of cultural factors when no physical constitutional factors were elicited in the group of patients studied. The Committee on Problems of Alcohol of the National Research Council has given liberal support to this research program.

The psychiatric student health service has been carried on by Dr. Richard N. Kohl.

Twenty-eight papers published during the year have presented the results of the departmental research program.

PUBLIC HEALTH AND PREVENTIVE MEDICINE

The second year teaching in Public Health was curtailed to one afternoon a week during the second trimester. No course in parasitology was taught this year since it was taught to both first and second year classes last year. It will be given to the second year class in the fall of 1950. The third year course was presented almost exactly as last year with the same schedule and staff. The section work was better coordinated and more effective than last year. Special mention should be made of the teaching in Workman's Compensation by Dr. W. M. Weeden and in Rehabilitation by Dr. S. S. Sverdlick. The Department was pleased by the high quality of achievement in the students' community studies of the adequacy of medical care. This past year, ten students were selected as Family Health Advisers in a program described in last year's report. Plans are being made to extend and enlarge this program next year.

The work of the fourth year is concerned with the clinical application of preventive medicine and has been presented in one exercise a week during the year. Because of fourth year assignments of blocks of time to various departments, many of the fourth year students have been unable to attend these exercises. Conferences have been held to attempt to work out an integration of these clinical exercises in clinical medicine with the clinical exercises of other departments. The present arrangement has been found unsatisfactory.

The Cancer Detection-Prevention Clinic in the Kips Bay-Yorkville Health Center has continued into its third year of operation under the direction of Dr. Emerson Day. This Clinic, which is being conducted in cooperation with the New York City Department of Health, is designed for research study of adult health examination and early diagnostic techniques. Preliminary analysis of the findings in the first 2,200 examinations showed cancer in 1.3%; benign tumors in 16.5%; and other conditions requiring referral for care in 37.8% of examinees. Dr. Day and Dr. Richard Lawton of the Department of Physiology have served as consultants to the Cornell Aeronautical Laboratory in Buffalo in a research study of head injuries and protective devices.

Under a grant from the Josiah Macy, Jr., Foundation, Dr. Nine Choucroun has continued her studies on the components of the tubercle bacillus and has extended her observations to include other acid-fast organisms, particularly the leprosy bacillus. Dr. Bernard D. Davis has conducted investigations, under the auspices of the U. S. Public Health Service, which have been concerned with metabolic studies with bacterial mutants. Under the continuing grant from the Marcelle Fleischmann Foundation, Dr. Morton Kahn and his two colleagues, Mr. Benjamin Zeitlin and Miss Marilyn Smart, have studied the possible relationship of various highly purified bacteriological fractions to the clinical entity of asthma and certain other allergic conditions. This has been done with the cooperation of Dr. Horace Baldwin who is in charge of the work in allergy in the Department of Medicine. Mr. Daniel Alvarez is working for his Ph.D. in Parasitology and Mrs. Barbara Hitt for an M. S. degree under Dr. Kahn's direction.

One of our graduates, Dr. Hyla Watters, was a guest in this Department during the year and studied various parasites prior to her going to Liberia as a medical missionary. Dr. Smillie, the head of the Department, spent three months beginning in May of 1949 on a tour of Central and South America under the auspices of the State Department of the United States Government. He visited a total of ten countries and has reported advances in medical teaching and science during the past quarter century. He has emphasized the need for the establishment of strong departments of public health and preventive medicine there and further fellowship programs.

RADIOLOGY

On September 1, 1949, Dr. Robert P. Ball, previously Professor of Radiology at the College of Physicians and Surgeons of Columbia University, assumed the headship and direction of this Department.

During the academic year 1949-50, the teaching program of the preceding year was followed fairly closely. The one major exception was an attempt to give the fourth year student about ten hours of film analysis. This was found to be difficult because of the lack of a vacancy in the schedule. The third year student received about twenty hours of instruction on radiographic findings in diseases of different systems. The second year students received twelve hours of lectures which were aimed at acquainting them with the basic principles of therapeutic and diagnostic radiology. It is estimated that the total number of hours presented to the second, third and fourth year students was about forty. The lectures and demonstrations were repeated three times during the year. This represents about eighty hours of instruction given by members of the Radiology Department. Attendance at conferences, which includes demonstrations and comments by at least one radiologist, is strictly observed throughout the year.

SURGERY

Formal instruction in Surgery for the undergraduates begins in the third trimester of the second year with a course totalling twenty-four hours entitled: "Introduction to Surgery." This course formerly consisted of a series of lectures, but these were supplanted this year by clinical work.

A major change in the curriculum this year shifted the clinical work of the third year class from the pavilions to the Out-Patient Department. This was to give the students an overall perspective of surgical problems and indicated therapy earlier in their training. During the fourth year, they work on the pavilions as clinical clerks and concentrate on the solution of the more complex problems of patients hospitalized for surgery. It is felt that by this change the student gains a better understanding of the details of the more advanced technical problems encountered on the pavilion by first having a wider experience in clinical diagnosis through his third year work with the out-patients. Since the fourth year is now divided into fifths rather than trimester, the number of students in each group is smaller. This gives the students closer association with the senior and resident staffs both in the Out-Patient Department and on the pavilions. Although these changes have given the senior and resident staffs a greater workload, it is felt that better integration of instruction has resulted and the students receive more individual attention and supervision.

Minor additions and advancements were made as usual in the senior and resident staffs. Dr. Frank Glenn, Lewis Atterbury Stimson Professor of Surgery, has Dr. Charles G. Child, III and Dr. Samuel W. Moore as his immediate associates, assisted by Dr. William A. Barnes. Dr. W. DeW. Andrus is Director of the Second (Cornell) Surgical Division at Bellevue Hospital.

The teaching activities of the Department comprise undergraduate instruction of the medical students and graduate training of the resident staff. Total pavilion bed capacity for Surgery is 250.

General Surgery admitted 2,793 patients to the 120 beds of its three services in 1949. 2,940 operations were performed with 42 deaths, an operative mortality of 1.4%. Autopsies were obtained in 37 cases, or 76.6% of the deaths.

Neurosurgery, under the direction of Dr. Ray, admitted 299 patients to its fifteen beds, on whom 430 operations were performed with twenty-three deaths, a mortality rate of 5.3%. Clinical investigation of the sympathetic nervous system was continued under a grant from the Markle Foundation, and a new project was initiated on adrenolytic agents. Close cooperation with the neurological section of the Department of Medicine was continued.

Ophthalmology, under Dr. John McLean, has nineteen beds. 442 patients were admitted for diseases of the eye in 1949, on whom 470 operations were performed, a 56% increase over the previous year. There were no deaths. In conjunction with the Department of Obstetrics, a study of ocular changes associated with the toxemias of pregnancy is near completion. A study on the relationship of anesthesia to intra-ocular pressure has been continued with Anesthesiology. While resident, Dr. Richard Troutman perfected a prosthetic device for transmitting motion to artificial eyes.

Orthopedics is under the direction of Dr. Liebolt, assisted by Dr. John Schmidt and a resident staff of four. 171 patients were admitted to its twelve pavilion beds during 1949 on whom 135 operations were performed. Many of these were involved procedures that required prolonged postoperative care. New and more specialized instruments have been obtained for the more intricate orthopedic procedures as well as a simplified type of overhead traction apparatus for hospital beds. A generous grant from the Marguerite Davis Estate made possible the organization of an orthopedic research group which has already completed reports on foot problems of the infant and tears of the medical meniscus. A book on fractures and an atlas on orthopedic procedures have been started, and investigations of Caffey's disease and tendon injuries to the hand have been continued.

Otolaryngology, under Dr. James Moore, has a senior staff of fourteen and a resident staff of four. 883 patients were admitted to the sixteen pavilion beds in 1949 and 704 operations were performed with two deaths, a mortality of .3%. Procedures carried out by this section have continued to increase in magnitude, due in part to more direct attack on malignant tumors of the head and neck. Clinical investigation has been continued on the results of the Lempert fenestration operation for clinical otosclerosis and investigative work is being pursued on the anatomy of the temporal bone and methods of evaluating impairment of hearing and speech.

Plastic Surgery is directed by Dr. Herbert Conway assisted by a resident staff of three. 183 patients were admitted to the section's eleven beds during 1949 for 287 operations with no deaths. The speech therapy program for harelip and cleft palate patients has continued together with the orthodontia necessary for many of them. Clinical research has also been continued on operations for speech improvement. The section saw a greater number of patients needing surgical reconstruction following radical resection of head and neck tumors.

Urology. In September 1949, with the retirement of Dr. Oswald S. Lowsley as Director of the Brady Urology Foundation, the two urological services of the New York Hospital were combined under Dr. Victor Marshall and now constitute the urology section of the Department of Surgery, under the title of the Department of Urology, James Buchanan Brady Foundation. The pavilion beds of the combined service total 49, to which 796 patients were admitted during 1949. 583 operations were performed with six deaths, an operative mortality rate of 1%. During the year investigation of more radical procedures for treating carcinoma of the bladder and prostate was continued and a special study of the anatomy of the perineum in its relation to urological procedures undertaken. A full-time research fellow continued his experimental work in developing new techniques for anastomosis of the ureter and urethra. Studies were also begun on impotence in conjunction with the clinic on psychosomatic medicine.

Surgical Pathology is under the direction of Dr. John Pearce who is also a member of the Department of Pathology. During 1949, training in pathological diagnosis was given to seventeen members of the Surgery Department resident staff and nine from the Department of Pathology. Close cooperation between these two departments has extended the training in this field that is so important to both surgeon and pathologist. The undergraduate course was reinstated, giving the senior students two hours a week in surgical pathology while working on the surgical pavilions. A deep freeze unit was installed to provide fresh specimens for study. These are supplemented with colorful photographs and microscopic sections. 7,646 surgical specimens were examined pathologically during 1949, of which 17.8% were patients with malignancy.

Anesthesiology is under the direction of Dr. Joseph Artusio, Jr., now assisted by a resident staff of two and nineteen nurse anesthetists. The resident staff will be increased to four during 1950. There have also been six student nurse anesthetists. Undergraduate instruction in anesthesia is given chiefly in the third and fourth years of medical school and consists of demonstrations in practical application, both in the laboratory and the operating room, and presentation of didactic material. The scope of instruction for both undergraduates and residents has been extended to include basic material from the Departments of Chemistry, Pharmacology, Physiology, and Anatomy relevant to anesthesiology. Meetings with anesthetists from other institutions continue to be an integral part of the instruction for the entire staff and provide a means of widening the background in this growing specialty. 8,234 anesthetics were administered by the staff during 1949 with only 49 complications. Clinical research has been carried out to develop a safe and nontraumatic anesthesia for children. With the Department of Anatomy, a method of cardiac resuscitation using a direct condenser type of discharge is being developed. A new anti-curare drug has been studied in conjunction with the Department of Pharmacology.

Dental Surgery is headed by Dr. George Egan, assisted by five Instructors

and a resident staff of two. The senior group was appointed to the Medical School staff for the first time in 1949. This service provided treatment and consultation for a wide range of patients, both clinical and pavilion. These cases include trauma, infection, and tumor growth in their relation to dental surgery.

Physical Medicine is under the direction of Dr. Kristian Hansson. This section had an unusually active year with 27,485 treatments given to 2,506 patients, including fracture, orthopedic, and neurosurgical cases. To meet the increasing demand from both the medical and surgical services for rehabilitation following long convalescence, full use was made of the therapeutic pool and a second gymnasium. The sharp increase in poliomyelitis patients due to the epidemic last summer necessitated opening a special polio pavilion, and a large share of the rehabilitation of these patients was carried on by this section. 2,456 treatments were given to sixty-five polio patients between August 1 and December 31, 1949.

The Laboratories for Surgical Research, under the direct supervision of Dr. Child, have been actively engaged in a number of projects vitally important to the further advancement of surgery. These include the studies by Dr. Child on the effect of sudden occlusion of the portal vein on hepatic function, and his investigative work on water and electrolyte values and protein therapy. Dr. Edward Keefer has been devoting his entire time to research preliminary to the establishment of an arterial bank. Dr. Ward O'Sullivan and Dr. Mary Ann Payne have been engaged in liver problems, particularly those associated with cirrhosis and portal hypertension. Dr. John Sutton has been working on experimental production of cirrhosis of the liver. Experimental lung abscesses have been produced by Dr. Cranston Holman, and Dr. Artusio has been studying the mechanism of cardiac arrest. Dr. William Nickel is continuing his studies on ulcerative colitis and Dr. William MacFee and Dr. John West have followed their work on blood vessels with additional studies. Dr. Glenn, assisted by Dr. George Holswade and Dr. Arthur Gore, is pursuing the problem of revascularization of the myocardium and methods of producing myocardial hypertrophy.

A total of \$105,342 was received by the Department of Surgery in 1949 to support its research program. Contributors included the United States Public Health Service, the United Hospital Fund, the New York Heart Association, the American Cancer Society, the Childs, James, Markle and Astor Foundations, the Margaret S. Davis Estate, the Grace Line, and a number of individual contributors.

Progress in Surgery is the result of both laboratory and clinical research. One of the great needs of the Department is for continued support for its research program over a long period so that the overhead costs of its laboratories and expenses incurred in pilot projects may be defrayed.

INTERDEPARTMENTAL COMMITTEE ON NEOPLASTIC DISEASES

With Dr. Thomas P. Almy, James Ewing Associate Professor of Neoplastic Diseases (Medicine), as its Chairman, the Interdepartmental Committee on Neoplastic Diseases has administered a teaching grant of \$25,000 provided by the U. S. Public Health Service to implement the teaching of neoplastic diseases. Two full-time and three part-time staff members have been paid from this grant. The Committee has conducted a survey among our fourth year students to learn about the extent of their clinical experience with cancer cases. Some minor changes in the teaching program having to do with physical diagnosis have been made. Weekly tumor conferences have been conducted by a five-man panel from the Departments of Pathology, Surgery, Obstetrics and Gynecology, Radiology, and Medicine. Dr. Almy serves on the Education Committee at the Memorial Hospital and has assisted in the development there of a new elective course for our fourth year students in the form of a clinical clerkship. He has been able to help provide better integration between the teaching at Memorial and in our own institution. The Committee has served to advise some of our

departments regarding fellowships and grants. There have been some valuable additions to our teaching equipment which have been acquired during the year.

INTERNSHIPS

In accordance with the "Cooperative Plan for Appointment of Interns," the acceptances were due for release by the hospitals as of 12:01 a.m. November 15, 1949. The members of our senior class received a gratifying number of bids and all had signed up within forty-eight hours of the release time. Fifty-six (72%) placed in top-rating internships, 14 (18%) in middle-rating ones and 8 (10%) in low-rating ones. Twenty-six (33%) chose straight internships, 11 (14%) mixed ones and 41 (52%) rotating ones. Fifty-four (69%) will intern in New York State while the remainder will be in eleven other states. Only one is serving an internship in a military hospital.

The "Cooperative Plan for Appointment of Interns" will be continued this coming year with slight modifications. The applications will be filed in duplicate, one with Dean's Office and the other with the hospital on the third Tuesday in December, 1950. The hospitals will make the appointments on the third Tuesday in February, 1951, and no telegrams will be sent to arrive prior to 8 p.m. of that date.

COLLEGE MAINTENANCE

The activities of the Business Office of the Medical College for the year ended June 30, 1950, have continued under the supervision of our Business Manager, Mr. E. K. Taylor.

As has been the practice in previous years, estimates are used only for the basis of this report—final figures will be available in the Treasurer's Report to be issued at a later date.

Finance. Final figures will show an increase in dollar volume of approximately \$300,000 over last year for a new high of \$2,660,000.

Appropriations included in the above figure amounted to \$1,254,587 with an operating deficit originally estimated at \$114,600. This deficit will be reduced to approximately \$35,000 for the year because there was an increased income from Administrative Overhead charges which will amount to about \$70,000 or \$50,000 above the original estimate. In addition, some minor savings will be realized from the department budgets. Due to the tight budget conditions of department funds, savings from this source are now at a minimum.

<i>Comparative Figures</i>		1948-49	1949-50 <i>Estimated</i>
Academic Budgets.....		\$ 933,307	\$ 966,557
Administrative.....		92,200	104,420
Library and Service Accounts.....		138,116	160,246
Administrative Restricted Funds.....		21,272	23,364
Special Funds for Research.....		96,500	104,000
Restricted Research Funds.....		719,000	727,000
Government Contracts and Grants.....		366,000	573,000
		<hr/> \$2,366,395	<hr/> \$2,658,587

Actual Figures for Past Five Years

	1944-45	1945-46	1946-47	1947-48	1948-49	1949-50 <i>Estimated</i>
Total Expenses...	1,525,600	1,618,115	1,816,919	2,125,845	2,360,131	2,658,587
Orders Placed...	9,350	9,740	8,168	8,766	7,297	7,454
Checks Issued....	13,470	12,742	14,470	18,100	18,589	18,213

The above figures show a total increase of approximately \$292,000 over 1948-49. It is interesting to note that, although total expenditures have increased approximately 11%, the number of checks issued and individuals employed remain about the same; a rough indication that there has been little change in

the total operation. The increased expenditures have been more than offset by increased costs both in labor and materials. As of May 31, there were 625 employees on the payroll. 283 new employees were hired during the year and 279 resigned or left our employ for various reasons—a net increase of only four employees. Our employee turnover equalled 42%.

A partial breakdown of the increases shown in the comparative figures follows:

Academic budgets increased \$33,000—\$30,000 in the Clinical Departments and \$3,000 in the Pre-Clinical Departments. The major increase, \$14,450 was in the Department of Surgery. Practically all of the increases in the Clinical Departments were made possible through the use of funds from the Full-Time Fees Account.

Administrative and Service accounts increased \$34,000—approximately 50% of this figure represented an increase in heat, light, power and other services.

Department of Photography—\$8,000. This amount does not represent an increased cost, but was due to a change in accounting procedure. Formerly considered a sales account, the amount is offset by additional income.

Restricted Research Grants increased \$18,000. Government Contracts and Grants increased \$154,000. This figure represents the largest single increase in any category.

Hospitalization and Compensation Insurance:

Three hundred ten employees now subscribe to the Associated Hospital Service (Blue Cross Plan) through payroll deduction. This is an increase of 114 during the year.

Twenty-two compensable accidents were reported to our insurance carrier during the first eleven months; a decrease of five over last year. Of the twenty-two reported cases, four were more serious than usual and will involve considerable expense. It is planned to work more closely with the department heads in an effort to reduce our accident rate.

Veterans Affairs:

Two hundred thirty-six veterans were in training during the year.

Amounts Billed to The Veterans Administration:

184	Regular Students (Tuition, Fees, etc.)	\$ 91,107.05
10	Graduate Students	3,913.59
42	Special Students	11,039.39
Total		\$106,060.03

Payments from the Veterans Administration are on a more current basis than in previous years. At the end of the year a rather small percent of fees outstanding will remain unpaid.

General Maintenance:

The plant, in general, is in a good state of repair. No major changes were made during the year. Several minor alterations were completed, primarily to provide additional space wherever possible. There is a continued need for more space within the various departments.

A limited amount of painting was done and the exterior limestone was checked over carefully. All cracks or openings were pointed up and waterproofed.

Student Housing:

Students are continuing to live in the three temporary buildings made available by the Federal Government. It is expected that during the next month final arrangements will be made to effect the transfer of these structures to the University, in which event we will be permitted to continue their use, under agreement with the State of New York, until June 30, 1951, at which time the law permitting their emergency use will expire. A request for extension will be filed through regular channels.

SUPPORT ACTIVITIES

During the year July 1, 1949 to June 30, 1950 our Medical College has received \$747,840 in restricted gifts for research and education from private sources and \$547,604 from the Federal Government. In the reports of the work of the departments, reference has been made to the various sources of these funds, grants from private donors, industrial concerns, foundations, and governmental agencies. There have been no additions to endowment or sizeable gifts for our general educational program. A sum of about \$14,000 was provided from the National Heart Institute of the U.S. Public Health Service for teaching of cardiovascular diseases and, as in the previous year, we have received about \$25,000 for the teaching of neoplastic diseases from the National Cancer Institute of the U.S. Public Health Service. Aside from the gifts restricted for the Medical College, as yet we have received no allotment from the Greater Cornell Fund for our educational program.

The National Fund for Medical Education has continued its activities and many of our Alumni have received a brochure entitled: "Medical Education in the United States" which has effectively presented the financial plight of our medical schools. Two companion bills, Senate Bill 1453 and House of Representatives Bill 5940 for Federal aid to medical education were introduced during the year. The former passed the Senate unanimously, and the latter was never brought out of committee due largely to the opposition of the American Medical Association.

In February, 1950, the University assigned Mr. J. B. McKee Arthur, Jr., a member of the staff of Mr. Asa Knowles, Vice President for University Development, to the Medical College for the purpose of continuing the program of fund raising for the support of the Medical College.

ALUMNI ACTIVITIES

For the year ended in March 1950, Dr. Horace S. Baldwin, '21, served as President of the Cornell University Medical College Alumni Association. The other officers were: Dr. William H. Cassebaum, '31, Vice-President; Dr. Alphonse Timpanelli, '36, Secretary; Dr. Paul Reznikoff, '20, Treasurer. Dr. Baldwin and Dr. William D. Stubenbord, '31, served as the alumni representatives on the Medical College Council. Miss Mary E. Gleason has continued as full-time Executive Secretary in the office of the Association in the College. Dr. David N. Barrows, '12, Dr. Willis M. Weeden, '19, and Dr. Edward F. Stanton, '35, have edited the Alumni Quarterly which has become an important factor in the maintenance of a high Alumni morale.

Dr. Nelson W. Cornell, '21, served as Chairman of the 1950 Cornell Medical College Alumni Reunion Day held on March 23, 1950. The morning scientific program was presented by four distinguished alumni, Dr. Armand J. Quick, '28, Dr. Paul F. Russell, '21, Dr. Harry M. Rose, '22, and Dr. David P. Barr, '14. Dr. Barr was presented the Annual Alumni Award for his outstanding contribution to medicine by Dr. Baldwin. The award was in the form of a magnificent scroll. Dr. Barr gave the Annual Alumni Lecture.

At the annual business meeting held at noon, Dean Hinsey reported on the activities of the Medical College and the following officers were elected for the coming year: Dr. William H. Cassebaum, '31, President; Dr. Paul Reznikoff, '20, Vice-President; Dr. Alphonse E. Timpanelli, '36, Secretary; and Dr. Henry A. Carr, '35, Treasurer. The Medical College entertained the Alumni at a luncheon held in the Nurses' Residence. In the afternoon, some of the visitors went to see new facilities installed in the Cornell Division of Bellevue Hospital while others visited the exhibits of medical research carried on at the Medical College which were installed in the Histology laboratory of the Department of Anatomy.

A dinner-dance held at the Waldorf-Astoria ended the program. The seniors of the Medical College were guests of the Alumni.

Dr. Baldwin and Dr. Cassebaum have been appointed as Alumni representatives in the Medical College Advisory Committee for the coming year. On Sep-

tember 23, 1949, the Alumni Association gave its annual reception for the entering students and entertained the second and third year classes at afternoon teas this past spring. Again, I wish to express my gratitude for the continuing support and cooperation I have received from our Alumni. We were all very pleased when Dr. Preston A. Wade, A.B. '22, M.D. '25, was elected an Alumni Trustee of Cornell University in June of this year for a five-year term.

NEEDS

As I have done year after year, I wish to state again the pressing need for a student residence for our medical students. It has been agreed by the University Administration that we should proceed with plans for a residence to be erected on the plot at the northwest corner of 69th Street and York Avenue, now occupied by Metropolitan Distributors and owned by Cornell University, having been purchased with Medical College Funds. The Planning and Development Committee of Cornell University appointed a Student Residence Planning Committee composed of Dean Hinsey, Chairman; Mr. H. C. Flannigan, Drs. Guion, Wade and Bayne-Jones and Mr. Taylor and Mr. Arthur. This committee met and formulated recommendations for the Residence which were forwarded to Mr. Asa Knowles on March 1. At the request of Mr. John Parke, Chairman of the Committee on Buildings and Grounds, a more detailed study was prepared by Mr. Taylor and Dean Hinsey. This was forwarded to each member of the Committee on Buildings and Grounds on April 26, 1950. Our estimates indicate that about \$2,200,000 will be required to meet the housing needs of our students. There have been discussions between representatives of the Rockefeller Institute, the Memorial Center, New York Hospital and our Medical College concerning over-all center needs for recreation and housing. Many of us at the College are concerned for fear that once again delays will occur to the serious detriment of the morale in the Medical College.

It is unnecessary to reiterate the financial needs of the Medical College. Our budgeted deficit for this past year was \$114,600 and our actual deficit will be about \$35,000. We still have a reserve that will cover this. For the coming year, our budget, as approved, was a balanced one, but this was accomplished by increasing the annual tuition fees from \$700 to \$800, by charging for the first time an application fee of \$5.00 and by optimistic estimates of certain incomes. Even with the balanced budgets, we have not made needed increases to department budgets, the pre-clinical ones particularly. There has been some relief in the clinical budgets by the application of income from the Special Fund of Full-Time Fees. The Library Committee has emphasized the need to increase the library budget by a considerable amount.

One of the points of great importance in our situation is the large deficit incurred in the operation of the New York Hospital. A Survey Committee of the Board of Governors of the New York Hospital has been at work and has presented a report. Some time this coming year, discussions will be carried out with the University Administration concerning joint interests in our financial predicaments. Unless new income can be brought into this operation, I can see no escape from curtailment of our present program. It is hoped that this can be avoided because it will inescapably reduce the standard of the work of the Center.

Need for additional space is pressed from a number of quarters, such as the Departments of Radiology, Pharmacology, Biochemistry, Surgery, and Medicine. If funds were available for remodeling and the increased cost of maintenance, it would seem that additional space could be provided by adding three floors to the connecting wings between the A and B buildings and the D and E buildings. However, until sufficient funds are in hand, it will be necessary for our departments to plan their work and limit it to the facilities now available. The University has been unsuccessful in obtaining a grant from the National Heart Institute for additions to animal quarters. Likewise, the New York Hospital has not succeeded in securing funds for additions planned between the K and L buildings.

ACTIVITIES AT THE NEW YORK HOSPITAL-CORNELL MEDICAL CENTER

In last year's report, mention was made of an agreement for affiliation between the Society of the New York Hospital and the New York Society for Relief of the Ruptured and Crippled signed on April 5, 1949. While plans for the building have progressed, there has been no announcement of actual plans for starting construction. This is of great interest to the Medical College because one of our temporary residences is situated on the plot where the new building is planned.

Dr. Henry Pratt, Director of the New York Hospital, has been carrying on negotiations aimed at the establishment in the pavilions of the New York Hospital a new category of in-patient accommodations, to be designated as Semi-Private C. The purpose of the proposal is to augment the income of the pavilions and to place the Hospital in a position to preserve and maintain beds for teaching, training and research in the face of growing hospitalization and medical insurance plans, which are already having a direct bearing on facilities for teaching. At the present time, 36% of pavilion patients carry some form of hospitalization insurance. The success of these negotiations will depend upon the reaction of the Associated Hospital Service.

Upon recommendation of the Medical Board of the New York Hospital and our Executive Faculty, the Joint Administrative Board voted to recommend for favorable action of the Board of Governors of the New York Hospital the following statement of policy:

a. That offices in the Hospital for part-time members of the staff for the purpose of seeing and treating private patients be provided only for those who contribute substantially to the educational and research programs of the Center.

b. That allotments of office space be made for periods not greater than one year at a time upon individual recommendations to be made, with supporting data, by the Heads of the Clinical Departments concerned.

c. That the principle be adopted of limiting the incomes of part-time physicians occupying offices in the Hospital, the limit in each case to be recommended to the President of the Joint Administrative Board and the Dean of the Medical College by the Head of the Department concerned and the excess earning to be added to the Fund on Full-Time Fees.

d. That a committee of the Medical Board and the Executive Faculty be appointed each year to review the recommendations of Heads of Departments before they are acted on by the Medical Board.

e. That the present allotments of office space be reviewed by the Medical Board and the Executive Faculty in the light of the policies and procedures outlined above.

Seventy-one men and women who had completed fifteen years or more of service to the New York Hospital-Cornell Medical Center were honored on October 31, 1949, at a dinner in the Nurses' Residence by the Joint Administrative Board of the Hospital and University. Eighteen who had served twenty-five years or longer were presented gold pins by Dr. Stanhope Bayne-Jones, President of the Joint Administrative Board, and the fifty-three who had served fifteen years received silver pins.

As Dr. Thomas A. C. Rennie undertakes work on July 1, 1950, as Professor of Psychiatry (Social Psychiatry), he will be in charge of a program developed jointly with Dr. Oskar Diethelm. This includes the concern of Psychiatry not only with gross abnormalities of behavior, but also with the role of emotional factors in all disease processes and the every day problems of adjustment. Activities along these lines are envisaged as parts of a comprehensive community mental health program. Among the chief aims of the program are:

1. A public health survey of the extent, kind and distribution of mental and emotional health in a given area.

2. Study of the sociological, racial, individual and psychiatric dynamics of a given group.

3. The setting up of a broad program of "education" to disseminate widely the principles of healthy emotional growth, development and adjustment.

4. The subsequent evaluation of such a program in a given community of the improvement of its emotional and mental health level.

The Department of Psychiatry and the Payne-Whitney Psychiatric Clinic, as a part of the New York Hospital-Cornell Medical Center, has an excellent opportunity to develop a study of the psychological and social problems in the Kips Bay-Yorkville Health District and the Health Center, whose educational program is under the supervision of Dr. Wilson G. Smillie, Professor of Public Health and Preventive Medicine, would be the "field laboratory." Relations with the Department of Sociology of Cornell University will be broadened and collaboration will be sought from outstanding individuals in related disciplines.

Previously in this report I have referred to the appointment of Professor Leo W. Simmons as Visiting Professor of Anthropology in Medicine and he has a corresponding appointment in the Cornell University-New York Hospital School of Nursing. His work will be concentrated in part on those forces in society that produce frustration, aggression, and insecurity and that manifest themselves frequently in sickness. His interests will include the health implications of family situations, problems of unemployment and old age, attitudes of and about social and nationality groups, lack of social security, and needs for adequate housing, education, and recreational facilities. We agree with Dr. Donald Young, Director of the Russell Sage Foundation which is sponsoring this program, in feeling that the work here "will have a large influence in subsequent years upon all medical nursing education."

On January 3, 1950, the Vincent Astor Diagnostic Service received its first patients. Through the generosity of Captain Vincent Astor (USNR, Ret.) funds were made available for alterations in the L-1 wing and F basement for facilities of a diagnostic service for private ambulatory patients. The service is governed by a Board of Managers consisting of those members of the Medical Board of the New York Hospital concerned with clinical medicine and is manned by a group of members of the professional staff of the New York Hospital.

A committee of the Medical Board of the New York Hospital was appointed to study the need of a centralized program of rehabilitation because the average age of the population is increasing, the amount of chronic illness is becoming greater, and crippling from industrial accidents is increasing. It is estimated that there are at least 17 million physically handicapped people in the country today. A committee of Social and Vocational Restoration has been appointed and a program is under way which will emphasize the social and vocational restoration, positive health and consideration of the individual in relation to his socio-economic background. The physical aspects of the disease will receive consideration as a part of the whole treatment of the patient. This development in the New York Hospital is viewed with great interest by our Medical College because of its implications in our teaching program.

On June 20, 1950, an agreement was signed by representatives of four institutions, Cornell University, the New York Hospital, Memorial Hospital, and the Sloan-Kettering Institute for Cancer Research which provides for the establishment of the teaching program of the Sloan-Kettering Institute as a division of the Cornell University Medical College. This new division will use the staff and facilities of Sloan-Kettering for the training and education of candidates for advanced degrees in divisions of the physical and biological sciences, primarily through investigative work in the field of cancer and its graduate work will be carried on as a division of the Graduate School at Ithaca just as that in our Medical College is done. I shall not review in detail the provisions of the agreement which are known to you and the Board of Trustees. Mention should be made of the fact that it was necessary to amend again the Joint Agreement between the New York Hospital and Cornell University to conform with the Sloan-Kettering Agreement. Furthermore, for the purpose of carrying out the stipulations of the Douglas Deeds of Trust, the Board of Trustees of Cornell University now constitutes the Cornell University Medical College Council. Provision in the University By-Laws is made for a Cornell Medical College Advisory Committee which corresponds in functions to the Councils of the

other colleges. I wish to express appreciation for the skill demonstrated by Mr. Arthur Dean in carrying out these negotiations and for the tremendous amount of work he did.

We have enjoyed the continued cooperation and friendship with Dr. Stanhope Bayne-Jones with whom we have shared many problems during the year, with Mr. John H. Whitney who has been President of the Society of the New York Hospital, and with Dr. Henry Pratt, Director of the New York Hospital. It is a pleasure to mention especially the thoughtfulness of Mr. Lawrence G. Payson, Secretary and Treasurer of the Society of the New York Hospital, who has done so much to cement the friendly relations between the various units of our Center. During the past year, Mr. J. H. Whitney, Mr. W. H. Jackson, and Mr. Henry Sturgis have represented the New York Hospital in the Joint Administrative Board and the University members have been Dr. E. E. Day, Mr. N. D. Becker, and Mr. J. P. Ripley. I wish to express appreciation for the services of Dr. Day and Mr. Ripley for their service and contribution over the past years and we shall miss them in our future deliberations.

I should like to include in this report the following resolution which was passed unanimously by our Executive Faculty.

"The Executive Faculty records with profound regret the resignation of Edmund Ezra Day as President and later as Chancellor of the University. As the presiding officer of the Faculty, he has guided it through many difficulties and has led in many of its projects. From the day he assumed the presidency at Cornell, the affairs of the Medical College have received his active interest. He has been a constant attendant at the meetings of the Faculty and from his great experience and broad views has shaped its deliberations. More than any one person, he has been responsible for the establishment of increasingly cordial relations and effective cooperation with the New York Hospital. He has opened the way to closer affiliation with the Memorial Hospital and the Sloan-Kettering Institute. During his administration, the Medical College has extended and strengthened its activities and has advanced steadily to fulfill its destiny in one of the great medical centers of the world. In this development the Faculty has found in him its staunchest friend and most influential ally. The Faculty will miss his friendly humor, his calm judgment, and wise counsel. It hopes that it may receive during the years to come his continuing interest, attention, and advice."

With responsibilities of an extracurricular nature which have made great demands on my time this past year, I have been even more dependent than usual upon certain of our staff for the execution of my work, to Drs. Edwards and Hanlon, Mr. Taylor, to Mrs. Crozier and Miss Givens of our office staff. I am very grateful for the help and loyal cooperation I have received. I am particularly pleased that Doctor Edwards has consented to carry on as Secretary of our Faculty. It is a pleasure for me to express my deep gratitude to you, the members of the Board of Trustees, the Medical College Council, the Joint Administrative Board, our Alumni, and Staff for support and cooperation.

JOSEPH C. HINSEY,
Dean of the Cornell University Medical College.

APPENDIX XIII

REPORT OF THE DEAN OF THE NEW YORK STATE
VETERINARY COLLEGE

To the President of the University:

SIR: I have the honor to report herewith on the activities and condition of the New York State Veterinary College for the fiscal year ended June 30, 1950.

THE FACULTY

Two changes in key personnel occurred during the past year. Dr. J. N. Frost, Professor and Head of the Department of Veterinary Surgery, died in October after having served the institution for 43 years. Dr. A. G. Danks, who previously had been a professor under Dr. Frost but who was on the staff of the University of Pennsylvania, was invited and accepted the invitation to take the post as of July 1, 1950. Dr. A. M. Mills served very capably as acting head of the department from October until the end of the fiscal year when Dr. Danks arrived. At the beginning of the academic year, Dr. D. W. Bruner, of the University of Kentucky, was appointed Professor of Bacteriology, and assumed the teaching and research in this field. There were a number of changes in less important positions—a normal occurrence.

At the beginning of the fiscal year, changes in the departmental organization were made whereby the number of departments was reduced from seven to six by elimination of what had been called the Veterinary Experiment Station. The personnel of this division were transferred to the Department of Pathology and Bacteriology, thus bringing into a single department all of the teaching and research related to the causative agents of the transmissible diseases.

THE STUDENTS

The undergraduate registration during the year was 193, and the graduate, 18. Forty-nine were graduated with the D.V.M. degree in June, and 51 new students have been approved for admission next fall, therefore next year's registration will be about the same. The class of 1950 consisted largely of veterans whose average age was four or five years above normal. Of this number 36 were married and these had 43 children at the time of graduation. There were plenty of employment opportunities available to the group, and all but a few had made definite commitments for employment by graduation day.

Many more graduate students could be accommodated and could have been secured if better subsidies had been available. Since the graduates of the last few years have been older than usual and many had assumed family responsibilities before graduation, they were eager for jobs that paid better than assistantships and fellowships, and since many such positions were open to them, academic work had to bow to the non-academic. Even in the cases of those who were prepared to make financial sacrifices for graduate study, we were at a great disadvantage in competition with some midwestern institutions which often could pay considerably more and still permit graduate work. This situation is due, in part, to the establishment of new veterinary schools which has created an abnormal demand for young men interested in academic work. As these new schools complete their rosters, the situation should improve, so far as our competitive situation is concerned.

THE ADMISSIONS SITUATION

The Committee on Admissions has just completed its work of selecting those who are to matriculate next fall. The applications of 391 persons were considered of which 171 were residents of New York State and 220 lived in other states and foreign countries.

The number of applications for all veterinary schools in North America is steadily decreasing from the high point which was in 1947. So far as this school is concerned, the number of applications in that year was 752. In 1948 they had decreased to 632, and in 1949 to 358. The slight increase in 1950 was expected because an increase in admission requirements from one to two years of pre-veterinary work became effective in 1949, and this held back for a year those who would have qualified under the old requirements.

Whereas many of the veterinary schools during the past five years had been restricting admissions to applicants from their own states, several of them last year found it necessary to go outside to fill their classes, and one state fell short of the number they had intended to take. At least two schools which prior to last year had been restricting admissions to residents of their own states this year admitted more than half of their entering classes from other states.

It has previously been reported that the number of veterinary colleges in the United States has increased from ten to seventeen during the last five years. During this period, several of the older schools have increased the size of their classes, so the number of places in veterinary schools has practically doubled during this period. Prior to the last decade, the ten schools that then existed were not able to obtain as many students as were desired. Twenty years ago, the total number of veterinary students in the United States and Canada were less than 1000. Ten years ago the number had risen to about 2100. During the last year the registration was slightly above 3600. The great increase in facilities and the apparent falling off in interest in veterinary medicine as a profession indicates that we may again be approaching a period when there will be active competition among the schools for students.

This year we have continued the policy of accepting 40 members of the entering class from the group of New York residents and 10 from those who live elsewhere. This means that we accepted almost one in four from New York and about one in 22 from the non-residents. Since the average quality of the non-resident group was at least as high as that from this state, the Committee was forced to refuse admission to a considerable number of excellent out-of-state applicants, and to accept a considerable number from within the state whose qualifications were considered to be mediocre. Although the total number of applicants is still large, the committee feels that a large proportion of all applicants were poorly qualified to study veterinary medicine.

The Committee continues to receive considerable criticism from alumni and others who are friends of unsuccessful candidates. Generally such persons do not have nearly as much information about the candidates as is available to the Committee. Quite generally they know only some of the personal qualifications and are quite unaware of scholastic deficiencies which is the basis for the greater number of rejections. The committee does not insist upon the highest level of scholarship. It accepts a considerable number in each class whose previous classroom performance has been only slightly above average. It does not propose to accept poorer-than-average students, however, when better ones, with good qualifications in other respects, are available. Undoubtedly the Committee sometimes errs in judgement, but it has not been swayed by pressure from friends and politicians.

It was pointed out last year that New York State and all of the other states that have long maintained veterinary schools were reasonably well supplied with veterinary practitioners, but that many of the states that have made no contributions to education in this field were suffering from a shortage. This shortage has served to siphon off a considerable part of the graduating classes of the last few years to the areas of shortage. It was shown, for example, that about one third of the New York residents who graduated from this college during the last ten years had settled for practice outside the state. Were it not for the fact that this state has been supplying a generous part of its graduates to serve the needs of other states, we might very well have an oversupply for our own needs at this time. If we had been educating twice as many as we actually did during this period, the result probably would have benefited the

state very little since it is quite certain that a much larger number would have sought the better opportunities for practice elsewhere.

It is obvious that the veterinary needs of the country do not call for the maintenance of a school in every state. Veterinary educators have long known that the number of existing schools was not adequate to supply the need. Now that there is an average of one school for each three states it is felt that the national needs will shortly be met. The impact of the new schools on the supply of veterinarians has not yet been felt since they are only beginning to provide graduates. Four of the new schools graduated their first classes this year; the others have not yet reached that stage.

PLANS FOR A NEW PHYSICAL PLANT

In previous reports mention has been made of plans for replacing James Law Hall and the Surgical Clinic with new buildings to be financed from Post-War Development Funds accumulated by the State during the war years. Plans were developed and allotments totalling \$1,126,000 were voted by the Legislature for the purpose. The allotments were based upon 1940 construction costs, and it is estimated that the actual cost, at present prices, would require supplementation to the extent of about 120 per cent.

A little more than a year ago, another plan was proposed; namely that the College vacate its present site and buildings and move to another area of the campus where a completely new plant would be built. This plan was acceptable to the veterinary faculty since it presented the opportunity to acquire a completely new and modern plant located in an area where much more space for the handling and housing of animals was available than on the present area which has been completely surrounded by the University's development. A plot of ground at the east end of Tower Road where the Veteran's Village now stands was decided upon as the best location. The University trustees approved the plan and officially allotted the area for the use of the new veterinary college. Last fall the plan was approved by the trustees of the State University of New York. For several months the faculty has been working on space requirements for the new plant in collaboration with the architect of the State University. These have now been completed and submitted for approval. It is expected that an architectural firm will shortly be authorized to proceed with the development of working plans. When these are completed and an accurate idea of the building costs can be obtained, it is proposed to seek an appropriation from the legislature for its construction.

In the new buildings we are planning for a somewhat larger student body than we now have, and for better facilities for research and graduate studies. At present the new plant is visualized as consisting of two or possibly three principal buildings and a series of small, one-story structures for housing animals, the latter being connected with the main buildings by enclosed areas or breezeways.

THE NEW RESEARCH LABORATORY FOR DISEASES OF DOGS

A significant development during the past year has been the acquisition from private sources of funds for initiating a new program of research on diseases of dogs. These have come from dog owners, a considerable number of veterinarians, and commercial companies who do business with dog owners. A new building costing more than \$100,000 is now under construction on the veterinary farm on Snyder Hill to be used for laboratories and the isolation of experimental animals. Another, costing about \$15,000 is under construction for the housing of a dog colony to provide healthy, experimental animals which have not previously been in contact with infectious diseases. These new facilities will be used in conjunction with the Virus Disease Laboratory which has been developed by extensive remodelling of the old hog cholera serum plant, and the newly completed, State-built, virus isolation building. Operating funds for the dog work will be supplied by those who are interested in this work. The facilities for work on dogs will be used as a part of a concerted attack on the virus

and rickettsial diseases of animals. The State-built isolation buildings will be used principally for work on the diseases of cattle and chickens. The facilities for maintaining disease-free colonies of mice, guinea pigs, rabbits, swine, cattle, and dogs will be the best available anywhere. Such animals are essential for accurately controlled work in this field, and we believe that they will enable our staff to clear up many areas of confusion that now exist because of the use in past experiments of animals whose previous history of contact with infections has been unknown.

NON-TEACHING WORK OF THE COLLEGE

The education of veterinarians is only one function of this college. From its beginning, more than 50 years ago, research and other service activities have occupied the time and attention of many of its staff members, and many contributions to veterinary knowledge have been made. These new facts have been passed along to veterinary practitioners and have been incorporated in textbooks for the education of new members of the profession. As many of them as can be effectively used by livestock owners are communicated to them through our extension activities.

RESEARCH

A full statement of the research activities, even in abstract form, cannot be included in this report. A more complete and detailed report will be published later for the information of those who care to request copies.

It might be thought that research, continued for fifty years, should have supplied answers to most of the animal disease problems. It has provided answers to many of them but it is characteristic of science and research that discoveries are constantly opening new vistas and new fields of endeavor. We have old problems that have not been solved by research, and we have new problems which either did not exist previously, or were not recognized. Problems which previously were not thought to be serious, often assume serious proportions because of changes in our methods of husbandry or of breeding for higher production. The mobility of our livestock industry, the constant shipping of breeding stock from one region to another, serves to distribute diseases. The spread of well-known diseases can often be controlled by police measures but the obscure infections often are widely spread before they are recognized.

About two years ago, an apparently new, highly contagious disease of ducks appeared on Long Island. The greatest losses were among the young ducklings which are raised in large numbers there each year. It is estimated that about 900,000 birds were lost as a result of this new disease, this number amounting to about 15 per cent of the entire crop. The disease proved to be caused by a virus which has not hitherto been known. It was isolated and studied by members of our staff, and a serum was made available which has brought the disease effectively under control this year. This is not chance, because there have been many new outbreaks of the disease this year, but the serum when used promptly has stopped all outbreaks with only slight losses.

Last year a new disease, leptospirosis, was recognized in several dairy herds in this state for the first time. Its importance is not fully known as yet. A lung-worm of sheep, not previously known in this country, was found by one of our staff members during the past year. A disease of cattle was found to occur also in cats, and the possibility is presented that cats may play a role in the transmission of the disease from one herd to another. Research work on the chemotherapeutic treatment of bovine mastitis has proceeded and gradually we are learning the possibilities and limitations of various chemical agents on this disease. New research work has been initiated on abortion in cattle and sheep instigated by an organism known as a vibrio. This is an old problem that was thought not to be important until recently. The success that has been achieved in controlling abortions due to Bang's disease has caused the vibrio to emerge from obscurity and to assume a prominence which was unsuspected when brucellosis was much more common. A new and better vaccine for infectious

bronchitis is being sought. In the meantime very good success is being attained by the inoculation of young birds with fully virulent virus.

The virus disease research program has been mentioned above in connection with the description of the newly acquired facilities for such work. Work is under way on several respiratory infections of cattle and calves, and on two virus diseases of dogs. These studies have not progressed far since proper facilities have been available for only a short time.

These are only a few of the highlights of the research program. The entire program covers a wide area and includes brucellosis and related diseases of cattle, sterility or infertility of cattle, hyperkeratosis of cattle, bovine mastitis, metabolic diseases of dairy cattle, the physiology of digestion in ruminants, parasites and parasitic diseases of all species, bacterial, protozoan, and virus diseases of poultry, virus diseases of cattle and dogs, and the diagnosis and therapy, both medicinal and surgical, of many miscellaneous ailments of livestock.

EXTENSION SERVICES

Although the Veterinary College does not maintain a special extension division, a considerable amount of off-campus educational work is carried on. Some of this is done in cooperation with the College of Agriculture. Much of it is done through the agency of our diagnostic laboratories of which three are located in Ithaca and nine elsewhere in the state. Many of our extension activities are directed toward the improvement of the methods and knowledge of practicing veterinarians through many local meetings held in various parts of the state, and an annual short-course held in Ithaca.

Last fall the fifth and sixth poultry disease research and diagnostic laboratories were set up. The fifth was established in Oneonta, N.Y. to serve an area of the state that had not previously been easily available to any of the other units. The sixth was a special laboratory, established at Eastport on Long Island to serve the duck industry which is concentrated in that region. In order to have the laboratory near at hand the industry provided a laboratory and supplied equipment, and the College placed a poultry disease specialist and a technician there to operate it.

It is believed that the College has been operated efficiently and economically with the funds available. The staff has worked hard and has discharged its obligations to the best of its ability. The morale of the staff is good, a fact which is of great importance in an institution such as this. Each member is proud of his connection with Cornell University, appreciates the freedom which his appointment carries, and gladly assumes the responsibility which he knows goes with this freedom.

WILLIAM A. HAGAN,
Dean of the New York State Veterinary College.

APPENDIX XIV

REPORT OF THE NEW YORK STATE COLLEGE OF
AGRICULTURE AND OF THE CORNELL UNIVERSITY
AGRICULTURAL EXPERIMENT STATION

To the President of the University:

SIR: I have the honor to submit the report of the New York State College of Agriculture and of the Cornell University Agricultural Experiment Station for the fiscal year 1949-50.

A 25 per cent drop from the peak in prices of farm products with only a 5 per cent decline in farm costs has placed farmers in a price-cost squeeze. To meet this problem, the Extension Service has been emphasizing the importance of reducing debt, building financial reserves, utilizing labor more efficiently, and lowering the costs of production and marketing. The research program of the Experiment Station during the past year has provided much information on many of the important agricultural problems, the solutions of which have been of direct benefit to consumers as well as to farmers. The number of undergraduate students increased in 1949-50, and the enrollment of 1,776 was the highest in the history of the College.

RESEARCH

More than 500 active research projects were under way last year. The following brief progress reports will illustrate the nature and scope of the Experiment Station's program. More detailed information is provided in the Annual Reports of the Colleges of Agriculture and Home Economics to the State University of New York, the Governor, and the Legislature.

Spraying for disease and insect control is a major cost in producing fruit. A three-year study of fruit-spraying operations has provided information on how to cut labor and machine costs. Faster filling, faster travel to and from the source of water, and operation of equipment at or near capacity are especially important factors. As for degree of control, the amount and kind of materials and the timing of the applications are most important.

Several of the Northeastern agricultural experiment stations and the United States Department of Agriculture have cooperated in a regional project on egg quality. Differences in management practices and in handling were found to affect quality of the eggs on the farm and as they moved through the marketing channels. The results of this research will enable poultrymen and handlers to provide consumers with eggs of higher quality.

Experiments, using white rats, have shown that these animals can live to ages comparable to 70 and 90 years in humans with no food other than cows' milk, supplemented by a few necessary minerals. This means that milk is a complete and satisfactory food in terms of high quality protein and water-soluble vitamins. The work has also emphasized the need of older persons for the calcium in milk to keep their bones from breaking easily. Persons around the age of 60 need about the same amount of calcium that they would get from a quart of milk each day.

A new spray—lindane—has proved to be very effective in controlling mange mites and lice on dairy cows. Serious infestations of these pests can materially reduce the amount of milk produced by the cows. The spray can also be used for the control of flies in dairy barns. One application is effective for three weeks.

Research on the nutritive value of dried distillers' solubles shows that these materials can be used as an ingredient in dry calf starters. Several large feed manufacturers are now selling calf starters containing distillers' solubles in place of the higher priced animal proteins. This substitution will save large

sums of money each year to the many dairymen who raise their calves by feeding dry calf starters.

Large quantities of potatoes are consumed each year in the form of potato chips. Recent investigations have yielded information on ways to improve the keeping quality and the flavor of this product. By adding an anti-oxidant to the oil in which the chips are fried, the development of rancid flavors is inhibited. The natural flavor of the chips is enhanced by the addition of small amounts of a chemical plant extract called monosodium glutamate. Consumer tests show that two out of every three persons prefer the new type chips.

Fresh vegetables that stay fresh longer will soon be available to housewives. Prepackaging the vegetables in transparent cellophane or pliofilm containers is already a commercial practice. During the past year, however, it has been shown that several small holes cut in the transparent wrapping facilitate the transfer of gases and allow the plants to respire in a normal manner. Furthermore, the holes do not increase the shrinkage of the products in the packages. This new discovery prevents much waste and doubles the life of the fresh vegetables in the store or home.

As a result of quick-tests made on muck soils and the discovery of large accumulations of phosphorus and potassium, farmers are planning to change the ratio of fertilizer constituents and the rates of application. This practice will result in a saving of about two-thirds of the present fertilizer bill on many muck farms.

Grasses and legumes in hay or pasture are the most important crops in New York State. Studies have been conducted of the effect of stage of growth when cut upon the (1) nutritional value, (2) yield of hay and aftermath, and (3) longevity of stand of the principal perennial forage grasses and legumes. The data are being used extensively by farmers in using and managing these important crops.

Two new corn hybrids have been released to the New York Foundation Seedstocks Cooperative, Inc., for the first production of double-cross seed in 1950. Both of these are all yellow in color, of good standability, and have consistently outyielded standard commercial hybrids in their maturity class.

Many farmers have wondered whether some of the new insecticides and fungicides used on potatoes and vegetables may eventually be harmful to plant growth through longtime accumulation in the soil. A project has been started to study this problem over a period of years. It is extremely desirable to have the answer before injury occurs.

Research on the improvement of town highways from the standpoint of physical conditions, use, and costs, in conjunction with research done by the Temporary State Commission on Agriculture, was the basis for devising the Ten-Year Town Highway Improvement Program passed by the State Legislature of 1950. This law represents the first major change in town highway finance in twenty years and will be of tremendous benefit to New York agriculture.

EXTENSION SERVICE

The year 1949 has seen participating membership in the New York State Extension Service reach the highest point on record. The agricultural departments of the 56 counties where the Extension Service is operating, had 89,231 members; the home departments organized in 52 counties and 3 cities had 93,580 members; there were 49,450 4-H club members in 54 counties, and 5,733 young adults were being reached more or less regularly.

These figures evidence an effective coverage of the farms of the State by the Extension Service that is about as nearly complete as efficient operation permits. Although the federal census lists about 140,000 so-called farms, 90 per cent of the total farm production of the State comes from 100,000 farms. The other 25 or 30 per cent of the census figure represents part-time or subsistence type farmers, some of them situated on land incapable of producing a good standard of living.

Local financial support has increased, and the current budget (1949-50)

for the extension work in New York comprises 43.6 per cent county funds—about the same proportion as for the two preceding years. In other words, local financial support has kept pace with increased funds from federal and state sources and is considerably larger than either.

As a result of declining prices for most farm products, the net income of New York State farmers (especially fruit growers) were substantially lower in 1949 than in other recent years. An unusually severe summer drought caused a dangerous water shortage in the metropolitan area and scattered up-state areas. Contrary to normal expectations, the drought during the summer of 1949 did not reduce the summer milk flow perceptibly. With a fairly favorable milk-feed price relationship, dairymen fed enough more grain to compensate for short pastures and lost hay tonnage. Autumn pasture conditions were favorable and milk supplies in the metropolitan milkshed were almost embarrassingly ample. The College Dairy Committee wondered whether it might have overdone the emphasis in recent years toward increasing the fall milk supply!

Farm prices in New York reached a peak about midyear 1948. From that point there has been a decline. Since early in 1949, when the index of farm prices overtook the cost of production index on the downward swing, a price-cost squeeze has been developing. For the past two years the Extension Service has been preparing farmers to meet these conditions. Emphasis has been placed on the importance of reducing debts, building up financial reserves, improving labor efficiency, and reducing controllable costs of production and marketing. A good illustration of current programs, aimed at lowering costs of production, is a concerted effort toward further improvement in the production and utilization of forage crops: hay, pasture, and silage. In carrying out the ramified aspects of this program that involves several subject-matter departments in the College, the Extension Service has obtained the active support and cooperation of the dairy industry, manufacturers of and dealers in seed, feed, fertilizer, machinery; and milk handlers.

Farmers in all of the major types of farming in New York, dairy, poultry, vegetables, fruit, are becoming more active in marketing and sales promotion through their own efforts. The Milk for Health Movement, sponsored by the National Dairy Council, has made real progress in the Niagara-Frontier, Rochester, and Syracuse areas, where 60 per cent of the dairymen are already enrolled in the promotional campaign. Poultrymen are contributing generously to the Poultry and Egg National Board in promoting use of eggs and poultry meat. The large 1949 apple crop and lower prices have focussed attention on marketing and stimulated the formation of the Western New York Apple Growers Association to assist in solving these problems. Vegetable growers have no similar sales promotion plan. The large number of crops that are more or less competitive one with another greatly increase marketing difficulties.

The Extension Service is performing a useful job in various phases of marketing agricultural produce. The Food Marketing Information Service has been expanded and is functioning efficiently. Staff members in the Department of Agricultural Economics are playing a vital role in the operation of the Milk Marketing Orders. A number of marketing studies involving fruit and vegetables, that have been conducted during the past year, point the way to improved methods of handling at both wholesale and retail levels.

In 1946, there was created jointly for the Colleges of Agriculture and Home Economics an Advisory Council on Extension Education, the purpose of which is to coordinate and improve all activities that have a part in the training and professional improvement of extension workers. The variety and scope of these undertakings has increased. It now forms a continuous process beginning with recruitment and carrying through the service until retirement.

Undergraduate students in both colleges, who wish to prepare for extension work, have access to special advisers as to the curriculum each follows. In the College of Agriculture, 66 men were advised in the 1949 fall term. Three separate student organizations also aid through extracurricular activities with advice of the Faculty.

By utilizing the resources of the University in broad, related fields, there is

developing a strong graduate program in extension education. Plans are laid to relate the choice of problems and thesis subjects to items emerging from the work of the Policy Committee on Field Studies in Extension.

The workshop for extension specialists, held in April of 1950, drew an active participating attendance of 62, including 4 from other States. For a considerable number of the group this two-week period of study of educational methods was something of a new experience—and apparently a useful one.

During 1949, training schools for agricultural agents were given in the economic outlook, fruit, vegetable, and potato production and marketing, and soil conservation. 4-H club agents were given a four-day program planning and methods training school; three regional tractor-maintenance clinics of two days each; and a six-day training camp on camp administration.

One of the most significant and far reaching phases of extension teaching involves key personnel representing other federal and state agencies and industrial groups concerned with agriculture and rural welfare. Much of this work is done on campus in training schools and conferences ranging from a few hours to one or two weeks, and varying in size from a dozen to several thousand. They include such groups as the teachers of vocational agriculture, rural bankers, florists and nurserymen, manufacturers of and dealers in feed, seed, fertilizers, insecticides and fungicides, breeders' associations, highway superintendents, public welfare employees, parent-teacher associations, and many others including such national organizations as the American Dairy Science Association, the American Association of Agricultural College Editors; and such regional groups as the northeastern section of the American Society of Agronomy, the Northeastern States Farm Bureau Federation. Some regional group meetings of the same general character are conducted elsewhere in the State. An important one during the past year was a consumer marketing information conference held in the metropolitan area participated in by New Jersey, Connecticut, and federal, state, and city agencies and organizations interested in the program.

This College is also contributing generously to the E.C.A. program of aid to foreign countries. Members of the staff have been loaned for service abroad. Young farmers from many countries, chiefly in Europe, have been placed on New York farms for training in American methods of production, and large numbers of teachers and agricultural experiment station workers from abroad have been received for consultation and exchange of views on research problems. This has been a heavy load on staff members in some departments and shows no sign of abatement.

Under the direction of administrative officers of the State University of New York, a survey was made of all extension teaching being done by the several units of the University during the past year. These data will aid the State University authorities in coordinating the far-flung activities of the several state institutions and discovering the areas in which adequate services have not been developed.

APPROPRIATIONS

The State appropriations for the fiscal year 1949-50, as compared with 1948-49, show a net increase of \$184,577 in personal-service, including salary increases, new positions, temporary services, and accessory instruction. The appropriations for maintenance are increased \$174,830. This increase includes \$15,000 for the Farm Bureau and 4-H Club work in the counties. The appropriations for equipment are decreased \$18,000.

The sum of \$7,500 was allocated for relighting Fernow Hall, and \$6,000 was allocated for additional drainage of experimental fields.

The Legislature rescinded an appropriation to rebuild the horse barn at an estimated \$62,800. An appropriation of \$30,000 was made from the Capital Fund to provide a building for instruction in the care and breeding of livestock. This amount was later supplemented by an allocation of \$30,135.76.

The Legislature made special appropriations as follows: \$17,000 for research on dairy cow sterility; \$10,000 for additional research on problems affecting Long Island potatoes and vegetables; \$50,000 for the construction of a building at the Long Island Vegetable Research Farm for research on storage of potatoes; \$4,550 for research on the production, harvesting, and storage of hay and hay crop silage.

The Federal appropriations for teaching and extension work were the same in amount as those for the years 1948-49. The Experiment Station received an increase of \$31,717.95 under Sections 9b1-2 of the Research and Marketing Act of 1946. In addition to this, the sum of \$68,450 was assigned to the Cornell Station for one year under Section 9b3.

COUNCIL FOR THE NEW YORK STATE COLLEGE OF AGRICULTURE
AND THE AGRICULTURAL EXPERIMENT STATION

Upon the nomination of the New York State Conference Board of Farm Organizations, the Board of Trustees elected the following persons for a three-year term beginning July 1, 1950: A. Morelle Cheney to replace J. D. Sholes, James Roe Stevenson to replace Herman Kappel, Isaac DeHollander to replace Kenneth Bullard, Marion Johnson to replace J. Stanley Earl, Mrs. Lowell Huntington to replace Mrs. C. E. Ladd.

Upon the nomination of the President and the Dean of the College of Agriculture, Halsey B. Knapp was elected by the Board of Trustees to succeed Marion C. Albright for a three-year term beginning July 1, 1950.

As newly elected President of the New York State Agricultural Society, Fred H. Sexauer succeeds Earl B. Clark on the Council.

The Faculty of the College of Agriculture elected S. S. Atwood to succeed L. H. MacDaniels, and O. C. French to succeed himself.

THE COLLEGE STAFF

It is with profound regret that we report the deaths during the year of Otis Freeman Curtis, professor of botany, on July 4; Roy A. Olney, professor of rural education, on October 10; and Harry Morton Fitzpatrick, professor of plant pathology, on December 8.

Retirements took place, as follows: Clara Louise Garrett, associate professor of drawing, and Paul J. Kruse, professor of extension education, on July 31, 1949; Richard Alan Mordoff, professor of meteorology, on August 15, 1949; and Frank Bonar Howe, professor of soil technology, Byron Burnett Robb, professor of agricultural engineering, George Walter Tailby, assistant professor of animal husbandry, and Ernest Van Alstine, professor of soil technology, on June 30, 1950.

The following resignations occurred: Roy Emil Blaser, professor of agronomy, on June 30, 1949; Victor Edward Schmidt, associate professor of rural education, on August 31; George Stanford, associate professor of soil science, on December 31; Eyvind Bernard Wahlgren, assistant professor of agricultural engineering, on March 31; Earl McKee Kroth, assistant professor of soil science, on May 31; John Burl Peterson, jr., assistant professor of animal husbandry; and Philip Taietz, assistant professor of rural sociology, on June 30.

During the year or to become effective July 1, 1950, the following new appointments to the Faculty have been made: Edward Wilbur Foss, professor of agricultural engineering; Marvin David Glock, professor of rural education; Wilbert Keith Kennedy, professor of agronomy; John Paul Leagans, professor of extension education; Bernard Valentine Travis, professor of medical entomology; Harlan Parker Banks, associate professor of botany; Francis E. Broadbent, associate professor of soil microbiology; David Culbertson Chandler, associate professor of limnology; Robert Leavitt Cushing, associate professor of

plant breeding; Paul Joseph Zwerman, associate professor of soil conservation; John Carr Ayers, assistant professor of oceanography; Arthur Bing, assistant professor of floriculture; Carl William Boothroyd, assistant professor of plant pathology; Mrs. Elizabeth Loring Burckmyer, assistant professor of drawing; Warren William Burger, assistant professor of marketing; William LaMar Coggshall, assistant professor of apiculture; Wendell George Earle, assistant professor of marketing; Thomas Matthew Eastwood, assistant professor of floriculture; Mrs. Frances Adkins Hall, acting assistant professor of rural sociology; George Andrew Johannessen, assistant professor of vegetable crops and pomology; Chase Del Mar Kearl, assistant professor of farm management; Douglas J. Lathwell, assistant professor of soil science; Robert Edwin Lee, assistant professor of floriculture; Benjamin Ferris Lownsberry, jr., assistant professor of plant pathology; Russell Dickinson Martin, assistant professor of extension teaching; Marion Watt Meadows, assistant professor of vegetable crops; Robert Rising Morrow, jr., assistant professor of forestry; Donald Joseph Pierce, acting assistant professor of ornamental horticulture; Norman Whittier Rollins, acting assistant professor of animal husbandry; William Frank Shipe, jr., assistant professor of dairy industry; William Knowlton Widger, jr., assistant professor of meteorology; Thomas Edgar Wiley, assistant professor of animal husbandry; Odin Wilhelmy, jr., assistant professor of biochemistry and nutrition; and Thomas Lenoir York, assistant professor of vegetable crops and plant breeding.

Thirteen promotions to the rank of professor, ten to associate professor, and one to assistant professor, were made, to be effective July 1, 1950.

At his own request, Professor Louis Melville Massey resigned from the headship of the Department of Plant Pathology on June 30, 1950. He continues active service as a professor in the department. Professor George Clarence Kent becomes head of the department on July 1, 1950.

After serving as acting head of the Department of Rural Sociology, Professor Robert Arnold Polson, has been appointed head of the department, effective July 1, 1950.

TRANSFER OF METEOROLOGY

Following the retirement of Professor Mordoff, the work in Meteorology was transferred, at the beginning of the fall term, from the Department of Pomology to the Department of Agronomy.

THE STUDENT ENROLLMENT

The number of undergraduate students and total registration continued to increase in 1949-50. Those who are enrolled and reported as four-year, two-year, and special students are considered to be undergraduates, because they are taking full-time, undergraduate programs. The total for these three groups in 1949-50 was 1,776, which is the largest enrollment of undergraduates in the history of the College, and 125 more than in 1939-40, the peak-year prior to World War II.

The following table reports the number of students in all classes for 1949-50, with the corresponding numbers for 1948-49 for comparison:

	1948-49	1949-50
Four-year students:		
Freshmen.....	307	362
Sophomores.....	350	331
Juniors.....	431	306
Seniors.....	319	485
Total.....	1407	1484
Special students.....	70	69
Two-year students:		
Dairy farming.....	51	56
General farming.....	85	86
General livestock farming.....	14	13
Fruit growing.....	17	16
Poultry farming.....	12	14
Vegetable growing.....	12	18
Commercial floriculture.....	24	18
Nursery landscape service.....	3	2
Total.....	218	223
Graduate students.....	807	760
Summer-session students.....	849	799
Taking regular courses in the College but registered as extramural.....	70	96
Total.....	3421	3431
Less number counted twice.....	240	202
	3181	3229

WILLIAM I. MYERS,
Dean of the New York State College of Agriculture.

APPENDIX XV

REPORT OF THE DIRECTOR OF THE NEW YORK STATE AGRICULTURAL EXPERIMENT STATION AT GENEVA

To the President of the University:

SIR: We have the honor to submit the report of the New York State Agricultural Experiment Station for the academic year ended June 30, 1950.

Many activities at the Experiment Station must be continued over a period of years along more or less the same line if we are to advance our basic knowledge concerning some fundamental problems of production and utilization of horticultural crops. The program of research during any one year is, however, inevitably influenced by the adjustments that must be made to meet unusual variations in weather and other conditions. During the growing season of 1949, for example, many of our New York State crops were produced with much less than the normal seasonal rainfall and more hours of bright sunlight. It is well known that insects and diseases respond markedly to variations in weather and that the rate of development, the composition, nutritive value, and the quality of the crops and their suitability for processing are profoundly influenced from year to year by such factors as rainfall, temperature, and sunlight.

During the past year, special emphasis has been given to the improvement of facilities required for experimental methods in which we endeavor to control

the environment by the use of climate chambers and other devices to regulate light, temperature, soil moisture and humidity. These have proved to be very useful in supplementing field trials and have resulted in the saving of valuable time in the development of basic knowledge concerning the biological material with which we deal.

The Station has also completed two farm ponds in which large amounts of water may be stored for the long-time irrigation experiments to be carried on to learn more about the problems of soil moisture supply during occasional dry seasons and during the more frequent short periods of insufficient rainfall that may influence the development of the crop in many years. These ponds will also be available for cooperative study with the Conservation Department of the College of Agriculture on fish production on farms under New York conditions.

In November, 1949, the Station acquired a 75-acre farm which had been previously rented for many years. This land will continue to be used for the study of fruit tree rootstocks and other nursery problems and will also be available for large-scale testing of promising seedlings of fruits before they are introduced to the public.

Further progress has been made in broadening and coordinating the research program in food science and technology. Some excellent research equipment, including an infra-red spectrophotometer, a Tiselius electrophoresis apparatus, and a Hunter color meter, has been added for use in basic studies in food problems. These facilities will aid in fundamental work on the identification of volatile constituents of fruits and vegetables and the improvement in methods of preservation of flavor and of color in processed fruits.

The first step in providing additional physical facilities for the Station took concrete form in April, 1950, when the construction of the Central Heating Plant was begun. The heavily reinforced basement portion of this building is now complete, and the steel work is in process of erection. It is to be hoped that the next step will be the construction of the urgently needed Food Science Building, plans for which were completed several years ago.

RESEARCH

In this brief report, mention can be made of only a few examples of progress on some of our formal research projects. Additional information, together with a complete list of all projects, is given in the Annual Report of the Station.

The year 1949-50 was noteworthy for the fruit breeding work of the Station. A new apple seedling that has been tested for a number of years was introduced to the public under the name of Monroe. This new variety was deemed worthy of introduction on account of its good keeping and other desirable qualities, and because its parentage, Jonathan and Rome Beauty, suggests that it would make a desirable variety for processing. Over 9,000 seedling strawberries were evaluated, and 1 out of every 90 seedlings were deemed worthy of propagation for more extensive trials before being named and introduced to the public. Approximately 4,000 seedling blackberries were fruited, and of these 50 were good enough for further testing. A population of over 6,700 purple raspberry seedlings yielded 30 promising selections.

The proportion of the total tomato acreage planted to three Geneva varieties, Gem, Red Jacket, and Longred, introduced by the Station a few years ago, continues to increase. Red Jacket seems to respond to a wide range of growing conditions and has taken first place in total acreage planted to one variety in New York State. Gem fruits are not as well colored as those of Red Jacket and Longred, but when set early at the rate of about 450 plants per acre will produce high yields for canning by the first of September. Gem is also well suited for use in the home garden.

The results of irrigation trials during 1949 were pronounced. Red Jacket and Stokesdale tomatoes planted in the first week in June on well fertilized Amboy silt loam near Wolcott, N.Y., received three applications of water, totaling 4 inches, during this very dry season when the total rainfall for June, July, and

August was only 5.1 inches. In addition to increasing the total yield of marketable fruits by about 4½ tons, irrigation reduced blossom end rot to about 12 per cent on the treated plants compared with 35 per cent on the checks. It increased the average weight per fruit from 4.6 oz. on the check plants to 5.4 oz. on the irrigated plants.

The Mexican bean beetle in western New York has been gradually increasing during recent years, and in 1949 reached its highest peak in population of any year since it appeared in this area about 20 years ago. Although a large number of new materials have been tested, including DDT, DDD, BHC, and Chlordane, Rotenone continues to be the most satisfactory insecticide for this pest. Parathion is also effective and has given good commercial control, but it is more hazardous to use and requires careful handling by the operator. One application of spray material is frequently sufficient when applied as the eggs are hatching, usually some time during the first 2 weeks in July, but in years of heavy outbreaks a second application a week later has proved desirable.

Codling moth was unusually difficult to control in 1949, and many growers, particularly those relying on lead arsenate alone, sustained rather heavy losses. In control experiments conducted in a heavily infested orchard at Geneva, 12 new organic insecticides were applied in 5 cover sprays. DDT at the standard rate proved the best material. Parathion caused severe pitting of the tissues of McIntosh and Cortland fruits when used alone, but activated charcoal seemed to prevent such damage. The use of this material tends to cause an unattractive finish.

Spraying tomatoes for the control of tomato leaf blight showed increases of average cumulative yield for 3 years of 5 to 7 tons per acre of number one fruits of the varieties Gem, Red Jacket, John Baer, and Rutgers, and at least 2½ tons for Longred and Wisconsin 55. The varieties Gem and Wisconsin 55 in unsprayed plots developed almost twice as much anthracnose as Longred, John Baer, or Red Jacket. Late blight occurred only to a slight extent in 1949, and then only at the last picking. Longred, Wisconsin 55, and Gem definitely developed the least blight. Gem escapes the disease by virtue of its earlier maturity and lack of dense foliage at the time when conditions are ideal for the disease to develop. The other two varieties are definitely more tolerant to the blight as shown by greenhouse experiments.

Internal breakdown of mature cabbage heads was again severe in a number of fields in widely separated areas of the State during 1949. Observations in previous years on the occurrence of this non-parasitic disease in cabbage breeding stocks indicated that there were inherent differences among strains with respect to their susceptibility to internal breakdown. Accordingly controlled crossings were made in several combinations with several standard kraut varieties and the unnamed Geneva breeding material. The progeny were tested in 2 areas during 1949, and highly significant differences were found in the development of internal breakdown. The genetic studies are being continued as one approach to the problem of the control of this disease.

Buds from Montmorency cherry trees which were previously "indexed" and found to be free from virus for several years were distributed to 4 cooperating nurserymen during 1949. Each of the nurseries received approximately 200 buds to be used for propagation in an area isolated from other prunus species. The trees derived from these disease-free buds will serve as sources of virus-free material for commercial propagation of this variety, thus insuring healthy nursery stock for the cherry grower.

Considerable progress has been made in standardizing the method of manufacture of tomato juice and improving the methods of analysis in connection with the national cooperative study on the relationships between the United States raw tomato grades, yields, and quality of products manufactured from this crop. Analyses were made on the raw tomatoes and on the juice for lycopene, mold count, total solid, Brix, total acid, pH, ascorbic acid, and Munsell color index. A new objective method has been developed for measuring color of the juice. The color of the canned juice as determined by the Processed Foods Inspection Service is found to correlate with the color and the ripeness

of the raw grades. Variations in processing methods are reflected to some extent with the grade of the final product.

The vitamin content of 124 strawberry selections from the Station fruit breeding work ranged from 36 to 107 mg. per hundred grams of fresh fruit. Among the 25 best freezing selections, each of 5 contained over 80 mg. per hundred grams. Among the 16 raspberry varieties and seedlings tested for suitability for freezing preservation, Willamet and Milton were found to be outstanding in flavor and texture in the frozen product. The comparison of the chemical composition of raspberry varieties in two years showed that the season and the variety may have an important effect on the product.

A survey of the final results of the study on the relationships of the quality of frozen foods to microbial flora indicates that there are certain microbiological levels which should be established as standards for frozen peas, beans, and corn, and that these standards will reflect sanitary conditions in the manufacturing plant. In the case of peas, a count of 50,000 organisms per gram should be a maximum allowable when the product first enters storage; for beans, the maximum is indicated as 100,000 per gram; and for corn 200,000 per gram. It is strongly indicated that counts above these levels on these vegetables at the time the material is frozen and first stored would suggest unsanitary conditions or poor operating practices during the processing procedures.

In accordance with the feeds and fertilizer law, administered by the New York State Department of Agriculture and Markets, a total of 2,346 commercial feeds were analyzed, of which 178 samples were found to be in violation of the law. Of the 423 fertilizer samples tested, 92 were below standard on one or more counts. Among the economic poisons, 266 samples were analyzed, and 14 were found to be seriously below guarantee. Only 4 of the 46 commercial samples of legume inoculants were found to be unsatisfactory.

Under the provisions of the seed law, 2,975 official seed samples, representing state-wide market cross sections of field, vegetable, and flower seeds, were received from the New York State Department of Agriculture and Markets and tested for germination and purity. Field plantings were made of 193 different stocks of cabbages, 29 of Chinese cabbage, and 149 of radishes selected from the vegetable seed samples. In the flower seed samplings, 309 plantings were made of asters, marigolds, and other varieties. As judged by past years' results, such field trial work has proved most effective in bringing good stocks to the attention of the public and in encouraging more general use of the best strains. A total of 21,963 seed samples, representing a wide range of kinds, was received from individual growers for evaluation. A special type of service in co-operation with the New York Certified Seed Growers Cooperative involved the study of 864 samples. Field plantings of certain crops have also been made to check on the purity of certified seeds grown outside New York State for use by our growers.

APPROPRIATIONS

State appropriations for the Experiment Station for the fiscal year ended March 31, 1950, amounted to \$711,734. For the year beginning April 1, 1950, an appropriation of \$805,381 was made available for personal service and maintenance and operation. In addition, there was an appropriation from the Capital Construction Fund of \$34,000 for equipment and \$32,000 was reappropriated for special repairs and painting of Station buildings. The allotment of Federal funds for 1950-51 includes \$1,500 Adams, \$1,500 Hatch, \$6,000 Purnell, \$11,022.46 Bankhead-Jones, \$10,069.19 Research and Marketing 9b1 and 9b2, and \$10,000 Research and Marketing Title II. Eighteen grants, supported by industrial concerns, have been in force during the year, amounting to \$21,250.

CHANGES IN STAFF

Appointments during the year beginning July 1, 1949, included Arnold M. Mattson, Chemical Microscopist; Austin C. Wegenknecht, Assistant Professor of Biochemistry; Mrs. Ann D. Holley, Research Associate in the Division of

Food Science and Technology; Siegfried E. Lienk, Assistant Professor of Entomology; and Alexander C. Davis, Assistant Professor of Entomology.

On July 1, 1949, George E. R. Hervey was promoted from Associate Professor to Professor of Entomology, and on October 1, 1949, DeForest H. Palmer was promoted from Associate Professor to Professor in the Division of Plant Pathology. James C. Moyer was promoted on July 1, 1949, from Assistant Professor to Associate Professor in the Division of Food Science and Technology.

Resignations were accepted during the year from: Robert F. Brooks, Assistant Professor in Food Science and Technology; Laurence A. Carruth, Associate Professor of Entomology; John P. Tomkins, Research Associate in Pomology; Robert E. Foster, Assistant Professor of Plant Pathology; Harry C. Young, Assistant Professor of Plant Pathology; Curtis H. Dearborn, Assistant Professor of Vegetable Crops; and Kenneth C. Holgate, Research Associate in Food Science and Technology.

Professor Otto August Reinking retired from his position as Head of the Division of Plant Pathology on April 30, 1950, and was appointed by the Trustees as Emeritus Professor. He had headed the Division of Plant Pathology since coming to the Experiment Station in July, 1936. Frank K. Bowen retired on March 1, 1950, as Administrative Assistant after 25 years of service at the Station.

Sabbatic leaves of absence were granted during the year to Guilford L. Mack, William T. Tapley, Dwight C. Carpenter, Nelson J. Shaulis, and John Einset.

In spite of the fact that several of our divisions have been shorthanded, due to the difficulty of finding suitable replacements for those who have resigned to accept more lucrative positions elsewhere, the staff as a whole has carried on with commendable enthusiasm and energy to fill the gaps. Close cooperation between the staffs at Geneva and at Ithaca, which avoids needless duplication and results in effective research covering the respective fields of activity, is now taken for granted as a matter of course. It is nevertheless gratifying to report that the professional contacts, seminars, and consultations involving the two groups of technical workers are more frequent and informal than in years gone by. Many members of our staff have given freely of their time to assist in the extension activities arranged through the Extension Service of the College, and some have helped on occasion in certain aspects of the resident teaching programs.

The Station continues to enjoy the confidence of growers and processors of fruits and vegetables as evidenced by numerous calls for technical help, by the frequent conferences on problems of the industry, and by the demand for more reliable information based on scientific research. We enjoy the continued cooperation of many grower and industry groups who provide grants-in-aid, the use of land, or other research facilities.

While we have reason to believe that our efforts to promote the agriculture of the State through scientific research and experimentation are highly regarded by those who are closely in touch with the work, it is becoming increasingly clear that more educational efforts are required fully to acquaint the general public with our activities. We need to dwell on the fact that funds expended for scientific investigation in agriculture are a profitable investment that benefits all the people of the State and not just another expense for governmental activities for a relatively small segment of the population. True, the farmer or the processor who applies the results of agricultural research in his enterprise may benefit directly just as the physician who utilizes the latest medical discoveries is likely to be more successful in his practice. But the real beneficiary in both cases is obviously the public as a whole, which is assured of an adequate supply of wholesome food and better health.

W. I. MYERS,

Dean of the New York State College of Agriculture.

ARTHUR J. HEINICKE,

Director of the New York State Agricultural Experiment Station.

APPENDIX XVI

REPORT OF THE DEAN OF THE NEW YORK STATE
COLLEGE OF HOME ECONOMICS

To the President of the University:

SIR: I have the honor to submit the report of the New York State College of Home Economics for the year 1949-50.

Since this has been the first complete year of operation as a unit of the State University of New York, a review of the college program as it relates to the other programs of home economics within the State University has been undertaken. The officers of Cornell University and of the State University, as well as the Council for the College of Home Economics have been of great assistance to the college faculty in this undertaking. It becomes increasingly clear that this College will be responsible for continued and expanded cooperation with other home economics units in the State University, especially in the areas of coordination of curriculum and of the provision of personnel. Reorganization and expansion of graduate courses and continued development of research which can carry graduate students have gone forward and, as the Cornell University allotments have permitted, the number of graduate students has increased by the allotted number of ten again this year.

The completion of Statler Hall, the dedication of the building, and the removal of hotel administration into the new building have been events of importance this year. The Cornell University Board of Trustees at the time of the dedication of the new building announced the change of name of hotel administration from "Department of Hotel Administration in the College of Home Economics" to "School of Hotel Administration in the College of Home Economics" and the change of Dr. Meek's title to "Director of the School of Hotel Administration."

The extension program of the College has continued to grow rapidly. Membership in the home bureaus increased another 10,000 and is now over 100,000. Membership in 4-H clubs and in older rural youth is also increasing. Try-outs of methods devised the year before and the development of new methods of getting accurate subject-matter and the findings of research to such large numbers have continued with gratifying results. Continued expansion of the number of letters and other types of requests for information indicates that the wide coverage of work through news releases, radio, and other mass media is bringing help to the people of the State in an effective way.

Admissions

Applicants for regular standing in the fall semester, 1950, totalled 779, an increase of 100 over 1949. Six hundred and fifty-six of these were applicants for freshman standing, an increase of 97 over the previous year. The Committee on Admissions interviewed 553 students in Ithaca, Albany, Buffalo, and New York City.

Interpretation of admissions policies and procedures is a continuing responsibility of all members of the Committee on Admissions through personal conferences and correspondence with alumni, parents, applicants, and school officials as well as members of the faculty. Interpretation of the program of the College and the relation of the program to the type of student who might be encouraged to follow it are seen to be increasingly important aspects of the Committee's work if a growing number of high calibre applicants is to be maintained.

Enrollment

Total student enrollment for 1949-50 was as follows:

	<i>Fall term</i>	<i>Spring term</i>	<i>Total different students for year</i>
Seniors	153	135	154
Juniors	137	134	138
Sophomores	158	155	159
Freshmen	177	166	177
Special students	10	4	10
Graduate students (majors and minors)	90*	94**	104
	<hr/>	<hr/>	<hr/>
TOTAL SUMMER SESSION	725	688	742
			<hr/>
			301
			<hr/>
Less duplications			1043
			<hr/>
			40
			<hr/>
Total home economics students			1003
Hotel administration students			<hr/>
			413
			<hr/>
TOTAL ALL STUDENTS			1416

*Includes 2 extramural students registered also in the Graduate School and 2 School of Nutrition students with major professors in Home Economics.

**Includes 2 extramural students registered also in the Graduate School and 1 School of Nutrition student with major professor in Home Economics.

Four senior students were enrolled for special study for a semester at the Merrill-Palmer School. Eight students were enrolled at the Cornell University-New York Hospital School of Nursing. Thirty-three transfer students were admitted with advanced standing from 29 different colleges and universities.

Two Ph.D., 38 M.S., and 148 B.S. degrees were awarded during the year.

Scholarships

Several increases were made in scholarship funds during the year. A gift from the Sears-Roebuck Foundation made possible the establishment of four scholarships of \$200 each for incoming freshmen.

A number of generous increases were made in the home bureau scholarships with the ultimate objective to make each of these \$200 a year.

Two student groups, Omicron Nu and the Home Economics Club, added \$75 respectively, thus making two additional scholarships. The Home Economics Alumnae Association, at its June meeting, voted to increase the fund from which grants are made from time to time so that the amounts of these might be larger. It is particularly gratifying to note the continued efforts of alumnae and undergraduates to help meet student financial need.

Counseling Service

The regular program of orientation, individual and group counseling, testing, placement, and committee work was carried on as usual during the year. Again during Freshman Week a meeting was held for the parents of freshman students to give them an opportunity to become acquainted with the college program and ask questions about the College and the University. The meeting preceded a tea for new students, their parents, and members of the staff. Other aspects of orientation, once carried by the College, are now cared for by a general orientation program in Cornell University.

Placement

Requests from employers for experienced workers continued high. Calls from the colleges were significant of the great need in every area for leaders. There

were calls from many parts of the United States for graduates to fill administrative or supervisory positions. Most of these openings required the doctor's degree. All the 204 requests for teachers in all subject matter divisions of home economics in the colleges and universities required the master's degree. There is great need for more personnel with advanced degrees.

RESIDENT TEACHING PROGRAM

In order to keep abreast of research findings in the field of home economics and in order to meet changing demands upon homemakers and upon teachers and other professional personnel new courses were developed and old courses were revised or dropped at both the undergraduate and graduate levels of instruction in nearly all departments.

The Department of Child Development and Family Relationships broadened its undergraduate offerings to include a richer experience with school-aged children and a more general undertaking of children of all ages; courses in nursery school teaching were given somewhat less emphasis than previously. Greater emphasis was also put upon family relationships and upon such general background courses as *The individual and his relations with others*. Graduate courses in this department were enriched and the number of graduate students expanded.

The Department of Economics of the Household and Household Management revised its core courses to meet current emphases upon economic issues in public problems, and to adjust to the fact that the present student body contained more married students and more students with experience in financial matters than usual. Graduate courses were revised and expanded.

A new course was offered in home economics journalism, and expanded experience was given in the field of extension teaching and information to several senior and graduate students.

Changes were made in the Department of Food and Nutrition to meet changing needs of both graduate and undergraduate students in preparation for professional work in food and nutrition and to adapt the work more closely to developments in the School of Nutrition and in the Department of Clinical and Preventive Medicine.

The Department of Home Economics Education offered a new course for undergraduates in *Homemaking education and the community*, designed to give students a basis for understanding the contribution of home economics to community life. Graduate work in this department was strengthened by a beginning of research on state funds to supplement the research on federal funds. (For further report on the activities of this department in the state and national picture, see report of the School of Education.)

Developments in the Department of Housing and Design were rapid and in line with a program of development planned over several years to meet demands in this field. Two new undergraduate courses and one new graduate course were added to the curriculum and all graduate courses were surveyed and reorganized.

Expansion of facilities for the School of Hotel Administration through the completion of Statler Hall will enrich undergraduate and graduate offerings of the Department of Institution Management. Students in hotel administration will continue to use the facilities of the Department of Institution Management.

The Department of Textiles and Clothing widened its program of field trips for undergraduate students, reorganized its core course, and strengthened its graduate program through its developing research program.

Constant increase in the demands of extension work upon resident teaching personnel in all departments, and increasing participation in local, state, national, and international programs, committees, organizations, and agencies made still heavier this year the already heavy loads of the teaching staff of the College.

RESEARCH

The following brief report of research activities is suggestive of the type of projects which were active during the year. A more complete report of the research program of the various departments is contained in the annual report of the College to the Governor and the Legislature.

The recently initiated programs in the fields of child development and family relationships and in clothing have shown substantial progress. In the interdisciplinary study of social creativity, techniques were developed for the analysis of creative behavior including the role profile, a sociometric method for the description of intra-group relationships, and measures of social insight. Procedures were developed for the integrated study of personality structure and development in persons contributing to creative community living.

In a study of the effects of the comfort and discomfort of clothing on disposition and on the efficiency with which sedentary work is done, six techniques to measure the changes objectively were investigated. Several give promise as research tools in this type of study.

Investigation of the component activities common to certain major household tasks was continued. In relating equipment design to fatigue problems of the worker, information is needed regarding the relative energy required in reaching, bending, stooping, and twisting—component parts of various household tasks. It was found that reaching to a height of 56 inches above the floor required twice as much oxygen as reaching to a height of 46 inches; reaching to a height of 72 inches required four times as much oxygen, and bending to reach to 3 inches above the floor, 19 times as much oxygen as reaching to the 46-inch height. The evidence of this study appears to justify the measurement of oxygen consumption as a technique for comparing the effects of activities upon the worker. The closed-circuit metabolism tester was used successfully for measuring the oxygen consumed in light activity.

A study of the financial problems connected with the handling of decedent estates showed a general reliance of farm families on the intestate statute and on joint ownership. These findings point up the need for a more general understanding of the way these procedures work out as compared with wills.

Studies of food included an investigation of the toughness and stringiness of four varieties of kale. In general, the tips of the leaves were found to be most tender and the base least tender; also the rims were more tender than the center portion of the leaves. Of the varieties studied, the order of tenderness and freedom from stringiness was Curled Siberian, Long Seasons, Smooth Kale, and Dwarf Blue Curled Scotch. In an investigation of yeast bread, loaves of larger volume were obtained when the milk was heated to 90 degrees or 100 degrees C. or to 75 degrees C. and held at this temperature for 15 minutes than when heated to 60 degrees or 75 degrees C. The heat treatment of the milk influenced the amount of titratable amino acids in the doughs during fermentation. The adjustments in sugar and thickening agent needed in the production in quantity of blueberry pies from frozen berries, dry packed and packed with sirup added, were established. This type of information is needed by food service production managers.

An additional staff member to direct research in nutrition was made possible through the relationship between the College and the School of Nutrition. A study of the effect of diet on the nitrogenous constituents of biological fluids was initiated. In an investigation of the calcium and protein requirements of six adolescent girls, it was concluded that an intake of one gram of calcium was adequate if an estimate of the amount needed for growth were used as the criterion; that an intake of 75 grams of protein was adequate but near the borderline, whereas an intake of 86 grams was undoubtedly adequate but possibly more than would be practical to recommend.

Arrangements were made to effect a substantial expansion of the research facilities and personnel in the area of institution management. There is appreciable demand for graduate training in this field, and this College is one of the few in the country in a position to offer research training in the field.

The final technical report of the study of farm housing requirements in the northeast region, which covered survey and analytical work undertaken during two previous years cooperatively with several other experiment stations in the region and with the Bureau of Human Nutrition and Home Economics of the United States Department of Agriculture, was published by the Cornell University Press and has wide distribution. Work is underway on the second phase of this regional project. Data described in the technical report are to be converted to space requirements in order to make the information most useful in planning farm homes for families of different sizes, income levels, and other significant variables. This study is enlisting the active participation of an architect, an engineer, and a home management specialist in addition to personnel in housing. This development has made possible a closer coordination of the research in housing supported on state funds and the federally supported housing research program; and a closer coordination of this work with the research program in household management.

The research funds available to the College are not yet adequate to provide support for any substantial amount of research in home economics education although the need for research is recognized. The faculty Committee on Research is continuing the study of the college research program with a view to its further coordination and strengthening in all areas.

EXTENSION SERVICE PROGRAM

The size and scope of the Extension program continued to expand. Approximately 100,000 homemakers, 50,000 boys and girls, and 5,000 young adults participate directly in the program. Many thousands of others request bulletins or are reached through the mass media originating at the College or in the counties.

There has been no change in the total number of specialists and agents employed, but personnel for agent positions has become available for most of the vacancies as they have occurred. There are 24 specialists, 16 devoting time to adults, six who work with the 4-H clubs and two who are primarily concerned with the work with young adults. One hundred ten home demonstration agents and 38 home-economics-trained 4-H club agents are employed in the counties.

Local leadership is fundamental in the development of the extension program. Four thousand four hundred thirty-four adult leaders assisted in the work of 2,586 4-H clubs. Thirty-five thousand two hundred forty-six women served as volunteer leaders in the 2,693 home bureau units.

County support for home demonstration work has increased \$35,144, making a total of \$467,244 appropriated in 1950 by the 54 organized counties. Fulton and Green Counties were organized for home demonstration work and made appropriations in January to support it.

All counties report an increasing number of young homemakers requesting help from the home bureaus. The time which these women can spend at meetings is usually less than that available to those whose children are grown. Many of the young women meet in the evening. This resulting need for shorter periods of teaching in the units has been worked out by the specialists and agents. Several series of short projects have been planned by the departments to meet the shorter meeting time available to young mothers and to focus principally on the needs of the younger homemakers.

Agents have shared in planning for and in training leaders for much of the teaching. Committees of home demonstration agents and 4-H club agents have worked closely with specialists in the development of a program which can be carried on successfully with the increasing ration of cooperators to agent and specialist. Specialists have given particular attention to ways in which agents can be kept aware of new teaching materials and methods of presenting material to leaders. Training schools for agents, newsletters from the subject matter departments, new bulletins and multilith materials have been provided. Agents have accepted added teaching responsibility and have worked for better coordination of all extension programs within the county.

Progress has been made in cooperative training of leaders by home demon-

stration agents and 4-H club agents in the counties. There is a renewed interest in coeducational meetings in the counties. This has been, in part, a natural outgrowth from programs such as home management and family relationships, in which close cooperation within the family is necessary for success, and, in part, to the emphasis on work with young adults. This renewed interest in coeducational meetings indicates a social need for meetings of young couples. In addition to the coeducational work with young people, both specialists and agents are working closely with the agricultural staff on a number of projects, among them housing and community building clinics; poultry demonstrations and publications; livestock field days; family financial planning; and family relationships.

Special attention has been given to in-service training for state personnel. A two-week workshop for extension specialists was held in April. The College with the School of Nutrition also provided a five-day workshop for extension specialists of food and nutrition in the northeast and a three-day nutrition institute for the State Nutrition Committee.

For the first time since the war a state-wide judges' training school was held. Induction training for newly employed agents in all departments was held in December.

The second Council of County and City Home Bureau Chairmen was held during Farm and Home Week.

Four programs might be cited as having created widespread community interest in parts of the State. The citizenship program, carried on in 48 counties and one city this year, is gaining steadily in community response and participation. This program is entering its fourth year with a study of local and state taxes—how they are assessed and budgeted. The program to obtain better bread through the regular bakeries is gaining support in communities where local nutrition committees form the nucleus for community organization and promotion of the program. Food forums as a part of the marketing program are being conducted by producers and consumers in a number of the larger cities. Housing shows or expositions are being set up on an area basis; that is, in the Niagara frontier, the north country, and the capital district.

The home management specialist working on financial planning with young adults interviewed twenty-seven young homemakers as a basis for developing the program. The institution management specialist worked closely with a graduate assistant to study community kitchens.

The clothing specialist with the Office of Extension Studies, the state leader, and the home demonstration agent, studied the clothing practices of 200 homemakers in Fulton County for clues to guide the development of the clothing program in a new county.

One measure of achievement is participation. The established homemaking programs and activities for adults and young people have been carried on in the usual way. Home demonstration agents report 4,959 home visits, 125,059 phone calls, 1,360 radio talks, 17,107 news stories released and 69,554 meetings held, attended by 1,115,403 homemakers. Members of 4-H clubs carried out 97,910 projects.

Over 1,250,000 bulletins and leaflets were distributed from the county offices and other thousands from the College. Increased quantities of multilithed and mimeographed teaching materials needed in the counties present a problem of production and mailing. A steady flow of press releases and radio scripts emanate from the College for use in the counties, and feature stories and broadcasts are a part of the annual plan.

PUBLICATIONS

One book, one sound film, 40 articles for scientific, popular and semi-popular magazines, 18 new bulletins, and 18 revised or reprinted bulletins were published in addition to the news, magazine, and radio releases of the Department of Extension Teaching and Information.

ELIZABETH LEE VINCENT

Dean of the New York State College of Home Economics.

APPENDIX XVII

REPORT OF THE DEAN OF THE NEW YORK STATE SCHOOL
OF INDUSTRIAL AND LABOR RELATIONS

To the President of the University:

SIR: I have the honor to present the report of the New York State School of Industrial and Labor Relations for the academic year 1949-50.

The dynamic field of industrial and labor relations presents a constant challenge to the progress and perspective of the School. The School is meeting this challenge and is rendering a service to the citizens of the state and nation. Such a service, since the inception of the School in 1945, has been characterized by a spirit of teamwork which has permeated the staff and student body. Concomitant with the cooperation of the School staff and students has been the valuable contribution in advice and assistance from other colleges of the University. The understanding and cooperation of industry, labor, and government has also been most significant.

As we examine the record of the School during the past five years, appraise its present activities, and attempt to gauge future demands, we recognize one basic concept: the School has as its major purpose the development of knowledge and understanding on the industrial-labor relations scene.

Due to the School's limited physical facilities in relation to the demand for admission, the number of students receiving resident instruction remains relatively stabilized with approximately 350 in attendance during the past year. The School is continuing its efforts to develop most effectively the selection of students, summer work-training programs, the curriculum, counseling, and placement of graduates.

The research and publications phase of the School's program has evolved into a distinct service of fact-finding and information for resident teaching and for citizens of the state. The library's recognition and standing in the field of industrial and labor relations is noteworthy; the quarterly publication "Industrial and Labor Relations Review" reaches a wide audience and has been well received; the completion of various research projects has resulted in publications which are a real contribution to the field.

Expansion of the School's extension program continues to reflect the growing demands for adult education from the state's citizens. The Extension Division increased its total number of major programs from 133 in 1948-49 to 299 for the past year. Even so, the demand for extension services was beyond the resources of the School. As a result, the School faces many problems of meeting the adult educational needs of individuals and groups throughout the state.

RESIDENT INSTRUCTION AND ALLIED ACTIVITIES

The numerical growth and development of the School's resident teaching program, upon completion of its fifth year of operation, is illustrated in the table below:

RESIDENT INSTRUCTION AND ALLIED ACTIVITIES			
Year	Undergraduate Registration	Graduate Registration	Out-of-college registrations in ILR courses
1945-46	134	14	24
1946-47	252	15	107
1947-48	284	28	349
1948-49	300	34	523
1949-50	304	49	622

Significant aspects of the resident teaching growth and development are:

(1) On the undergraduate level the number of applicants for admission has remained substantially in excess of the capacity of the School, and enrollment has been limited to approximately 300.

(2) On the graduate level a progressive increase has occurred in the number and quality of applicants in successive years of the School's existence, and it has been possible to arrange for a modest expansion in this phase of the resident teaching program.

(3) Increased interest is being shown by graduate applicants in instruction leading to the Doctor of Philosophy degree. Sixteen of the graduate students now in residence are candidates for that degree. It is apparent that the School is assuming an important role in preparing teachers in this field.

(4) The School has assumed an important place in the educational structure of the University through an increase in out-of-college registrations from 24 during the academic year 1945-46 to 622 registrations during the past academic year.

Undergraduate Academic Program

Within the five-year span of its existence, the School has been alert to improve the nature of its curriculum. The Curriculum Committee of the School has sought to recommend changes which reflect not only the needs of education in the ever changing field of industrial and labor relations, but also the needs of our present day society. Experiences of early graduates of the School have also served as a guide to curriculum improvement.

Significant changes in the undergraduate curriculum include more emphasis on course work in American Ideals and the Development of Economic Institutions and the addition of new general education requirements in the Humanities.

The curriculum of the School has reflected not only the broad range of course offerings available in the University, but also specialized course offerings by the School. However, the basic philosophy of the curriculum has remained unchanged—that education must provide a base for effective citizenship and a professional competence and understanding of the forces and problems which characterize industrial and labor relations.

Graduate Academic Program

During the year just completed instruction was expanded and new requirements established for the degree of Master of Science in Industrial and Labor Relations. The program leading to this degree is designed to meet the needs of students who have not had substantial previous academic specialization in this field and who seek a broad preparation in industrial and labor relations which will augment undergraduate training in engineering, business administration, etc. The Master of Science degree and the Ph.D. degree are being continued as the programs designed for those who are academically prepared for graduate specialization in one or more of the areas of instruction within the field of Industrial and Labor Relations.

Library Developments

The School considers the library as an integral part of resident instruction and offers students guidance and training in the use of materials and sources. During the past year a formal course on Sources and Materials in Industrial and Labor Relations was developed and taught by the librarian. The reserve book service and loan service of the library has reflected an increased student use of library materials.

Activities of the library have been guided to a great extent by the fact that much of the School's research and instruction requires accessibility to a wide range of published and documentary material. Primary objectives of the library, during the School's first five-year period, have been to: (1) meet the responsibilities placed upon it by providing intensive coverage of published material in industrial and labor relations, (2) devote special attention to developing

the foundation for a Labor-Management Document Center of documentary and source materials, and (3) offer an adequate program of student guidance and reference service.

Cooperation with Business, Labor, and Government

The dynamic nature of the field of industrial and labor relations with the basic importance of a fundamental knowledge and understanding of human relationships makes it imperative that teachers and students in industrial and labor relations have continuing contact with practical experience. The staff and student body of the School appreciate the cooperation received from business organizations, labor unions, and governmental agencies in making practical experience available to the members of the staff and student body.

The School has benefited from the cooperation of labor, business, and government in supplying a constant flow of speakers and lecturers for utilization in appropriate school courses. It is essential that staff and students be kept up-to-date, but it is often difficult or impossible to obtain from the field of practitioners appropriate members of the permanent staff. Consequently, with the cooperation of the groups indicated, the system of visitors and lecturers has been of great value to the School. Special appreciation is due to Mr. A. L. Kress, a consultant in the field of wage and salary administration, and to the firm of Marsh and McLennan for special instruction in the fields respectively of wage and salary administration and of health, welfare, and benefit plans.

The increasing interest in placement of students on a permanent basis and for summer work-training by industry, labor, and government is encouraging. The School is indebted to all groups for their cooperation.

The School's Student Body

By virtue of its experience, maturity, and interest in developing professional competence, the student body continues to serve as a stimulating challenge to the School. Upon the initiative of the students, annual conferences are held which draw to the campus leaders in the field of industrial and labor relations. The student body has also developed a speakers' bureau to assist in publicizing the School's activities. Increasing interest has been demonstrated by the student body in University athletics, fraternity life, and social affairs. A marked contribution to the School's progress has been made by the student organization, a representative body for students of the School. During the past year a local student-faculty chapter of the Industrial Relations Research Association was established at the School.

Scholarships

An increasing interest by individuals and organizations to assist with the financial needs of students has been demonstrated during the past year. The School received from the Sidney Hillman Foundation a grant of two thousand dollars for scholarships. The Gimbel Foundation contributed one thousand dollars to the ILR Scholarship Fund; a one thousand five hundred dollar grant was received from the Borden Foundation to provide an annual scholarship prize of \$300 for a five-year period. Elliot B. Doft, a former student of the School, has provided a grant in honor of his brother, killed in World War II, to be known as the Frank J. Doft Memorial Fund. Mr. Harry Alpern, Secretary-Treasurer of the Pal Blade Company, has contributed an additional five hundred dollars for use in the Daniel Alpern Memorial Prize Fund. The School also received one thousand five hundred dollars from the Mailman Foundation, five hundred dollars from the Richard Koret Foundation, and five hundred dollars from the Kraus Foundation for use in the Daniel Alpern Memorial Scholarship Fund.

Local No. 3 of the International Brotherhood of Electrical Workers, AFL, added two thousand four hundred dollars to the Father William J. Kelley, O.M.I. Scholarship Fund for sons and daughters of members of Local No. 3, I.B.E.W., which was established during the academic year 1948-49 in honor of the former chairman of the State Labor Relations Board. Recipients of the

scholarships are to receive \$1,200 annually through completion of the bachelor's degree. One student completed his first year of training at the School last term, and a second recipient of the Father Kelley Scholarship will be announced this summer. It is expected that this program will be expanded until four such scholarships are in effect. A number of additional contributions were also received by the School from several individuals who were interested in scholarship activities.

Placement and Alumni Relations

Early graduates of the School found little difficulty in obtaining employment in a relatively tight labor market; more recent graduates have experienced more normal conditions. Most of the graduates of the School obtain appropriate types of employment. The School's 1950 graduates are entering a relatively favorable job market, and the majority are being placed in worthwhile employment.

The School recognizes that it must give continued attention to the development of long-term placement plans. Such plans must establish relationships with increasingly greater numbers of potential employers—labor unions, government agencies, industrial employers—not only in the State of New York but elsewhere in the nation. Moreover, equivalent attention must be given to the effective counseling and development of graduates so that their preparation will reflect the long-term needs for employment and effective living, plus development of individual talents to cope with the unique specialties in this field. Counseling must give proper recognition to the fact that students of the future will be more youthful upon graduation. These students must contemplate a period of apprenticeship or maturation before they are permitted an opportunity to work on the professional level in industrial and labor relations.

Graduates of the School now number 316 individuals. An alumni organization is developing; during the past year alumni were informed of the School's activities and of new trends in industrial and labor relations via a monthly newsletter. There is real recognition that alumni of the School can perform important placement referral and public relations services.

EXTENSION ACTIVITIES

Major formal programs conducted by the Extension Division in its fourth year of operations totaled 299. This expansion of activities reflected growing demands for adult educational services from labor, management, governmental, and educational groups alike.

Major Emphasis of Extension Activities

Continuing efforts toward developing mutual understanding through education in industrial shops, retail stores, and offices received major attention. To meet this problem a number of labor unions at both the state and local level called upon the Extension Division for educational programs in grievance procedure, human relations, and other subjects which might increase the effectiveness of their shop stewards and local officers. In like fashion numerous management groups turned to the School for assistance in the development of programs on the human problems of supervision.

The Extension Division provided several programs on welfare and pension plans as national attention centered on this subject. Growing recognition that the public concern in collective bargaining transcends the interests of the contending parties caused a number of upstate communities to request classes and lecture series on the community's stake in labor-management relations.

Communities Served

Formal activities were conducted in 34 communities throughout the state, in addition to informal miscellaneous services in scores of other communities. Programs in the various New York boroughs were supplemented by offerings in suburban communities such as Farmingdale, Mineola, and White Plains. In the Capital area, educational services were made available in Albany, Amsterdam, Glens Falls, Green Island, Rensselaer, Schenectady, Troy, and Watervliet.

In the Central and Western areas of the state, programs were conducted in Batavia, Binghamton, Buffalo, Corning, Cortland, Dunkirk, Elmira, Farnham, Geneva, Hornell, Ithaca, Jamestown, Little Falls, Niagara Falls, Oneonta, Rochester, Seneca Falls, Sidney, Syracuse, Utica, Waverly, and Wellsville.

Types of Program

In each community extension programs have been developed on request and after discussion with interested groups and community leaders. Formal programs have been of four general types:

- a) Lecture series for labor, management, and the public.
- b) Community courses for labor, management, and the public.
- c) Specialized programs to meet specific educational needs of labor and management organizations and other groups interested in industrial and labor relations.
- d) Conferences, institutes, panel discussions, radio presentations, and similar programs.

Public Lectures

Seven public lecture series were conducted by the School in upstate communities. In five communities, Corning, Dunkirk, Geneva, Oneonta, and Waverly, each series was integrated around the central theme: "The Community Stake in Labor-Management Relations." In addition, members of the School staff provided a series of three lectures on industrial and labor relations topics as part of the Community Forum at Seneca Falls. A series of six lectures on "Human Relations" was given in Elmira.

Community Courses

Approximately one-fourth of the programs conducted by the Extension Division were planned as community courses, usually meeting one evening a week for a period of from six to ten weeks. Such classes attracted a cross section of representatives from labor, management, government, and the public. An attempt was made to diversify these programs in the larger industrial areas so as to appeal to persons in various occupations and with varying levels of work responsibility. A total of 51 such courses was conducted in ten communities with a registration of more than 1,800.

Specialized Programs

The demand for educational services of the School to meet specific problems of labor and management organizations and other groups interested in industrial and labor relations resulted in a total of 161 specialized programs for such groups with a registration of 4,551. These services included classes, seminars, and lecture-discussion series. The subject matter of each such program was closely related to the needs and to work situations of those enrolled. Management and government groups, AFL, CIO, and independent unions all participated substantially in these programs.

Subjects Offered

In community classes and specialized programs the subject matter was adapted to meet needs ranging from those of persons with little or no training or experience to those of specialists in some phase of industrial and labor relations. Subject matter coverage for each course was limited to the number and variety of topics or problems which could be adequately discussed and integrated in the allotted six to ten sessions. For purposes of this report, however, these topics can be grouped under the following major subject matter areas: Human Relations, Grievance Procedure, Labor Relations Law, Public Relations, Labor Market Economics, Labor Union History and Organization, Contract Negotiations, Mediation and Arbitration, Personnel Administration, Social Security and Protective Labor Legislation, and Community Problems in Industrial and Labor Relations.

A substantial contribution to more effective labor-management relations can be provided through educational programs which are designed to develop skills

rather than to cover subject matter content alone. Therefore, some of the programs conducted by the Extension Division have been concerned with such tool subjects as conference methods, role-playing, and parliamentary law and public speaking in the industrial and labor relations setting.

Extension Conferences

A number of extension conferences or institutes were held on the Cornell Campus and in upstate communities. Among the groups served through this medium were labor union leaders, plant training directors, hospital administrators, and teachers of labor economics.

As a step toward development of more effective work with labor organizations, seven international and regional educational directors of various unions visited the campus for a one-day conference. The group met with the Extension staff to discuss educational needs of labor groups and methods by which the School could help meet these needs while accomplishing the objectives for which it was established.

Statistical Summary of Extension Activities

A brief statistical summary of extension activities follows:

<i>Type of Program</i>	<i>Number of Programs</i>	<i>Number Enrolled</i>
Community Lecture Series	7	458*
Community Classes	51	1828
Specialized Programs	161	4551
Conferences and Institutes	10	254
TOTALS	229	7091

*Aggregate average attendance.

Cooperation with Government Agencies

Cooperation with federal and state governmental agencies provided a significant part of extension activities. The Extension Division in cooperation with the Training Division of the New York State Civil Service Department and representatives of other state departments, developed materials and provided instruction in fundamentals of supervision for 63 selected supervisors from various divisions of the state government. This program consisted of 16 weekly sessions of two hours each. The School also cooperated with the New York office of the Atomic Energy Commission in the conduct of six sessions on various industrial and labor relations problems for 27 members of the AEC staff. These sessions initiated a long-range management development program in which the School has been requested to assist. Eight sessions on conference methods were provided for nineteen staff members of the New York Regional office of the federal division of Old Age and Survivors Insurance. The School held on the campus a five-day institute for sixteen social security administrators. This institute was planned in cooperation with various state and federal agencies concerned with social security.

Three conferences, each of two weeks' duration, were conducted on the campus for leaders of German industry, unions, and governmental agencies who were brought to this country by the United States Department of Labor as part of the democratization program. In all, 66 Germans participated in these conferences which stressed such subjects as the American Labor Movement, Collective Bargaining, the American Urban Community, American Institutions, Production and Trade, Labor Law and Legislation, American Constitutional Government, and Handling Labor-Management Differences.

Cooperation with Educational Institutions

A number of programs were conducted with the cooperation of other educational institutions and agencies. Adult and vocational education representatives of the State Department of Education gave advice and consultation on community needs and cooperated in the development of a number of community programs.

At the request of the New York City Board of Education, a course for teachers was provided on "The Role of Labor and Management in the United States Economy" and in-service credit was given for those who attended. In-service credit was also given by the Board for a course in Human Relations for teachers requested by the Teachers Guild of the American Federation of Labor. At Waverly students in one of the high school classes were required to attend some of the public lectures conducted in that community by the Extension Division and to report on the lectures as part of their class work. Other units of the State University of New York provided classroom facilities and cooperated in planning activities to meet local needs. In some instances, extension offerings were planned to supplement the educational programs of State University units. The public lecture series at Oneonta, already cited, was planned in cooperation with representatives of the State Teachers College at Oneonta and was held in the auditorium of the Teachers College; students of one class were required to attend. Students in a class at Oswego State Teachers College were brought to the Cornell campus for a one-day conference on industrial and labor relations subjects conducted by the School faculty. The Extension Division also cooperated with the Fredonia State Teachers College in presenting three radio panel discussions on industrial and labor relations subjects.

Materials Developed

Further progress was made in the development of materials useful for adult education in industrial and labor relations. Guides for conferences on the human problems of supervisors in retail stores and also in government service have been developed and tested in extension programs. Materials on welfare and pension problems and on human relations have been prepared from summaries of discussions or presentations in extension programs. Course outlines and materials developed for extension classes have been edited and put in form useful for teachers and other persons concerned with adult education in the field of industrial and labor relations. Indexes of topics in collective bargaining and personnel administration have been compiled as an aid to planning by field representatives and teachers and to serve as a basis for further development of materials. The cataloging of library and course materials in the various fields of industrial and labor relations has continued and much of this material has been made available to extension teachers and students.

Extension Teaching Staff

Teachers and discussion leaders for extension courses have been recruited either from the School staff or from competent personnel in localities where the programs were conducted. Ninety-six teachers comprised the instructional staff for community classes and specialized programs. Of these, eighteen were members of the School staff. The remaining 78 instructors were drawn from a variety of backgrounds and occupations, principally from other educational institutions and government agencies, and were hired for the specific course or courses they conducted. Of this group, 38 had taught for the Extension Division in prior years. The educational program has been greatly enhanced by the development of continuing relationships with such persons who are familiar with the School's purposes, policies, and procedures.

Regional conferences and a two-day state-wide conference of extension teachers were planned to help the teachers to further orient themselves to the School's program and to provide an opportunity for them to discuss mutual problems and teaching methods found helpful in the solution of these problems.

RESEARCH AND PUBLICATIONS ACTIVITIES

During the early years of the School much of the staff time available for research was of necessity devoted to the preparation of materials for teaching. This was a natural development resulting from the fact that the teaching program was the original focus of attention and effort. The addition to the staff

of a full-time Director of Research and Publications and additional staff members has made possible considerable progress.

Organization and Objectives

Beyond the general statement that the School's objective is generally to improve labor-management relations, the Legislature, in creating the School, wisely refrained from trying to define precisely the mode of operation of the research program. The spirit of the legislation and the reports of the Joint Legislative Committee on Industrial and Labor Conditions reflect an appreciation for the values of careful, impartial fact-finding and the values of penetrating analysis of the facts in the search for truth. This spirit has permeated the efforts of the School staff and the development of policy and program.

This general statement of purpose has been implemented by the development of certain policies, the more significant of which are:

1. There should be a close relationship between teaching and research with the same staff generally engaged in both activities, although not necessarily at the same time. Therefore, no large research staff independent of the teaching faculty is required.
2. Research effort will be encouraged in each of the subject matter areas in Industrial and Labor Relations.
3. Appropriate projects of different types may be undertaken with School support with appropriate emphasis both on fundamental research and on applied research.
4. Although members of the staff are given considerable latitude for individual decision in the selection and development of projects, an interdisciplinary approach is encouraged in instances and to the extent that teamwork appears desirable.
5. To the extent possible and desirable from the standpoint of the School, members of the staff will be released periodically from teaching responsibilities in order to give substantial time to research.

Within this framework, the Director of Research coordinates the efforts of individual staff members, helps maintain contact with other research groups and agencies, and helps to stimulate and facilitate efforts by staff members. A faculty committee on which the Dean and Director of Research serve as ex-officio members also aids in the development of the School's research program.

Publications

As a means of disseminating the results of its work the School's publications include:

- 1) A series of books published by the Cornell University Press
- 2) A quarterly professional journal, "The Industrial and Labor Relations Review"
- 3) Research bulletins
- 4) A series of extension bulletins which present information in a non-technical style and summarize the results of previous research and published material
- 5) Conference reports, excerpts from research studies, and general information items about the School

Some of the projects undertaken during the past three years, as might normally be expected, are still in process. The projects completed and appearing in published form, therefore, do not reflect all the effort put into research.

The first of the series of books, Professor Vernon Jensen's study entitled, "Heritage of Conflict," a history of labor relations in the non-ferrous mining industry, was published early in 1950. Professor Jesse Carpenter's study of Employer Associations and Collective Bargaining in the New York Metropolitan Area was published in June 1950.

The "Industrial and Labor Relations Review" occupies a unique place in the School's research and publications activities as a professional journal devoted to scholarly treatment of industrial and labor relations problems, current developments, and information on pertinent publications. The REVIEW has more than

2,000 subscribers and has had a favorable reception by scholars, lawyers, business and union leaders. Articles for publication have come from representatives of all the groups which constitute its readers.

Research bulletins published to date include:

<i>Title</i>	<i>Author</i>	<i>Date of Publication</i>
Training in New York State Industries	John M. Brophy	June 1949
Apprenticeship in Western New York State	Edward B. Van Dusen	June 1949
Welfare Collective Bargaining in Action: A Case Study	Morris Sackman	July 1949
Union Security and the Taft-Hartley Act in the Buffalo Area	Horace E. Sheldon	August 1949
Combating Discrimination in Employment in New York State	Felix Rackow	November 1949
Negroes in the Work Group	Jacob Seidenberg	February 1950
Extension bulletins published to date include:		
Industrial Training: A Guide to Selected Readings	John M. Brophy and I. Bradford Shaw	August 1948
You Can't Hire a Hand, and Other Essays	Temple Burling	February 1950
Our State Safety and Health Laws	Lois S. Gray	March 1950
Sources of Information on Union-Management Relations	J. Gormly Miller	March 1950

Projects Currently Under Way

<i>Title</i>	<i>Staff Member Responsible</i>
Public and Private Plans for Social Security	Professor McConnell
Union-Management Relations in a Plant with Labor-Management Production Committees	Professor Whyte
A Case Study of the Relationship of Union Leaders to Rank-and-File Members	Professor Whyte
Procedures and Techniques Developed by Labor-Management Safety Committees	Professor Jehring
Labor-Management Relations in Nonferrous Mining Industries 1930-1950	Professor Jensen
Development of Arbitration as a Means of Settling Industrial Disputes	Professor Carpenter
Auburn Labor Market Study	Professor Adams
Worker, Management and Patient Relationships in a Hospital	Professor Burling
Development of Training Materials for Supervisors in Retail Trade	Professor Brooks
Survey of Wage Survey Techniques Used by Management and Trade Associations	Professor Tolles
Private Pension Plans	Professor McConnell
Employee Attitudes in a Medium-Sized Hospital	Mr. Puchek
History of Important National and International Unions	Professor Brophy
History and Development of Unionism in New York City Department Stores	Professor McConnell
Role of the Controller in Industrial Relations	Mr. Billmyer
	Professor Estey
	Professor Brooks

OTHER DEVELOPMENTS

Industry, labor, and government groups have encouraged the School to expand its program of special on-campus institutes and seminars which are de-

signed to meet specific needs. Accordingly, the School is developing further this phase of its work.

During the 1950 summer session the School is conducting the Fourth Annual Conference of Plant Training Directors and a Workshop for Hospital Administrators. Members of the United Steelworkers of America locals in New York State are scheduled to attend a one-week Labor Institute at the School; leaders of New York State Federal Labor Unions, AFL, will also attend an educational conference conducted by the Extension Division. Other special programs include a professional conference for industrial and vocational education teachers, a fall conference on teaching of labor economics, and an additional two-week conference for hospital administrators.

A special seminar in Personnel Administration for business and industrial personnel, held during the 1949 summer session, proved to be highly successful. The seminar is to be repeated during the 1950 summer session and is designed to provide persons in the field with an opportunity to become acquainted with personnel principles, practices, problems, and literature in the field of personnel management and industrial relations.

A one-day conference was held on the campus with labor, management, and government specialists on research in private pension, health, and welfare programs; members of the Central New York chapter of the American Society of Safety Engineers participated in a campus conference which included a trip through the Newman Laboratory of Nuclear Studies.

In view of the growing interest in providing instruction in industrial and labor relations in secondary schools, a course entitled, "Sources and Materials for Teaching Social Studies," will be offered during the summer session for social studies teachers interested in the development of course material.

FUNCTION OF THE SCHOOL DURING A NATIONAL EMERGENCY

Recent international events are of such a nature that the School of Industrial and Labor Relations has recognized the necessity of taking immediate action to most efficiently serve the citizens of our state and nation in a war economy.

Without disrupting its present program the School has taken certain specific steps to assure that its resources are of maximum usefulness in the event of further allocation of national resources toward war preparation.

Among these steps are the following:

- (1) The library is preparing a listing and description of sources of information valuable to persons who find it necessary to acquaint themselves with the experiences of World War II as they relate to the present crisis.

- (2) The staff of the School is making an analysis of the experiences with manpower mobilization in the Buffalo area—one of the principal war production centers during World War II. This project is being developed with cooperation from various agencies of the federal government and a high degree of interest by the National Security Resources Board.

- (3) Following discussion with representatives of the National Security Resources Board, the School is moving immediately to (a) prepare a manual as a guide to preparation of instructional materials, and (b) to be prepared to follow this with specific training materials for certain key occupations if the emergency develops further.

- (4) The School is proceeding at once to check with the armed services and various agencies of the state and federal government to determine to what degree and in what specific instances such agencies will wish to utilize the School's services for short-course training programs on topics such as: training of supervisors; mobilization of community resources; programs for training directors on preparation of instructional materials; the role of union leaders in a war-time economy.

The timing and sequence of events in the present and prospective emergency cannot be completely foreseen. It is recognized, however, that prolongation of an emergency would curtail the normal type of on-campus undergraduate and graduate education programs, would modify the nature of the extension pro-

gram, and would require the normal research program of the School to be replaced with one geared to the needs created by the emergency. Consequently, the School is already well along with the development of plans for adjustment to changing conditions.

M. P. CATHERWOOD,

Dean of the New York State School of Industrial and Labor Relations.

APPENDIX XVIII

REPORT OF THE DEAN OF THE SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION

To the President of the University:

SIR: I have the honor to present this report of the School of Business and Public Administration for the academic year 1949-50.

THE STUDENT BODY

At the beginning of the academic year, 123 students were registered for full-time instruction in the School. The second-year class numbered 50, all of whom subsequently obtained their Masters' degrees in June, 1950. In the first-year class, there were 73 students of whom 25 were double registrants from the following undergraduate divisions of the University: Arts and Sciences, 20; Agriculture, 1; Engineering, 3; and Hotel Administration, 1. In the student body as a whole, 32 different undergraduate institutions were represented, including 5 foreign institutions.

In considering admissions for the coming year, it has become quite apparent that an increasing proportion of our good applicants are coming to us from the undergraduate divisions of Cornell under the double registration arrangement with those divisions. We have reached the point at which students who have come to Cornell as freshmen planning to double register in their senior year are now reaching us in increasing numbers, the School having been in operation four years. Under the allotment system now in effect, double registrants do not count in our allotment. They are included in the allotment of the undergraduate division from which the student expects to receive the baccalaureate degree. Only when they return to us in the second year as candidates for Masters' degrees do they count in our allotment. Consequently, while we shall have a large first-year class during the coming year, the increasing proportion of the class represented by the double registrants is likely to result in a technical shortage in the extent to which we fill our allotment. Hereafter, I believe it will be necessary for us to claim full credit for such double registrants in view of the fact that all of their classroom work is taken in the School of Business and Public Administration. It now seems probable that we shall have approximately 130 students receiving instruction in the School during 1950-51, but of these approximately 35 will be double registrants. Consequently, we shall fall somewhat short of our formal allotment of 110-115 students.

The quality of our student body is, on the whole, very good indeed. The employment record of the graduating class is excellent, approximately 80% of the graduates having accepted employment by Commencement Day. We have received excellent cooperation from Mr. John Munschauer, Director of the University Placement Service, and shall continue to work closely with him during the coming year.

The performance of our students in the Junior Management Assistant Civil Service Examination, given by the U.S. Civil Service Commission last fall under its program of attracting college graduates to the federal service, has been gratifying. Forty per cent of our ten students who took the examination passed it,

one of them being tied for the top score. This record is really outstanding in view of the fact that while approximately 12,000 American college students took the examination only about 250 passed it. As a consequence, the prestige of the School in federal government circles is now quite high. All four of the students passing the examination received offers of employment in the federal government.

THE FACULTY

Late last summer, Professor Wallace S. Sayre resigned to accept a position at The City College of New York, and Associate Professor C. Hart Schaaf resigned to become Deputy Executive Secretary of the United Nations Economic Commission for Asia and the Far East. The loss of these two men was, of course, a heavy blow. Fortunately, we were able to bring Edward H. Litchfield to Cornell for the second term as Visiting Professor of Administration, and I am very happy to report that he is now a regular member of our Faculty with the rank of Professor. Professor Litchfield brings to Cornell an unusual background of training and experience, including four years on the staff of General Lucius Clay as Director of Civil Affairs of the U.S. Military Government in Germany. His presence on our Faculty will make it possible to move ahead with the work in international administration which was interrupted by the departure of Associate Professor Schaaf.

During the year, the Faculty elected to membership Associate Professor Elias Huzar of the Department of Government and Assistant Professor W. David Curtiss of the Law School. Both men have been giving valuable instruction to our students, and our Faculty felt that both are entitled to Faculty membership.

During the second term, Professor Delbert J. Duncan was absent on leave to teach at the University of California and do some research work in the economics of the petroleum industry on the Pacific Coast. Naturally, we want to grant leaves of absence to Faculty members when opportunities for diversifying their training and experience present themselves. At the same time, it is difficult to arrange leaves of absence in view of the small size of our Faculty, a Faculty barely adequate to handle the range of course offerings which the School must give. This is particularly true because we have been able to fill only one of the two vacancies resulting from the resignations of Professors Sayre and Schaaf.

THE SECOND ANNUAL CONFERENCE

In February the School conducted its second annual management conference on "Security in an Enterprise Economy." The arrangements for the conference and its general conduct were handled almost entirely by student committees. The conference ran for two days. It was well attended by students and attracted between thirty and forty persons largely from industry—many of them alumni of Cornell. The general reaction to the conference was highly favorable. The formal papers had been carefully prepared by most of the speakers, and the discussion periods were lively and stimulating. We plan to publish the proceedings of the conference in the near future. It is now our intention to have a similar conference in February, 1951, a student committee already being at work on the matter.

GENERAL PROGRESS OF THE SCHOOL

I am happy to report that in April the School was elected to membership in the American Association of Collegiate Schools of Business. This election followed an examination of the School by a committee of deans from the Association. I believe that Cornell's School of Business and Public Administration is the youngest school to gain admission to the Association. Our program of instruction and the quality of our Faculty have made a most favorable impression on other members of the Association, just as our graduates have made a similar impression on their employers. All of us in the School take real pride in the progress the School has made during its first four years. Nevertheless, we all realize that, if such progress is to continue, much remains to be done. Last fall

I presented to the finance subcommittee of the Executive Committee of the Board of Trustees a statement of our financial needs as we see them during the coming years. I know that the figures I presented came as somewhat of a surprise to some members of the subcommittee, and I appreciate the fact that we are not alone at Cornell in having very real financial needs. I believe, however, that I must emphasize the inescapable fact that the School of Business and Public Administration must have additional funds if it is to progress and enhance its reputation as an advanced professional school. The exact nature of our needs was covered in my presentation to the subcommittee, and I shall not repeat them here.

At present the entire administrative burden of the School is borne by the Dean and the Secretary, Mrs. Frances K. Rea. This results from the fact that Professor Sayre, who left us last year, had also served on a twelve-month basis as Director of Student Personnel, supervising student placement and assisting with admissions. Because of the budget situation, it has not been possible to replace Professor Sayre with someone on a twelve-month appointment. In the near future, it will be necessary for the School to add at least one person to its staff who, in addition to myself, will serve the University on a twelve-month basis.

PAUL M. O'LEARY,

Dean of the School of Business and Public Administration.

APPENDIX XIX

REPORT OF THE DIRECTOR OF THE SCHOOL OF EDUCATION

To the President of the University:

SIR: I have the honor to present the report of the School of Education for the academic year 1949-50.

The work of the School of Education this year has been characterized by expanding services to the University and an increase in the number of students, on both the graduate and undergraduate levels, seeking admission to courses in education. For the first time special courses were offered to the large number of graduate students in the University, outside the School of Education, who expect to become professional college teachers. One hundred and sixty-eight students took advantage of one of these offerings.

The large percentage of graduate students in the School creates a burdensome load for the Faculty. As indicated in the following table of enrollment, 61 of the 183 majors in education are candidates for the doctorate, and 130 are candidates for a Master's degree. This does not include 182 extramural students and 646 total enrollments in summer session education courses at Cornell. Most of these students are also candidates for advanced degrees.

TABLE I

GRADUATE STUDENT ENROLLMENT

	<i>First Term</i>	<i>Second Term</i>	<i>Total</i>
I. Number of different students registered:			
a. With Education* as a major.....	129	157	183
b. With Education* as a minor.....	22	17	29
II. Number who are candidates for:			
a. Ph.D. or Ed.D. (Major in Ed.).....	48	58	61
b. Ph.D. (Minor in Ed.).....	7	6	11
c. M.A. or M.S.....	45	53	63
d. M.S. in Ed. or M.Ed.....	34	48	57
e. Other Masters' degrees.....	8	3	10
f. No degrees.....	9	6	10
III. Geographical Distribution			
a. Number of different states represented.....	29	29	30
b. Number of foreign countries represented.....	7	5	7
c. Number from New York State.....	70	108	127

*All divisions in School of Education.

DIVISION OF INDUSTRIAL EDUCATION

In addition to their regular assignment of providing advanced work for students in the field of industrial education, both on and off campus, the staff has been active as consultants in such important surveys as that of New York City and Arkansas. Particular attention has been given to national conferences and an enriched summer session featuring the outstanding leaders in the field of industrial education.

DIVISION OF HOME ECONOMICS EDUCATION

The division of home economics education, working jointly with the United States Office of Education and the New York State Department of Education, successfully conducted workshops and conferences on both national and state levels for workers in the field of home economics education. The staff members have served on state and national research committees and have participated in professional conferences. With the assistance of state funds, special research projects have been undertaken in adjacent communities. Approximately fifty per cent of home economics graduates employed as teachers in the public schools of the state were visited by members of the staff as a part of an in-service training program.

DIVISION OF RURAL EDUCATION

The number of undergraduates taking courses in rural education continued to increase. Aside from the heavy extramural and summer session enrollments, 786 undergraduate students took courses in this department. A new departure in the training of teachers of vocational agriculture was launched in 40 rural schools of the state, with marked success. Out of 1,000 that applied to the department for help, over 300 students were given special remedial training in reading. Special grants for research in the fields of vocational agriculture, conservation education, and extension education have been received, and the work is proceeding under the direction of members of the staff.

DIVISION OF EDUCATION IN THE ENDOWED COLLEGES

Th work in education in the College of Arts and Sciences has been characterized by an increase in the number of students seeking professional courses in education and by closer working arrangements with those departments whose major students desire to teach in the secondary schools and colleges. The heavy demand on the limited staff by both graduate and undergraduate students sug-

gests the need for expansion of the professional staff as well as the quota in this division. In my opinion, the College of Arts and Sciences should increase its offerings in education.

EDUCATION PLACEMENT BUREAU

During the past year the Educational Placement Bureau has been requested to recommend candidates for 1,568 positions on all academic levels. This is approximately the same number of requests as were processed last year, with the significant growth in the percentage of college placements continuing. Of the 224 people placed, 75 of them were on the college level. It is becoming more and more difficult to place teacher candidates with only the Bachelor's degree in the Arts and Sciences fields, but this is not true for vocational agriculture and home economics, although students are tending to remain for a fifth year in these fields also. Starting salaries in all fields remained high. The relationship between the Placement Bureau and the schools of the state continues to be very satisfactory, but the growing demands on the Bureau indicate the need for additional clerical help at an early date, if this good will is to continue.

FACULTY CHANGES

Professor Roy A. Olney died suddenly from a heart attack while on duty, October 7, 1949, and Associate Professor E. R. Hoskins was approved by the faculty to direct the work in vocational agriculture until a permanent appointment could be made.

Edward Mott was appointed September 1, 1949, as instructor to assist with the teacher training program and to publish *Horizons* during the absence of William Kunsela.

Theodore Eckert was appointed as assistant in the field of nature study to replace Assistant Professor Schmidt as supervisor of teacher training in science.

Assistant Professor L. H. Elliott was promoted to the rank of Associate Professor of Secondary Education as of April 1, 1950.

Professor M. D. Glock was appointed director of the newly created University Testing and Service Bureau, June 12, 1950.

A. L. WINSOR,

Director of the School of Education.

APPENDIX XX

REPORT OF THE DIRECTOR OF THE SCHOOL
OF NUTRITION

To the President of the University:

SIR: I have the honor to present the report of the School of Nutrition for the year 1949-50.

RESEARCH

The School has continued to devote major attention to research on those problems the solution of which requires an integrated attack by investigators representing various fields of science and technology. The more important accomplishments during the past year in this general area are here summarized.

The data collected in the family community nutritional status survey of the Town of Groton have been analyzed and prepared for publication. The findings will be reported in a series of six papers in the *Journal of the American Dietetic Association*, beginning in October. At the time of the survey the community was relatively prosperous and this prosperity was reflected in food intake. In general the people appeared to be well nourished. The records indicated, however, that some families and individuals in the survey group were not getting adequate amounts of certain foods. Among the individual nutrients, calcium was the one in shortest supply relative to needs. In general, families which produced a considerable share of their own food seemed to enjoy better diets than did those who bought all or nearly all the food they ate. The farm families had the best diets, the village families the poorest, with the rural non-farm families in the intermediate position. Young children were the members of the families with the best food intake, with the other male members ranking next. Adolescent girls and women of child-bearing age had the poorest diets in relation to needs. Individual cases of poor intake showed that economic status is by no means the sole factor governing nutrition and that there is still plenty of need for effective nutritional education. The medical inspections revealed comparatively few physical signs of nutritional deficiencies, but they did show that nearly 25 per cent of the adults were overweight, reflecting a nutritional problem of real importance in terms of health after middle life.

The School has cooperated in a study of the nutritional status of 350 students at the Cooper Union School in New York City, involving diet records and blood analyses in the fall of 1949 and spring of 1950, the medical examinations being made by doctors from the Cornell Medical School. The School has also assisted in the nutritional status study being carried out by the College of Agriculture Experiment Station as a Research and Marketing Project.

An active program of clinical research in the field of nutrition has been inaugurated, taking advantage of facilities which were made available last year in the Infirmary. The research team has consisted of resident physicians, the physicians guiding the medical program of the School, biochemists, nutritionists, and technicians. Of the patients studied this year, the following were hospitalized.

An obese patient with diabetes was followed for the express purpose of observing the effects of withdrawing insulin while she was on a reducing diet. When both calories and insulin were withdrawn sharply from this patient, acidosis did not occur; neither did glycosuria or hyperglycemia. The patient reduced weight according to a projected curve and maintained freedom from evident diabetes; she subsequently went through major surgical procedures without glycosuria or ketosis.

Another patient was studied for the purpose of determining emotional influence on appetite. A young woman, suffering from anorexia nervosa, was observed for three weeks, at the end of which time she refused further hospitalization.

Data obtained from this patient contributes valuable teaching material for the course in medical nutrition.

A young woman 31 years of age, having marked fluctuations in blood sugar levels, ranging from hypoglycemia with semicoma to hyperglycemia with acidosis in a period of a few hours, was admitted as a research patient for study of possible relationships between liver diseases and insulin effectiveness. During the early course of the study, it was determined that the liver played no active role in the dilemma, but that emotions did. The important finding with this case, however, was the effectiveness of the micro blood sugar method in standardizing a patient with diabetes.

The country-wide surge of medical interest in the steroids of the adrenal cortex reached its height during this academic year. The discovery that ACTH (adrenocorticotrophic hormone) when administered to patients, does, to a large extent simulate the effect of cortisone influenced the School of Nutrition to make a few observations of the effect of this hormone. Observations confirming many published reports have been made. One observation of the effect of ACTH on chronic myelogenous leukemia in the terminal phase was followed by startling improvement. This patient was given in addition to ACTH, 8 millicuries of P-32 with continued marked improvement; a most gratifying result, especially so because the patient was a Cornell student.

A short observation showed the action of ACTH on a young man with terminal ileitis which interfered markedly with nutrition to be without effect.

As the year closed, observations of a case of a 17-year-old girl having an established diagnosis of dermatomyositis were started. The effects of ACTH in this severe disease are under study—suffice it to say here that consistent improvement has occurred to date coincident with ACTH administration. Formerly this disease was considered fatal. The School is committed to further study of this individual.

In this last year of the industry-sponsored frozen food research program, studies of the impact of frozen foods and home freezers on consumers' food habits and of the economic aspects of locker plant operations have been completed and published in bulletin form. Data obtained from 682 freezer-user families during the period 1946-49 have provided much worthwhile information on the effect of freezers and frozen foods on food habits, suggestions of users for improvements in freezer design, preferences in packaging materials, etc. The following are a few of the findings: Over 95 per cent of the families felt that their purchase or rental of a freezer was a justifiable expenditure. Fifty-seven per cent thought the freezer saved them money. Most agreed that it raised their standard of living by making better foods available, while saving time and labor. The majority (60 per cent) did not increase their consumption of commercially frozen foods when they had a freezer. The usual reason given by those who did not use more commercially frozen food was that they preferred the foods they froze themselves.

Comparisons have been made of various thawing and reheating methods for frozen meats and pre-cooked frozen meats and vegetables. No important differences in vitamin content have been observed as a consequence of the thawing methods used. The flavor and appearance of meat cooked by dielectric heat were inferior unless some other source of heat was employed to brown the outer surface of the meat. The palatability of pre-cooked frozen vegetables was improved by reheating in a household oven or in a double boiler; the latter method required the most time but resulted in least weight loss. Dielectric heating was fastest, but caused the greatest amount of evaporation.

Other important research carried out during the past year has included correlated studies with chickens and microorganisms of the newer members of the vitamin-B complex, studies of the effect of processing and storage on enzymatic breakdown in frozen foods and experiments on the quality of these foods in relation to their microbiological flora, the development of techniques for using guinea pigs as pilot animals in lactation investigations, and studies of nutritional factors causing abnormal calcifications in organs and tissues. A recently inaugurated study deals with the possibilities of increasing milk consumption through

vending machine distribution, in the interests of both better health for the consumer and an expanding market for the dairy farmer. The purpose of this project, in which nutritional scientists, dairy technologists, engineers and extension specialists are cooperating, is to investigate the economic, psychological, sanitary, and mechanical aspects of machine vending, with the objective of obtaining more widespread distribution of the nutritional benefits of milk.

These various research activities during the past year have resulted in the publication of 24 reports in various scientific and technical journals.

INSTRUCTION

Two new seminar courses in the field of food science have been inaugurated during the School year. One deals with the biochemical aspects of food processing. The other is concerned with various technical problems of the food processing industry.

Registration during the year has been as follows:

	<i>Fall Term</i>	<i>Spring Term</i>
<i>Single Registrants:</i>		
Master of Nutritional Science.....	15	17
Master of Food Science.....	8	8
Special Students.....	3	3
TOTALS.....	26	28
<i>Double Registrants:</i>		
Master of Nutritional Science.....	8	10
Master of Food Science.....	5	5
TOTALS.....	13	15
The following degrees were awarded in the course of the year:		
Master of Nutritional Science.....	9	
Master of Food Science.....	4	
TOTAL.....	13	

The demands for graduates of the School, particularly for positions in the food and feed industries have greatly exceeded the supply.

NUTRITION COUNSELING AND DIET TABLE

These important services to Cornell students have been continued with the support of the generous grant for the purpose from Mr. Frank Gannett. At the Medical Clinic 130 new patients were counseled, involving a total of 376 consultations. The Special Diet Table served 14 men and 15 women in the course of the year.

EXTENSION ACTIVITIES

During Farm and Home Week the Staff of the School conducted a "Nutrition Clinic" daily, attended by approximately 650 persons. The examination of each included determination of blood sugar and hemoglobin, a chest X-ray and records of height and weight. General diet information was given and personal nutritional counseling was furnished to those desiring it.

At the request of M. L. Wilson, Director of the U.S.D.A. Extension Service, the School planned and conducted a five-day Nutrition Workshop for the extension specialists of the Northeastern States.

Members of the Staff of the School have assisted in the preparation of booklets on food and nutrition science for use in the public schools of the State. Three members of the Staff participated in the program of the Annual Conference of the Agricultural Institutes of the State. Various members of the Staff have given talks on food and nutrition to teachers, food processors, consumers, and other groups.

SPECIAL GRANTS

The State appropriation of \$100,000 to the University for the support of the School program was continued. In addition the following special grants were received:

\$5,000 from Mr. Frank Gannett for the support of the counseling service, the diet table and related research activities.

\$3,000 from the Philco Corporation for two research assistantships for the support of studies in the field of frozen foods.

\$1,500 from the Robert Gould Foundation for research in lactation.

\$11,000 from the Office of Naval Research for the support of studies of pre-cooked frozen foods.

\$5,000 from the Nutrition Foundation for studies of the newer members vitamin-B complex.

FACULTY CHANGES

The following members of the faculty resigned during the course of the year: Cornelius K. Cain, Assistant Professor of Chemistry; Vivian Lightbody, Research Associate in Nutrition; Nancy K. Masterman, Research Associate in Food; and Herbert Tremble Peeler, Research Associate in Nutrition.

The following new appointments have been made: Frederic W. Hill, Associate Professor of Animal Nutrition; and Odin Wilhelmy, Jr., Assistant Professor of Biochemistry and Nutrition.

L. A. MAYNARD,
Director of the School of Nutrition.

APPENDIX XXI

REPORT OF THE DIRECTOR OF THE SUMMER SESSION

To the President of the University:

SIR: I have the honor to present on behalf of the Administrative Board of the Summer Session the following report for the Session of 1949.

By action of the Board of Trustees, the Administrative Board was enlarged to include one additional appointment. Professor Robert A. Polson was appointed to replace Professor Loren C. Petry, whose term expired. Professor William F. Whyte was appointed to the new position.

For the first time since 1946 there was a sharp drop in total Summer Session enrollment. A decrease in undergraduate registration, coupled with the abandonment of the post-session program, was chiefly responsible for the lower figure. It is evident that, as the need for acceleration and the number of irregularities diminishes, fewer undergraduates are attending the Summer Session. In this and future sessions there will probably be an increasingly larger proportion of students at the graduate level. Within the total enrollment there was a decrease in the proportion of student hours in the University and Home Economics sessions, and an increase in the sessions in Agriculture, Hotel, and Industrial and Labor Relations. The University departments have lost student hours to the other units of the Summer Session for three successive years, a situation which must be carefully considered in future planning.

The 1949 curriculum was adjusted to meet the needs of a relatively smaller undergraduate group and a relatively larger group of teachers and other professional persons. Fewer basic courses were offered in engineering, in the social and natural sciences, and in the humanities. A larger proportion of the total offerings were of a type useful for graduate students, including workshops, seminars, and advanced laboratory courses. French and German for graduate students wishing to acquire reading proficiency, a course in experimental group dynamics, and one in audio-visual methods were offered, as well as work in such fields as children's literature, teaching as group counseling, the house and

family, and the teaching of earth science. For teachers a cooperative workshop in curriculum and another in the development of instructional materials were available. The Summer School of Industrial and Labor Relations sponsored non-credit institutes in such fields as personnel management, industrial education, and social security. Among the professional groups visiting the campus during the summer were supervisors and teachers of home economics, teachers of science, of agriculture, and of the social studies, extension specialists, and hospital administrators.

The experience of 1949 emphasizes the need, discussed in the report for 1947, for establishing a summer program of value and interest to teachers and professional persons. Such groups will be attracted to our Summer Session only if the curriculum is rich with opportunities for challenging and practical training. Some experimenting should be done with work offered in units shorter than the regular six-week period, and in the offering of non-credit programs for students interested in specialized training but not in academic credit.

The attached tables will give specific details on comparative enrollments, classification of students, and distribution of student hours.

TOTAL ENROLLMENTS

	1939	1947	1948	1949
Graduate and Special Students.	1462	1025	1224	1342
Undergraduates.	600	1700	1520	975
TOTALS.	2062	2725	2744	2317

UNDERGRADUATE CLASSIFICATION

Cornell University.	318	1416*	1229†	743
Other Institutions.	282	284	291	232

CLASSIFICATION OF TEACHERS ENROLLED

College and University.	105	117	113	154
High School and Junior High School. . . .	513	343	383	372
Elementary School.	73	48	55	72
Principals, Superintendents, etc.	63	61	83	49
Others (Jr. Coll., Normal Schools, etc.) . .	157	83	59	68
TOTALS.	911	591	610	715

*Includes 6-week Postsession enrolling 195 Cornell men.

†Includes 6-week Postsession enrolling 167 Cornell men.

CREDIT HOUR DISTRIBUTION

	1939		1947		1948		1949	
University.	6169	55.5%	10,904	70.7%	9132	61.7%	6977	54.4%
Agriculture.	3622	32.6%	2601	16.6%	3355	22.6%	3466	27.1%
Home Economics.	886	8.0%	1039	6.5%	1351	9.2%	1155	9.0%
Hotel.	435	3.9%	623	4.0%	396	2.7%	480	3.7%
Ind. & Lab. Rel.. . . .	...	...	393	2.2%	555	3.8%	749	5.8%

FREDERICK H. STUTZ,
Director of the Summer Session.

APPENDIX XXII

REPORT OF THE DIRECTOR OF MILITARY TRAINING

To the President of the University:

SIR: I have the honor to submit this report of the Department of Military Science and Tactics for the academic year 1949-50.

GENERAL

During the post war years prior to 1949-50, the ROTC program of instruction provided for "Branch Immaterial" courses throughout the two years constituting the Basic Course. This program provided for instruction of a general nature and common to all branches of the arms and services.

The Department of the Army modified this program, effective in 1949-50, so that "Branch Immaterial" instruction was offered during the first year of the Basic Course only, with fields of specialization commencing in the second year. This proved to be a great improvement over prior years, and second year students were much better oriented and grounded as to the subject matter offered by the branch of their choice in the Advanced Course.

Cadets who desired to transfer from one department or branch to another were allowed to do so within quota limitations at the end of their freshman year.

At a University Faculty meeting on March 8, 1950, authorization was given for the appointment of a committee of the Faculty to be known as the "Faculty Committee on Military Curricula." This committee is composed of four members of the Faculty, with the Dean of the Faculty and the Professors of Military, Naval, and Air Science as members ex-officio. The agenda for this committee includes:

1. Familiarization with all courses and methods, of instruction including programs and schedules, with recommendations to appropriate headquarters for modifications.
2. Study, recommendations and assistance regarding academic credit for courses taken in the Military Departments.
3. Recommendations concerning equalization of university requirements for men and women.
4. Study, recommendations and assistance regarding needed facilities for efficient operation of the three Military Departments.

This department regards the establishment of this committee as a distinct contribution by the University toward the continued improvement of the three military departments including courses, methods of instruction, and facilities.

Effective July 1, 1949, the Air R.O.T.C. became an independent and separate unit from the Army R.O.T.C. The two departments fully cooperated in the "pooling" of instructors when the subject matter presented by the two departments was common to each.

The Professor of Military Science and Tactics was chairman of a committee composed of one representative from each of the six Army Areas in the United States, which met at Fort Sill, Oklahoma, May 1 to 5, 1950. As a result of this conference, Federal funds became available for providing many appropriate training aids which previously had not been available. Included in these aids are numerous charts, survey material, and a fire direction kit, all for the Artillery Unit of the R.O.T.C.

Throughout the year, classes were kept to the minimum size consistent with the instructors available and the nature of the instruction. The lecture method of instruction was reduced to a minimum and in general, efforts were made to limit classes to 25 or 30 members.

The course in "Leadership, Drill, and Exercise of Command" was outstanding in both its preparation and execution. One hour a week throughout each of the

four years of the course was devoted to this subject. Competitive drills were conducted at the end of each term, awards were given and intense interest was displayed.

The R.O.T.C. library continued to improve by book additions and the standardization of cataloguing procedures made possible by personnel of the Cornell University Library.

In an inspection on May 12, 1950, Colonel J. B. Rasbach, General Staff Corps and Chief of the R.O.T.C. Branch at Headquarters, Army Field Forces, expressed himself in part as follows:

"... and was very much impressed with the military establishment you have provided to Cornell University. It is, by far, the outstanding organization visited to date by me and both you and the University must be rather proud of your military unit including its facilities and production of officers."

The annual Department of the Army inspection was held on May 18 and 19, 1950. The rating given by the Department of the Army was highest obtainable.

The annual Presidential Review of the R.O.T.C. was held on the University Quadrangle at 2:30 P.M., on May 26 with the N.R.O.T.C. and Air R.O.T.C. also participating. Awards were presented by Dr. C. W. de Kiewiet, Acting President of Cornell University, to students selected for outstanding performances within this department.

BASIC COURSE

The Basic Course is given to all cadets for the first two years as required by University regulations.

The following subjects were given in the Basic Course:

	<i>First Year</i> <i>Hours</i>	<i>Second Year</i> <i>Hours</i>
Elements of National Power.....	15	..
Evolution of Warfare.....	6	..
First Aid and Hygiene.....	6	..
Maps and Aerial Photographs.....	15	..
Military Organization.....	4	..
Military Policy of the United States, National Defense Act and R.O.T.C.....	6	..
Military Psychology and Personnel Management.....	8	..
Leadership, Drill and Exercise of Command.....	30	30
Tactics and Technique of Selected Branch*.....	..	60
TOTAL HOURS:	90	90

*Among the subjects covered in Tactics and Technique were:

- Organization of the Selected Arm or Service
- Materiel
- Service of the Piece
- Communications
- Instruments
- Motors and Transportation
- Materiel: Ammunition; Automotive; Artillery; Fire Control; Small Arms
- Organization and Signal Communications practice of Infantry, Armored, and Airborne divisions
- Property Accountability and Responsibility
- Unit and Organizational Supplies
- Research and Development of Supplies in Quartermaster Corps

ADVANCED COURSE

The units established at Cornell University for Army ROTC Advanced Course instruction are: Field Artillery, Signal Corps, Ordnance, Quartermaster, and Veterinary Corps.

The objectives of this course are: (1) to produce college trained Reserve Officers to meet the needs of the Army during the postwar period, and (2) to preserve and expand the Reserve Officers' Training Corps organization in anticipation of postwar Reserve Officer requirements.

"Leadership" is emphasized throughout all Advanced Course training and

PRESIDENT'S REPORT

special instruction is given in correct methods of giving commands to a company or battery. A wire recorder is used in connection with this instruction.

The following subjects were taught to all branches:

<i>1st Year Advanced Course</i>		<i>Hours</i>
Tactics and Technique of Selected Branch*.....		120
Leadership, Drill and Exercise of Command.....		30
TOTAL HOURS:.....		150
<i>2nd Year Advanced Course</i>		
Military Administration and Personnel Management.....		26
Military Administration (12)		
Military Law and Boards (14)		
Military Teaching Methods.....		10
Psychological Warfare.....		4
Tactics and Technique of Selected Branch*.....		80
Leadership, Drill and Exercise of Command.....		30
TOTAL HOURS:.....		150

*Among the subjects covered in Tactics and Technique were:

Organization of the Selected Arm or Service
 Artillery Tactics
 Gunnery
 Message Center and Signal Center Procedure
 Communication Security; Communications
 Wire and Radio Communication Fundamentals and Materiel
 Ammunition Supply
 Materiel: Ammunition; Artillery; Automotive; Small Arms; Fire Control
 Maintenance and Supply
 Command and Staff
 Combat Intelligence
 Individual Weapons & Marksmanship
 Procurement Procedures
 Storage, Warehousing and Materials Handling
 Depot and Station Supply

ENROLLMENT 1949-50

BASIC COURSE

<i>Enrolled</i>		<i>Completed</i>	
1st Year.....	877	1st Year.....	756
2nd Year.....	641	2nd Year.....	590
TOTAL.....	1518	TOTAL.....	1346

ADVANCED COURSE

1st Year

<i>Branches</i>	<i>Enrolled</i>	<i>Completed</i>
Field Artillery.....	36	34
Ordnance.....	21	21
Quartermaster.....	54	57
Signal Corps.....	10	12
Veterinary Corps.....	31	27
TOTAL:.....	152	151

2nd Year

<i>Branches</i>	<i>Enrolled</i>	<i>Completed</i>
Field Artillery.....	36	33
Ordnance.....	15	14
Quartermaster.....	50	44
Signal Corps.....	10	10
Veterinary Corps.....	15	15
TOTAL:.....	126	116

Ninety-nine (99) commissions as Second Lieutenants, Reserve Corps, were conferred on students completing the Advanced Course during the academic year 1949-50; nine (9) are due to be commissioned at the completion of the ROTC Camp in July 1950.

ACADEMIC CREDIT

The amount of academic credit given for the Advanced Courses by the various schools and colleges in Cornell is in general adequate. However, a distinct lack of uniformity exists, some colleges giving adequate credit, while others do not.

DISTINGUISHED MILITARY STUDENTS

The Department of the Army established during the year 1947-48 the classification of Distinguished Military Students and Distinguished Military Graduates.

Distinguished Military Students are those students who qualify for consideration for appointment as commissioned officers in the Regular Army.

Distinguished Military Graduates are those Distinguished Military Students who have completed the ROTC Advanced Course and received their degree from the University and are qualified for appointment as commissioned officers in the Regular Army.

During the academic year 1949-50, forty-one students were designated Distinguished Military Students and nineteen students as Distinguished Military Graduates.

FACULTY AND STAFF

Changes in the Army commissioned personnel during the year were as follows:

Relieved:

Major John V. Leonard, QMC.	11 July 1949
Captain Merrill C. Loudon, Ord.	1 August 1949
Major Peter H. Comnas, FA.	22 August 1949

Assigned:

Major Arvel C. Stafford, FA.	5 July 1949
Captain Kenneth E. Nelson, Ord.	1 August 1949
Captain Charles E. Woodard, QMC.	11 April 1950
Captain Daniel Delaney, QMC.	11 June 1950

EXTRACURRICULAR ACTIVITIES

Pershing Rifles

In the Spring 1950, a competition with companies of the Pershing Rifles from other universities was held at Barton Hall with the Cornell Company as host.

During the year, the members of the Company served as ushers on military occasions, color guards, aides to distinguished visitors, and units of the Company demonstrated correct methods and procedures for certain ROTC classes.

The Pistol and Rifle Club

This club is composed of members of the ROTC and others in Cornell who are interested in this activity. It sponsors the Pistol and Rifle teams representing either Cornell in intercollegiate competitions or the Cornell ROTC in competition.

During the period covered by this report, the following results of competitions were recorded for "postal" and "shoulder to shoulder" matches:

Results of Postal Matches:

	<i>Won</i>	<i>Lost</i>	<i>Total</i>	<i>Percentage Won</i>
Cornell Varsity.....	41	17	58	70%
ROTC.....	30	12	42	71%

Results of William Randolph Hearst Match:

Two teams entered and placed 11th and 12th out of 46 teams in First Army Area.

First Army Intercollegiates-ROTC: Placed 4th out of 23 teams.

NRA Eastern Intercollegiates:

Varsity Shoulder to Shoulder: Placed 2nd out of 19 teams.

NRA National Intercollegiates: Placed 14th out of 86 teams.

Officers' Club

A Cadet Officers' Club, composed of Cornell Army and Air ROTC and NROTC Advanced Course students, is functioning and is a distinct asset to the Military Departments. All Advanced Course cadets of the Army, Air Force, and Navy are eligible for membership.

Classroom No. 4 at Barton Hall has been converted into an Officers' Club Room and has been completely furnished in order to serve its purpose.

Clef Club

This club is composed of Juniors and Seniors who are members of the Cornell University "Big Red" Band. Its purpose is to further interest in the band and assist this department. It has an enrollment of 28 members.

"Big Red" Band

The Military Department continues to assist in the military training, supply, and administration of the "Big Red" Band.

R.O.T.C. Band

The ROTC Band continued to function in a creditable manner. This is distinctly an extracurricular activity and the time devoted to rehearsals is in addition to the ROTC requirements of the University.

Scabbard and Blade

This is a national honorary society composed of selected cadet officers of both the ROTC and NROTC. Candidates are elected to membership by the Society. The Cornell Chapter, Company "C," First Regiment, now consists of 49 members.

RECOMMENDATIONS

It is recommended that the necessity for a uniform system of academic credit in all of the schools and colleges be recognized and that such a system be adopted.

RALPH HOSPITAL,
Colonel, Field Artillery,
Professor of Military Science and Tactics.

APPENDIX XXIII

REPORT OF THE DIRECTOR OF THE DEPARTMENT OF
NAVAL SCIENCE

To the President of the University:

SIR: The most important trend in this department during the academic year 1949-50 was the perceptible change from a military department to an academic department. This is a sound condition and greatly increases the academic status of the Department within the University. Military training is not stressed during the academic year inasmuch as the summer cruise periods are designed to provide this background.

DESCRIPTION OF THE PROGRAM

A description of the program and its objectives appears to be in order since this department is still relatively new to the campus.

The Naval ROTC Unit at Cornell is one of the fifty-two Naval ROTC's established at the outstanding colleges and universities throughout the United States. The "Holloway Plan" enacted by Congress establishes these units with a twofold purpose: (1) to supplement the Naval Academy, which is limited because of its size, in supplying the necessary officers for the postwar Navy and Marine Corps, (2) to create a reserve of trained officers available for active duty in a national emergency.

The students under this program are of two types: "Regular" and "Contract." All, however, are considered Midshipmen and all pursue the same program at Cornell.

REGULAR STUDENTS

Regular Students are selected by the following process: (a) A nation-wide aptitude test administered for the Navy by the College Entrance Board Examination Section; (b) Physical examinations and interviews by officers of an Office of Naval Officer Procurement; (c) Selection by state boards; (d) Acceptance by the college of choice or designation.

Successful candidates may take nearly any course leading to a baccalaureate degree including certain minimum requirements in mathematics, physics, and English, plus prescribed Naval Science courses for four years. They must participate in a practice cruise or aviation indoctrination cruise of from six to eight weeks' duration during each of three summers.

Uniforms, tuition, textbooks, usual laboratory fees, and \$600 annual retainer pay are provided by the Navy for four academic years.

Upon receiving their degrees and successfully completing the naval science requirements they are commissioned as Ensigns in the Regular Navy, or Second Lieutenants in the Regular Marine Corps, and take rank and precedence with officers graduated from the U.S. Naval Academy in the same year. They must agree to remain on active service for not less than fifteen nor more than twenty-four months. They may elect to make the Navy a career, and if selected by the Secretary of the Navy to meet the needs of the service are accorded permanent commissions; otherwise, upon the termination of their period of active duty, they are commissioned in the Naval Reserve and required to retain that status until six years from the original date of commissioning.

There are presently 140 continuing students in this category. In addition, forty Regular Students have already been selected from civilian and Navy sources and have been accepted by Cornell for entrance as freshmen in the fall of 1950.

CONTRACT STUDENTS

Contract Students are selected by the Professor of Naval Science at the time of registration in the University. Academic and laboratory requirements are exactly the same as for Regular Students. Contract Students are required, however, to make only one cruise, of about three weeks' duration, normally between their junior and senior years.

The Navy Department provides these students with uniforms and Naval Science textbooks throughout the four years and pays them during their third and fourth years the daily value of a commuted ration, or approximately \$30 a month.

Upon receiving their degrees and successfully completing the Naval Science requirements, Contract Students are commissioned as Ensigns in the Naval Reserve or Second Lieutenants in the Marine Corps Reserve and required to retain that status for six years from commissioning. They are not called to active duty except in time of a national emergency.

There are presently 115 continuing students in this category. Approximately 60 Contract Students will be selected from the class entering Cornell in the fall of 1950.

GRADUATES FROM THE PROGRAM

During the last academic year, ten officers were commissioned as Ensigns in the Regular Navy and seven as Ensigns in the U.S. Naval Reserve. These numbers will increase yearly, as this department builds up to its authorized strength of 300 students.

SUMMER TRAINING CRUISES

A unique feature of this department is the summer training cruise, which takes our students to many corners of the globe. In addition, practical familiarity with naval installations, customs, and procedures is instilled during this period. The cruises for the current summer are as follows:

(a) Prospective Regular sophomores and some seniors will cruise in Atlantic Fleet ships from Norfolk. This cruise includes stops in Canada, New York, and Cuba. Remaining seniors will be attached to other ships of the Atlantic Fleet as junior officers.

(b) Prospective junior Regulars are attached to the Naval Air Station, Pensacola, Florida, for preflight indoctrination. They will also receive shore-based indoctrination training at the Amphibious Training Command, Little Creek, Virginia, and will embark on vessels of the Amphibious Force, U.S. Atlantic Fleet, for participation in amphibious exercises and demonstrations afloat.

(c) Contract students will embark in destroyers at Norfolk and visit Atlantic Coast ports.

ACADEMIC INTEGRATION WITH THE UNIVERSITY

NROTC students should not be penalized in the matter of degree credits for participating in training for the national defense.

The superposition of twenty-four hours of naval science classroom work throughout the four years' course, plus two hours of laboratory work a week, upon the degree requirements of the individual schools and colleges places an extremely heavy academic load upon the Midshipman who enters this Unit. I am pleased to report that this problem is currently under consideration by most schools in the University. More departments are recognizing that the NROTC Program is conducted on a college level and that the courses are intellectually comparable with others for which degree credit is granted. Below is a tabulation of the academic credit granted by other departments within the University at present.

<i>School</i>	<i>Credit Hours</i>
College of Arts and Sciences.....	18
College of Architecture.....	24
State College of Agriculture.....	12
School of Chemical Engineering.....	6
School of Civil Engineering.....	4
School of Electrical Engineering.....	9
School of Mechanical Engineering.....	9
School of Hotel Administration.....	24
School of Industrial & Labor Relations.....	12
Department of Engineering Physics.....	6

Other divisions of the University not mentioned do not presently have naval science Students registered and therefore have not been asked for a final decision in this matter.

In addition to the above, certain Midshipmen who are registered in the College of Engineering and who take heat-power courses are exempted from taking the course in Naval Machinery during their seventh term in naval science. Thus three academic hours are removed from the original twenty-four hours required by this department.

PHYSICAL FEATURES

The increased enrollment this past year emphasized the lack of space available to the Department. The building referred to as the Navy Gun Shed on Campus Road is entirely inadequate for indoor assembly of the Unit and for the installation of complete training equipment. Naval science classes will continue to be held in Olin Hall in space made available through the courtesy of the Director of the School of Chemical Engineering.

The sites now occupied by NROTC headquarters and the Navy Gun Shed will be required for other Cornell construction. The classrooms in Olin Hall may be required exclusively for the use of the School of Chemical Engineering sometime in the future. This uncertainty as to adequate future facilities for the Department of Naval Science is detrimental to its administration. Consolidation of all naval science activities in permanent quarters designed for this purpose is the only ultimate solution to this problem.

RECOMMENDATIONS

It is recommended that the status of the contemplated construction of a Naval science building be further investigated. This project has received the approval of the central administration officers of the University and of the Board of Trustees and was submitted by the President of Cornell University to the Commissioner of Education of the State of New York. The present status is unknown.

It is further recommended that a plan be implemented to provide the Department of Naval Science with adequate facilities, when future University construction necessitates vacating our present buildings.

CHAS. W. GRAY,
Captain, U.S. Navy,
Professor of Naval Science.

APPENDIX XXIV

REPORT OF THE DIRECTOR OF THE DEPARTMENT OF AIR SCIENCE AND TACTICS

SIR: I have the honor to submit this report of the Department of Air Science and Tactics for the academic year 1949-50.

GENERAL

Effective July 1, 1950 the Air Force ROTC unit was established as an independent department. Preliminary plans for effecting the separation of Army and Air Force ROTC called for a general one-third to Air Force two-thirds to Army division of supplies, plant facilities, students, and general services responsibility. This separation ratio of 2 to 1 was continued in force for the academic year of 1949-50 as an interim arrangement.

The first year of the Basic Course offered by this department coincided with that of the Department of Military Science and Tactics; therefore, the two departments collaborated in the sharing of instructors and facilities towards the end that a greater degree of student supervision might be obtained.

Effective during the 1949-50 academic year the Department of the Air Force modified the two-year basic course such that specialized Air Force subject matter constituted the major portion of the second year basic course. The specialized Air Force subject matter followed two general lines of military endeavor—administration and supply and communications. The latter being technical in substance was limited to engineering students; the former being more general and broader in scope was available to non-engineering students. This modification proved to be an improvement over prior years, for second year basic students were better oriented and informed as to the subject matter offered to them in the advanced course.

Practically all regulations, procedures, and techniques utilized by this department were aligned with those of the Department of Military Science and Tactics. Since such close coordination and cooperation existed, you are referred to the following paragraphs in the *General* section of the "Report of the Director of Military Training."

- a. paragraph three, page 172.
- b. paragraph four, page 172.
- c. paragraph five, page 172.
- d. paragraph three, page 172.
- e. paragraph eight, page 173

The course in "Leadership, Drill and the Exercise of Command" was outstanding in preparation and execution. One hour a week throughout each of the four years of the course was devoted to this subject. Competitive drills were conducted at the end of each term; awards were made and intense interest was displayed. Several Air Force Reserve officers attending the University as students contributed their services as supervising instructors in this course.

Air Force Reserve officers attending the University as graduate students contributed their services as special lecturers and examination administrators.

For certain second year basic courses involving the study of aeronautical power plants and allied equipment, the facilities of the East Hill Laboratory were utilized. Student interest was well above average.

This department made a study of the second year basic course which brought about a nationwide revision of this course similarly offered at other colleges and universities. The revision was designed to more closely align the course with the engineering background of the enrolled engineering students.

The annual Department of the Air Force inspection, conducted May 18-19, 1949 by an inspection party of two officers headed by Colonel Emory L. Bruns, Director of Personnel for Headquarters First Air Force, resulted in

this department's receiving the highest obtainable rating awarded by the Department of the Air Force.

During the year instructors from this department were called upon to make speeches and give lectures before various military reserve and civilian organizations. Several of these engagements took the speakers to points as far away as Oneida, New York.

On June 5, 1950 the Professor of Air Science and Tactics departed for Stewart Air Force Base, Newburgh, New York, where he took command of the Air Force ROTC summer camp serving the northeastern area of the United States. This summer camp got under way June 18, 1950 with the arrival of 434 students from 18 colleges and universities; 38 Cornell AF ROTC advanced course students specializing in administration and supply were among this group. 16 Cornell AF ROTC advanced course students specializing in communications reported to Scott Air Force Base, Belleville, Illinois, June 25, 1950 for their six-weeks summer camp. Scott Air Force Base is the principal communications school of the United States Air Force.

BASIC COURSE

The Basic course is given to all cadets for the first two years as required by University regulations.

The schedule for first year students was the same as prescribed for army students as specified in the foregoing report of the Director of Military Training.

The following subjects were given in the second year of the Basic Course:

Leadership, Drill and the Exercise of Command	Hours 30
Orientation and Processing	3
Introduction to Aeronautics	27
<i>Administration Specialty</i>	30
1. Introduction to Administration (1)	
2. Air Force Publications (5)	
3. Military Correspondence (6)	
4. Pay and Allowances (8)	
5. Organizational Records (6)	
6. Review and Testing (4)	
<i>Communications Specialty</i>	(30)
1. Introduction to Communications (1)	
2. Direct Current Principles and Magnetism (13)	
3. Alternating Current Principles (13)	
4. Review and Testing (3)	—
TOTAL	90

ADVANCED COURSE

The specialties established at Cornell University for Air Force ROTC advanced course instruction were: Administration and Supply, and Communications.

The objective of these courses is to produce college-trained regular and reserve officers.

The following subjects were taught:

First Year Advanced Program

	<i>Hours</i>
Leadership, Drill and Exercise of Command.....	20
Psychology of Leadership.....	10
Logistics.....	10
Oriention.....	3
Air Operations.....	17
ADMINISTRATION.....	90
1. Introduction.....	(1)
2. Individual Records.....	(9)
3. Base Administration.....	(4)
4. Non-Appropriated Funds.....	(4)
5. Special Administrative Responsibilities.....	(4)
6. Transportation.....	(10)
7. Supply.....	(52)
8. Review and Testing.....	(6)
COMMUNICATIONS.....	90
1. Introduction.....	(3)
2. Supply and Maintenance.....	(6)
3. Visual and Aural Communications.....	(1)
4. Radio Communications.....	(38)
5. Radar.....	(10)
6. Wire Communications.....	(23)
7. Review and Testing.....	(9)
TOTAL.....	150

Second Year Advanced Program

Leadership, Drill and Exercise of Command.....	18
Military Teaching Methods.....	10
Military Administration*.....	
Practice Teaching†.....	12
Air Force Management.....	20
ADMINISTRATION.....	90
1. Introduction.....	(1)
2. Individual Records.....	(9)
3. Base Administration.....	(4)
4. Non-Appropriated Funds.....	(4)
5. Special Administrative Responsibilities.....	(4)
6. Transportation.....	(10)
7. Supply.....	(52)
8. Review and Testing.....	(6)
COMMUNICATIONS.....	90
1. Introduction.....	(3)
2. Supply & Maintenance.....	(6)
3. Visual and Aural Communications.....	(1)
4. Radio Communications.....	(38)
5. Radar.....	(10)
6. Wire Communications.....	(23)
7. Review and Testing.....	(9)
TOTAL.....	150

* Military Administration to be taught to Communications Section only.

† Military Teaching Methods-Practice Teaching—to be taught to Administration Section only.

ENROLLMENT 1949-50

BASIC COURSE

	<i>Enrolled</i>	<i>Completed</i>
1st Year	401	367
2nd Year	209	177
	<hr/> 610	<hr/> 544

ADVANCED COURSE

<i>Branches</i>	<i>1st Year</i>	<i>Enrolled</i>	<i>Completed</i>
Administration and Supply		39	39
Communications		26	22
		<hr/> 65	<hr/> 61
TOTAL			
	<i>2nd Year</i>		
Administration and Supply		32	31
Communications		12	10
		<hr/> 44	<hr/> 41
TOTAL			

Thirty-nine commissions as Second Lieutenants, United States Air Force Reserve were conferred on students completing the advanced course during the academic year 1949-50; two were commissioned at the completion of the Air Force ROTC summer camps.

ACADEMIC CREDIT

The amount of academic credit given for the Advanced Courses by the various schools and colleges in Cornell is in general adequate. However, a distinct lack of uniformity exists, some colleges giving adequate credit, while others do not.

DISTINGUISHED MILITARY STUDENTS

While the Air Force ROTC program was still under the administrative control of the Department of the Army during the year 1947-48, the classifications of Distinguished Military Student and Distinguished Military Graduate were established. These classifications have been continued in use by the Department of the Air Force which assumed full control and responsibility for the Air Force ROTC program July 1, 1949.

Distinguished Military Students are those students who qualify for consideration for appointment as commissioned officers in the Regular Air Force.

Distinguished Military Graduates are those Distinguished Military Students who have completed the ROTC Advanced Course, have received their degree from the University and are qualified for appointment as commissioned officers in the Regular Air Force.

During the academic year 1949-50, fifteen students were designated Distinguished Military Students and one student as a Distinguished Military Graduate.

PRESIDENT'S REPORT

FACULTY AND STAFF

The following changes in department personnel took place during the year:

Relieved:

Major John M. Hoffman.....	July 1949
Captain Warren P. Laws.....	Sept. 1950
Lt. Walter Mulé, SC.....	July 1950
S. Sgt. John D. Fields.....	Sept. 1950

Assigned:

Colonel George T. Crowell.....	July 1949
Lt. Col. Lewis H. Kensinger.....	July 1949
Captain George C. Snyder.....	July 1950
Major James H. Searle.....	July 1950
S. Sgt. John D. Fields.....	July 1949
M. Sgt. Francis J. Gleason.....	July 1950
M. Sgt. Sidney W. Macauley.....	July 1950

EXTRACURRICULAR ACTIVITIES

Since this department is not exclusive sponsor of any extracurricular activity and operates under a co-sponsorship agreement with the Department of Military Science and Tactics regarding extracurricular activities, your attention is invited to a similarly titled section in the "Report of the Director of Military Training" for further information regarding this subject.

RECOMMENDATIONS

That the necessity for uniform and adequate academic credit be given further study with a view to its adoption in the near future.

That a specialized technical course in Armament be established with the Air Force ROTC curriculum. This can be accomplished without infringing upon the student quotas of the other two military departments.

GEORGE T. CROWELL,

Colonel, USAF, Professor of Air Science and Tactics.

APPENDIX XXV

REPORT OF THE DIRECTOR OF PHYSICAL EDUCATION
AND ATHLETICS

To the President of the University:

SIR: In a year when the University is feeling keenly the burden of rising costs, it is pleasant to be able to report a surplus for one of its auxiliary enterprises.

The Division of Intercollegiate Athletics reports a balance of \$25,720.59 for its 1949-50 operations. This applied toward \$84,007.94, advanced by the University for the construction of the west-side stands on Schoellkopf Field, reduces its indebtedness to \$58,287.35. Record high income for this division of \$449,547.88 was made possible only because of the foresight exhibited in 1946 in building new steel stands on Schoellkopf Field at a cost of \$152,000 to increase the stadium capacity by 5,000 to a total of 34,300 and adding a new \$9,000 steel stand in Barton Hall, increasing its capacity from 4,400 to 9,000.

Good teams, of course, are necessary factors in providing the attractions to fill these stands and make the investments productive ones and, fortunately, we have had them.

A tantalizing comparison with ten years ago provides a unique example of what has happened to our economy and, more specifically, to the costs of con-

ducting an intercollegiate athletic program. The demonstration is unique because this is the only business enterprise I know of which has not raised prices to cope with a devalued dollar.

In 1939-40 Cornell University Athletic Association had income of \$283,864.19, expenses of \$238,077.90, and a surplus of \$45,786.29. With virtually the same program in 1949-50 there was income of \$449,547.88, expenses of \$423,827.29. With 1939 expenses and 1949 income it would be possible to report a surplus of \$211,469.98!

As heretofore indicated, the football team had a successful year, winning the Ivy title for the second year in succession. The soccer team likewise retained its Ivy championship and all other teams performed satisfactorily, exemplifying generally a good healthy state of affairs. With all the brick-bats directed toward intercollegiate sport these days, it is reassuring to be able to claim athletic successes for a school which maintains such high moral and academic standards.

The coaches are largely responsible for the interest, enthusiasm, and success of our teams. We are indeed fortunate to have such a loyal, intelligent, and hard-working staff. Besides their coaching duties, they also provide the instruction for the physical education classes for men.

This division, under the supervision of Mr. E. B. Wilson, had a heavy enrollment of 2,550 this year and although working with very poor indoor facilities, it achieved admirable results. The entering class in the fall of 1949 had 60 per cent classified as below the qualifying grade in the first physical tests. At the conclusion of the year, the percentage had dropped to 25 per cent. Results of the past indicate this percentage will drop below 15 per cent at the conclusion of the second year in the compulsory physical training program.

The women's division, under Miss Dorothy Bateman, has a fine record of achievement, too, but has even poorer working quarters than do the men. It is hoped that the Teagle Gymnasium can be started soon so as to be available for the men's program, which will have the dual effect of providing far better facilities for men and releasing for the women some of the facilities now used by the men. Outdoor field space is satisfactory and adequate.

It is respectfully and strongly urged that additional financial support be provided for the divisions of men's and women's physical education. It is just not possible to continue to conduct a respectable program without some more enduring method of support than is now in effect. The division of intercollegiate athletics presently subsidizes both divisions by accepting expenses which more properly belong to physical education. This is neither fair to the intercollegiate program nor is it defensible practice that football receipts are used for non-athletic purposes. In 1947-48 the Trustees appropriated \$32,785.51; income from fees was \$84,552.75. In 1948-49 this was cut to \$32,457.41; student fees amounted to \$81,993.86. The 1949-50 budgeted appropriation was \$26,600 and income from fees was \$81,512.62. Now for the year 1950-51 the appropriation has again been reduced to \$20,700. The differential can be directly traced to the assumption each year of a greater share of physical education expense by the division of intercollegiate athletics. The program, the staff, the maintenance costs are not being reduced. In fact they seem to increase each year and yet the working capital is reduced, thus placing the burden on another division to carry the costs.

Generally, the plant is in good condition. The Schoellkopf Crescent needs extensive repairs which should be undertaken over a ten-year period. We have started this year by allotting \$5,000 for repair of the concrete. Schoellkopf Hall needs painting inside and outside. Otherwise there are no large items under construction and repairs.

In retrospect I would say the year 1949-50 was one of the most successful this department has ever enjoyed. Unless the present unsettled conditions deteriorate into another global conflict, we shall continue to prosper. If declared war is forthcoming and the University is asked to contribute, I feel sure this department will do its part as it did in World War II.

ROBERT J. KANE,
Director of Athletics.

APPENDIX XXVI

REPORT OF THE CHAIRMAN OF THE DEPARTMENT OF
CLINICAL AND PREVENTIVE MEDICINE*To the President of the University:*

SIR: I have the honor to present the report of the Department of Clinical and Preventive Medicine for the year 1949-50.

The close of the past academic year marked a milestone on the road traveled by the Clinical Department since its reorganization ten years ago. A decade of University responsibility for the clinical care of students has allowed many creditable policies to become well established, the most notable of which is the return of Cornell campus physicians to regular medical channels from their former position of isolation, the direct result of an era when non-clinical policies were emphasized at Cornell. In his report to the Trustees for the academic year 1940-41, Dr. Edmund E. Day stated, "One of the important developments of the year was the assumption by the University of direct responsibility for the medical care of the entire student body." During that year a decade ago, Cornell staff physicians ceased to deteriorate in clinical skills and began to contribute substantially to the defense against deterioration for medical men of the entire community.

The development of many policies, now established as permanent and considered indispensable in the task of discharging clinical responsibility, has been reported in detail in previous reports. Suffice it to say here that policies have been conceived, tried, and modified until they were suitable for the Cornell location, in addition to being acceptable clinical procedures. It seems appropriate this year to depart from custom somewhat and to record in chronological detail the proposed consolidation of the Clinic with the Infirmary, the change in the character of physical examinations given entering students, and the need for stabilization of the Mental Hygiene program.

CLINICAL RESPONSIBILITIES

Consolidation of the Student Medical Clinic and Infirmary

Before 1940, no responsibility for true clinical care was shouldered by the University. Giving medical advice was as far as staff physicians could go. When a student became ill, he was shunted off for treatment to a second unrelated community physician. No suggestion as to the qualifications of a particular community physician could be given the sick, and thus more vulnerable, student. No working relationship between town and gown medicine existed. Clinical facilities at the University had not been developed. The quarters for medical advising were noisy rooms adjacent to the gymnasium. The offices were inadequate and obsolete in equipment. The doctors on the medical staff were isolated from the practice of their chosen profession. At the Infirmary, convention had demanded an adequate, modern hospital, but medical practice was not controlled within it—in fact, there were no specific qualifications for men who worked there. Bed, board, nursing care, and modest laboratory and X-ray services were provided under the authority of a nurse administrator.

Shortly after the decision of the Trustees to provide clinical care for all students, the University Medical Staff had attractive, well-equipped quarters in which to practice medicine, a modern hospital to which they could send their patients needing bed care and where they continued to be attending physician for their patients; also, a system of records fulfilling every requirement of an approved hospital and clinic was set up. The Clinic was organized and furnished at 7 Central Avenue; later 5 Central Avenue was added. These buildings were connected by a ramp and together they serve as one clinic building.

When Anabel Taylor Hall becomes a reality, provision must be made for

removal of the Medical Clinic. For some time it has been the feeling of the staff that the Clinic and the Infirmary should be together. Previous to the operation of the Infirmary and Clinic by the University, it was deemed desirable to have the "medical adviser's office" on campus, because other provision for counseling existed for women students only; there was no organized counseling service for men. Today we enjoy well-staffed counseling offices for men as well as women. Thus, the medical department has become a center for medicine instead of counseling, and there is less need to have the Medical Clinic in the midst of campus activity. We do, however, have a close relationship with the offices of the Dean of Men and Women, which is strengthened through a medical social worker who spends part time in the counseling offices and part time in the Medical Clinic.

Modern medicine has progressed so rapidly during the last decade that physicians find it difficult to keep up with medical trends when in an isolated position. Since the Infirmary and Clinic are separate, our staff physicians are in a semi-isolated position. True, they attend their own hospitalized patients, but they do not spend an optimum amount of time in the Infirmary and thereby benefit from daily contact with the visiting and consulting staff. At present, visits to their patients at the Infirmary are hurried. There is a tendency for a breakdown in communication between the attending physician and the consultant regarding patients, because when the consultant calls, the attending physician is not likely to be in the Infirmary. The advantage of talking over the patient is lost, and a note on the chart or a telephone call is substituted. If the Clinic and Infirmary were in one building, the doctor would be readily available for conversation with the consultant. The job of maintaining a first-rate medical service is partially dependent upon stimulation for self-improvement of the staff. With doctors isolated from the Infirmary, the task is made considerably greater.

Last fall it seemed certain that the next progressive move should be to unite the Clinic and the Infirmary under one roof. In December, 1949, the staff voted unanimously that such a move would be desirable. Small groups of students, leaders in hill activities, were taken on tour of the Infirmary and informed of the benefits which would accrue. An informal meeting of the student and faculty members of the Board on Student Health and Hygiene was held. When this group learned that most students who have more than an illness of a most temporary nature now go to the Infirmary for a diagnostic test of some kind, that both students and physicians alike would benefit in the quality of service rendered, and that a saving in costs of operation was likely, all present indicated that the move was advisable.

At the April meeting of the Student Council, a resolution approving the removal of the Clinic to the Infirmary was carried. The next informative effort was made before the Deans' Conference where the case for joining forces of the Clinic and Infirmary was presented in summary form. The Deans unanimously approved the idea and requested that the University Faculty be informed at the next Faculty meeting. Therefore, at the April meeting of the Faculty, the plan was again summarized; again there was no dissenting voice. It is probable that a small cold clinic should be continued on campus for a time. Some type of transportation service must be worked out. A change in Clinic hours is likely. Such arrangements were discussed thoroughly with student groups. It is predicted that the advantage students will gain by physicians working as a hospital-clinic unit will far surpass any inconvenience that may occur. It is believed that the operation of the combined unit will save more than enough dollars to offset such expense as will be involved in reducing student inconvenience.

In late May, the Board on Student Health and Hygiene voted to recommend to the Trustees that they approve the proposition. At the June meeting of the Board of Trustees, the move was authorized if it could be made for a maximum expenditure of \$50,000. It seems appropriate to record here the letter of notification of endorsement by the Secretary of the Student Council, Miss Sue Spiers: "At the last meeting of the Student Council on March 23, 1950, the Council moved to 'fully endorse the plan of moving the Clinic to the site of

the present Infirmary.' We came to this decision because (1) we felt that this step would promote a new and better Infirmary near campus in a future time, and (2) we felt that it would bring about better medical facilities for the students. We appreciate your willingness to consult with us on this problem and thank you for the time you have spent to take Student Council members on their visit to the Infirmary."

Student Medical Clinic

The operation of the Clinic during the year changed in no way from previous years. The psychiatric social worker, Miss Frances McCormick, reported considerable improvement during the year in students' attitude toward the medical services. Credit for this progress was given by her to the public relations program of informing students through their leaders of the extent of medical service available to them. All of the specialty clinics described in former years were retained.

Mental Hygiene—The Need for Development

During the year, there appeared to be an increased awareness among administration and faculty of the need for studying more thoroughly emotional instability among students. Excesses in behavior, which appear from time to time as tension heightens, afford opportunity to study the effects of stress on young men and women of various backgrounds. Dr. Darling senses the problem, and in his report he states, "In reviewing the activities of this past year, my thoughts have turned rather forcefully to the consideration of the 'changing order' of the practice of psychiatry. In one sense, psychiatry does not differ in this respect from any other medical discipline. In another sense, however, psychiatry particularly is faced with enormous demands for clinical services. It is generally conceded that the demand will far exceed the supply for many years to come, both on this campus and elsewhere. A definite need exists, then, to consider what the reasonable objectives should be in a mental hygiene program for Cornell University. . . . Any major change in services must, of course, come slowly and be built upon a sound financial structure."

The number of students referred to the Mental Hygiene Clinic this year again increased. The comparative numbers of old and new patients, in the categories of men, women, and veterans, are again presented. It is gratifying that the number of leaves of absence issued for emotionally disturbed students was sharply reduced this year.

	<i>Total No. Cases</i>	<i>Old</i>	<i>New</i>	<i>Men</i>	<i>Women</i>	<i>Veterans</i>	<i>Leaves of Absence</i>
1944-45.....	142	16	126	85	57	..	20
1945-46.....	208	23	185	132	76	66*	19
1946-47.....	175	34	141	105	70	79	11
1947-48.....	200	48	152	141	59	70	25
1948-49.....	206	44	162	153	53	111	24
1949-50.....	245	52	193	167	78	14	9

*Active service men and veterans.

Psychiatry requires subsidization in a service such as Cornell offers. Student fees cannot carry psychiatric services as they do surgery and consultation assistance from the various specialties. It, therefore, becomes one of the main problems facing the clinical medical program to secure subsidization for the psychiatric services in order to provide the personnel required to bring more students under its beneficent influence. It seems reasonable to predict that much of the trend toward acceptance of untraditional ideology by unstable, insecure boys and girls of college age could be avoided with a sound mental hygiene program. It is commendable that men of means have made permanent such a program in men's and women's educational institutions (for example, the Mellen gifts to Yale University and Vassar College in 1949).

Responsible persons in this department have attempted to support and help

mildly maladjusted students to reorient themselves in their thinking so that hostility to society and to Cornell would be minimal. Because of lack of funds, a well developed department of mental hygiene was not possible. For some time, however, a medical social worker has been available jointly with the Counselor's Office. Dr. Darling pays tribute to the work of Miss Frances McCormick in his report of mental hygiene activities. Seventy per cent of her time is spent with individual student conferences. During the past year she has held interviews with 80 girls and 75 boys, for a total of 349 individual conferences. Of the 155 students interviewed, 83 were referred by Miss McCormick to physicians at the Medical Clinic—usually to psychiatrists for further treatment. More and more do faculty members refer students who show irritability, hostility, or unusual behavior to the medical social worker. Many of these require expert medical handling and, because they receive attention, most of them are saved severance notices from the University and some of them from radical life on the outside.

Infirmary

Continued weathering of the Infirmary building was checked by repairs to the exterior. During the year maintenance inside was improved by having our own caretakers. Maintenance work, both inside and on the grounds, is now carried on by our own men. We are self-reliant except for highly skilled labor and thus less dependent on the Department of Building and Grounds. To accommodate the Clinic, structural alterations await the recommendations of a hospital consultant.

As the statistics indicate, patient admissions were higher than last year, the result of a mild flurry of Influenza A, not of epidemic proportions. The Infirmary continues to be approved by the American College of Surgeons. During the year the residency in Internal Medicine was certified by the American Board of Internal Medicine.

The Infirmary and Clinic Library is used extensively. Many books were added this year. Friends and grateful patients continue to express their positive feelings toward Cornell medicine by substantial contributions to the Library Fund.

In September, 1949, Miss Margaret Russell retired after seventeen years as Superintendent of the Infirmary. During late spring, the entire Infirmary and Clinic staff was shocked to hear of her sudden passing on April 26, 1950. It is appropriate that the resolution of the staff at the time of her death becomes a part of this report. It is, therefore, reprinted from the minutes as follows: "Miss Margaret Russell came to this country from Guelph, Canada. She received her professional training at Clifton Springs Sanatorium and stayed there for some years in charge of the operating room. She came to Ithaca, and was in charge of the office of Dr. Martin Tinker, Sr. She came to Cornell University in 1927, as assistant Superintendent of nurses under Miss Alice V. Newton. Miss Russell became Superintendent of Cornell Infirmary in 1932, and served until her retirement in 1949.

"Margaret Russell gave of herself in the discharge of her duties as Superintendent for seventeen years. Patients, nurses, employees, doctors became benefactors of Miss Russell's warm, friendly personality. Through the influence of these same admirable attributes, the Cornell University Infirmary came to be a symbol of warmth to patients and staff alike. Dr. Edmund Ezra Day, President of Cornell University for a major portion of the time of Miss Russell's administration, said, on the occasion of her retirement, "Institutions have personalities as do people—and they reflect the make-up of the persons at the top. It is not difficult to trace the philosophy of warm, kind, hospitable attitudes of the people at the Cornell Infirmary to the person at the top—Margaret Russell.

"Therefore, be it resolved that in the death of Miss Margaret Russell, the Staff of the Cornell University Infirmary and Clinic recognizes the loss of a devoted and trusted friend. Miss Russell became a symbol of gentleness and kindness during her administration as Superintendent of the Cornell Infirmary. The Staff will miss her promised visits from retirement to the institution to which she gave so much of her life. The Staff expresses sympathy to Miss Russell's family and orders that these resolutions be spread upon the minutes and that a copy be sent to the family and the Secretary of Cornell University."

At the close of the academic year, Dr. Harry Britton became Attending Physician Emeritus. Dr. Britton has given years of devoted service to the Clinic. He will be long remembered by Cornell athletes for he was physician to Cornell teams for nearly three decades. Dr. Britton will continue to assist on a part-time basis.

STATISTICS

Out-patients

Medical Clinic out-patient visits.....	47,385
Infirmary out-patient visits.....	1,582
	<hr/> 48,967

Infirmary Patients

Medical Patients Discharged.....	1,330
Communicable Disease.....	26
Other than Communicable Disease.....	1304
Number of Consultations.....	53
Deaths.....	0

Surgical Patients Discharged.....	321
Major Operations.....	45
Minor Operations.....	200
Fractures (58) and Dislocations (8) requiring reduction and casts	66
Casts, no fracture.....	13
Surgical specimens examined by pathologist.....	147
Consultations.....	115
Deaths.....	0

Leaves of Absence (medical).....	25
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Dental (Clinic and Infirmary)

Number of Patients.....	2495
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TOTAL NUMBER OF TREATMENTS.....	2844
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Physiotherapy (Clinic and Infirmary)

Diathermy Treatments.....	1809
Infra-red Treatments.....	716
Whirlpool Treatments.....	755
Baker Treatments.....	165
Ultra-violet Treatments.....	561

TOTAL NUMBER OF TREATMENTS.....	4,006
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Laboratory (Clinic and Infirmary)

Clinical Pathology Examinations Made.....	8841
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X-ray (Clinic and Infirmary)

Examination of Chest (70 mm.).....	4791*
Examination of Chest (14x17).....	1363
Dental Examinations.....	831
Examinations other than chest or dental.....	1686

TOTAL X-RAY EXAMINATIONS.....	8671
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*Includes departmental participation in student entrance examinations, Farm and Home Week, Hospital Day, Army and Navy officer examinations.

RESEARCH

Throughout a decade, each annual report of this department has emphasized the relationship of research to improved clinical services. One of the great defenses of the doctor against obsolescence is the intellectual challenge he receives

from being close to investigative work. The stimulus to read more widely and become aware of the other man's thinking reflects itself in improved patient care.

This year the Department has made great strides in improved attitudes toward team play within the group. Paralleling these improved attitudes has been a keen interest in each other's research projects. It is gratifying to one who has consistently kept before the medical group the concept of the dependency of improvement in medical skills on study and research to report such unusual progress in this area.

During the year there have been several contributions to medical literature from this department. Publications this year have been:

(1) "A Study of 258 Cases of Appendicitis, Based on Pathological Findings," H. B. Wightman, *Journal Lancet*, December, 1949. This study was made over a period of eight years on student patients in the Cornell Infirmary.

(2) "A Study on the Treatment of the Common Cold With an Antihistaminic Drug," C. R. Shaw and H. B. Wightman, *New York State Journal of Medicine*, May 1, 1950. This publication was one of the first to call attention to the ineffectiveness of the antihistaminic drugs in the common cold. The study was made possible at the Student Medical Clinic by a grant from Winthrop-Stearns Inc.

(3) "Coordinating Services of the Health Team," Norman Moore, *New York State Nurse*, April, 1950. This paper culminated many years of observation of hospital personnel. It was presented at the Academy of Medicine in New York, March 30, 1950.

(4) "Responsibilities of Hospitals to Doctors in the Community," Norman Moore, *New York State Journal of Medicine*, July 1, 1950. This paper reported a study of the growing dependency of doctors on hospitals as their defense against professional deterioration. It was presented before the Mid-Atlantic Hospital Assembly in Buffalo, May 25, 1950.

(5) "Physicians and the Phosphate Insecticides," editorial, *New York State Journal of Medicine*, April 1, July 1, 1950, at the request of Department of Entomology, Cornell, to warn physicians throughout the state of the dangers of these insecticides and their antidotes.

(6) "Facts About Nutrition," Norman Moore, editor. Protein I, II, III and Diet in Arteriosclerosis, C. R. Shaw, author; Interpretation of Basal Metabolic Readings, Charlotte Young, author. A series of editorials in the *New York State Journal of Medicine*, part of the Medical Nutrition Program of the School of Nutrition, March 15, April 15, May 1, June 1, 15, 1950. Both authors and editor have joint appointments in the School of Nutrition and the Department of Clinical and Preventive Medicine.

(7) "Relationship of Developmental Defects of the Breast to Cancer in Later Life," Progress Report. Jocelyn Woodman. Teagle Foundation, June, 1950.

(8) "Relationship of Mental Health to Religion," Douglas Darling. *Journal of Pastoral Psychology*, in press. This paper was originally presented to the Ministers Association at Clifton Springs, 1950.

Another study, at present incomplete, pertains to reactions of people to combined Diphtheria-Tetanus Toxoid and the ratio of time versus titre of Tetanus Antitoxin. Preliminary reports were in the process of preparation at the close of the year.

The association of this department with the School of Nutrition has been an active one this past year. The medical aspects of the Groton Survey have been prepared by Drs. Shaw and Moore for publication in the *American Journal of Dietetics* this fall. A number of case studies made possible by research funds from the School of Nutrition are in preparation for publication by resident physicians. These include such studies as nutritional deficiencies in anorexia nervosa; standardization of diabetes by micro blood sugar methods; relationship of obesity to diabetes, and the effect of ACTH on chronic myelogenous leukemia in terminal phase; the effect of ACTH on skin and muscle infiltration of a patient with dermatomyositis.

The excellent relationship of the Department with the School of Nutrition

must be credited with the impetus given research this past year. It is reflected in improved physician morale and interest, always an influence on better patient-doctor relationship and is finally expressed in more intense, positive feelings of student patients toward the medical service in general and the individual members of the Cornell family of medicine in particular.

PREVENTIVE MEDICINE AND PUBLIC HEALTH

During the academic year, 3,175 entering and transfer students were given physical examinations. This is an increase of 244 over the previous year. There were no delinquents among the 3,175 entering students, an all-time record. At the close of the year, there were but two students who had not complied with the filing of a chest X-ray and only sixty who had not received tetanus toxoid—most of whom received waivers on a religious basis. To summarize briefly the report on student health requirements, 100 per cent of entering and transfer students received a physical examination; 100 per cent had been vaccinated against smallpox within 5 years; 99.98 per cent had a chest X-ray on file, and 99.27 per cent of students were immunized to tetanus. This nearly perfect record in the fulfillment of health requirements is a tribute to the careful and tedious labor of Miss Evelyn Van Duzer who carries the responsibility for the fulfillment of health requirements.

PHYSICAL EXAMINATIONS

The above summary, while impressive percentagewise, may not be as effective as it appears. For a decade, it has been this Department's endeavor to examine old formulas in student health and to change them if indicated to conform with medical progress. To that end, the medical staff has studied the procedures for entering and transfer students and has come to the following conclusions:

(1) That 92 per cent of the data obtained from physical examinations is negative data, the gathering of which is wasteful of medical talent.

(2) That insufficient time is spent on arrangements to follow up positive findings, largely because of the enormous amount of time spent on total examinations and the inevitable indifference which develops in the minds of doctors who are harassed by what appears to them as meaningless examinations.

(3) That graduate students are resentful of complying with undergraduate health requirements. Being older, they are more responsible and have complied as undergraduates in their respective colleges; they are ineligible for varsity athletics and are, thus, less liable to wounds requiring antitetanus treatment. Therefore, they should be excused from tetanus immunization and physical examination procedures, with the exception of a chest X-ray.

(4) That more attention should be given in the future to careful examination of hearing and vision and that positive medical findings, as reported by the entering student's physician, be evaluated again at the time of entrance.

The staff recommended to the Board on Student Health and Hygiene which, in turn, approved and recommended to the Trustees that entering students be examined by their own physicians; that the examination be recorded on forms provided by the University and be forwarded to the Medical Department previous to the student's arrival on campus. It was deemed advisable that the forms be returned promptly so that there would be sufficient time for the Medical Department to make appointments for discussion of follow-up needs and/or adjustments in military or physical training requirements. All undergraduate entering or transfer students will, in addition, be given tetanus toxoid immunizations, audiometric examination, and a careful rating of vision. All entering students will receive screening 70 mm. chest X-rays and 14 x 17 plates where indicated. To this new formula this department is now committed by the approval of the Trustees. At the present writing, complete, well-recorded reports of examinations of entering students for the 1950-51 academic year are being scrutinized and appointments being made for follow-up of positive data. So far, one-half the number of expected forms has been examined, and the ratio of 92 per cent negative data continues to hold.

There were no outbreaks of food contamination in dining halls of the University during the year. Milk and water supplies have met official sanitary standards, as have all units serving food. As the year ended, a novel experiment in marketing milk in dispensing machines was instituted on the upper campus. If these machines continue to receive approval of public health authorities, they may prove to be a great stimulus to better nutrition because of their competition with less nutritious soft drinks dispensed in a like manner.

INSTRUCTION

The cutback in the budget of this department to zero, will, no doubt, curtail plans for exploration of the announced course in health education scheduled for the second term of next year. The course in Medical Nutrition was continued. The course in X-ray physics for veterinary seniors is most valuable to them. Teaching of mental hygiene is restricted to the summer session.

It is possible that the pattern of health instruction now given by this department may be more important than formal courses. More and more members of the staff of this department receive requests to discuss pertinent topics of medical interest in seminars, symposia, and workshops given by other departments. There is a similar demand off campus. This past year staff members were called upon many times by organizations in neighboring towns for discussions of mental hygiene, rheumatic fever, heart disease, and other topics. Dr. Darling spoke before the State Charities Aid Mental Hygiene Committee in New York City. He was appointed to the New York Citizens' Committee of One Hundred by the Governor. This committee is charged with the preparation of New York State's program at the White House Conference on Child Health in December.

Among undergraduates, the need for a course in elementary hygiene seems remote. Because of better student-Medical Department rapport and a close relationship with the general counseling offices, undergraduates are afforded ample opportunity to discuss health problems on an individual basis. Exploitation of these opportunities seems more certain of success than an attempt to launch a course in health education for upperclassmen at this time when funds to support a well-designed course have been allocated for other academic endeavor. When a course in health education is offered, it must be a well supported one.

This department continues to have singular responsibility for instruction in the resident program in internal medicine. While a considerable amount of instruction comes from the medical staff members of Memorial Hospital, during the residents' tour of duty in that hospital the responsibility for the caliber of the curricula remains with this department.

CONCLUSIONS

After ten years' experience of rendering clinical service to students, this department believes that consolidation of the Clinic with the Infirmary is advisable. The completed task of informing students, Faculty, and administration of the advantages which would accrue from this move, together with the response of the various groups to the proposition, are described in detail.

Study of the methods used in carrying out physical examination of new students led to a recommendation for a change in policy regarding fulfillment of the medical requirements of entering students. The new policy is discussed.

A statistical summary of work done by the clinical staff is presented. Emphasis is placed on the need for an adequate mental hygiene program. The stimulus which comes for increased professional achievement from a research program is again emphasized. The friendly working relationship of this department with the School of Nutrition accounts for much of the increase in research activity at this time.

While this report was in preparation, war clouds were gathering—clouds which could change the timing of final accomplishment for many developments herein described.

NORMAN S. MOORE,

Chairman of the Department of Clinical and Preventive Medicine.

APPENDIX XXVII

REPORT OF THE DIRECTOR OF ADMISSIONS

To the President of the University:

SIR: I have the honor to present to you the report of the Director of Admissions for the year 1949-50. As usual, this involves both a discussion of the activity of the Office during the reporting year, 1949-50, and the results of the work of the previous year in terms of actual admissions in the fall of 1949 and spring of 1950.

APPLICATIONS FOR ADMISSION

A year ago, applications for the fall of 1950 were estimated at about 8,500. Actually, up to the end of June, 1950, the number who applied for fall admission was 9,193 as against 9,267 for the fall of 1949 (see Tables 1-A, 1-B). These figures do not tell the whole story, however. A year ago the total applications figure included 2,521 veteran and transfer applicants. This year that number is down to 1,786. Thus the number of young people applying directly from secondary school has risen from 6,746 in the fall of 1949 to 7,260 in the fall of 1950, a gain of over five hundred.

This increase in freshman applications does not follow the trend indicated by figures reported to the College Entrance Examination Board of 121 member colleges earlier this spring. According to the Board's report, based on April 30 figures, the following situation exists this year:

	<i>Increase</i>	<i>Decrease</i>
22 men's colleges.....	3	18
33 women's colleges.....	6	26
33 coeducational colleges:		
men students.....	7	24
women students.....	11	19

In each case some institutions indicated "no change."

The Director of Admissions likes to feel that the healthy condition with respect to applications to Cornell, both actually and comparatively, has some direct relation to the secondary school work of the Admissions Office.

Cornell University takes a lot of explaining to secondary schools and secondary school students. There are twelve different undergraduate curriculums available. In most of these, admissions requirements differ in terms of entrance subjects required, quality of school work, pattern of vocational interest, work experience, personal characteristics, etc., which go to make a good candidate. In fact, Cornell is unique in the variety of its requirements and offerings. It is therefore most important to get the story of Cornell and Cornell admissions clearly before schools and their students.

The promotional pattern which the Office of Admissions has developed in order to make Cornell known to the schools, from which its lifeblood flows, was described a year ago. It includes a program of travel to visit secondary schools of importance over as wide an area as possible, appearance upon invitation at a large number of "college choosing" programs sponsored by P.T.A. groups, schools, or groups of schools, an annual admissions conference to bring to Cornell a group of principals and headmasters, the very useful work of our alumni secondary school committees, and Cornell Day for secondary school juniors.

Some 183 schools in 14 states were visited this past year, and it is estimated that in the neighborhood of 6,000 young applicants or prospective applicants actually discussed or listened to discussions of Cornell during these visits. Many received personal interviews.

Cornell Day was revived for the first time since the war, and from all accounts was a success in stimulating the interest in Cornell of the 220 boys who

spent two days on the campus the weekend of April 29. Twenty-seven Cornell Alumni Clubs actively supported the program, selecting boys for the trip and providing the loyal and interested group of "alumni-chauffeurs" that made the whole enterprise possible.

Many other things could be mentioned which are a part of the promotion work necessary to ensure the continued flow of first-class material to Cornell in the face of the really significant and aggressive competition of our sister institutions large and small. There is the infinite detail involved in keeping each of our 300 alumni secondary school committeemen immediately informed as an application is received from a student in his area—then later telling him promptly of the University's action on that application. There is the constant effort to handle correspondence more personally and graciously. There are the centralization of freshman scholarship business in the Admissions Office and the development of a common scholarship application form so that prospective students can better be served and with less confusion.

It is disturbing to look forward to any slackening of this promotional work due to lack of funds. It is in fact disturbing to feel that it is not possible to expand such work in the face of growing competition from other institutions.

COMPOSITION OF THE 1949-50 FRESHMAN CLASS

The freshman class which entered the University in the fall of 1949 came closer to being a normal proportion of the undergraduate body than any since the war (see Table IV). In the 1940 class, which may be taken as a normal prewar class, 30 per cent of the undergraduates were freshmen. Immediately after the war this proportion was greatly upset by the large number of returning students so that the new freshmen in the fall of 1946 were only 17 per cent of the undergraduate body. That percentage has climbed steadily to 27 per cent for 1949. In 1949-50 we were still apparently slightly weighted with students in the upper classes.

In taking these increasingly large freshman classes there appears to have been no appreciable drop in the quality of the accepted student, judging each of the past two or three years by the median College Entrance Examination Board scores of the class, as well as by the percentage of admitted students who ranked high in their secondary school courses. Indeed, in terms of prewar classes, the quality should still be high, as we are taking 27 per cent of those who apply against 42 per cent in 1940-41 (see Table III). It must be granted, however, that candidates are to a much greater extent filing more than one college application, so the total application figures these days are inflated.

Twenty-three per cent of the freshmen came from independent schools, 77 per cent from the public schools. Geographically, of 2,518 new students, 335 came from Greater New York City and 1,123 from elsewhere in New York State. Every state in the Union except Nevada was represented, as well as the U.S. territories and many foreign countries. Aside from New York State, other states represented in the freshman class by fifty or more are, in order: New Jersey, Pennsylvania, Massachusetts, Ohio, and Connecticut.

OFFICE ADMINISTRATION

The processing of applications, which, for twelve undergraduate classifications using eight different Faculty selection committees, is a somewhat complicated matter involving a tremendous amount of varied and important detail, has proceeded smoothly. Of particular note are the increasingly cooperative and helpful relations between the Admissions Office and the several Faculty selection committees. The willingness of those committees to assist the Admissions Office in meeting its schedules has been deeply appreciated.

The volume of applications processed was about the same as in the previous year. The staff of the Office was the same in number, though operation expense of the Office was appreciably less. This is of particular interest in view of the fact that the total work load did increase. The scholarship work, which involved servicing 1,736 applications this year against 1,005 a year ago, was not

only greater in volume but expanded to include the Undergraduate and LeFevre Scholarship programs. This move was made so that applicants would have the benefit of a central scholarship information and application office. Cornell Day for 220 secondary school students was added to the load of the Office at the peak of its admissions work, though the management was shared by Mr. Brewer of the Alumni Office and the expense shared by the College of Engineering. Our reporting services to schools and alumni committeemen are stepped up. Some savings, probably ill-advised, came from a curtailment of school visiting by the Admissions Office staff.

WHAT LIES AHEAD

The assumption and expansion of the so-called "promotional work" of the Admissions Office is new since the war. It must be further refined and expanded to ensure the quality, number, and geographical distribution of the students which Cornell must have. The assumption of responsibility for the direction of Cornell Day for secondary school juniors by the Admissions Office is new this year. The desirability of the program is not challenged, but it requires financing to be continued. The assumption of responsibility in the freshman scholarship area is new to the Admissions Office since the war and is creating a greater work load each year as college financing becomes more and more of a problem for the average applicant. All these things, together with the prospect of a continued large volume of candidates to be processed, point inevitably to the necessity of directing additional funds to the admissions operation, as well as the need for continual study by the Director and his staff of methods, procedures, and policies which will prove effective and economically sound.

STATISTICS

There follow several tables designed to report statistically the volume and distribution of applications and actual admissions and comparisons with similar figures for previous years. Comment relative to these tables is contained in the body of this report.

HERBERT H. WILLIAMS,
Director of Admissions.

TABLE I—A
APPLICATIONS FOR ADMISSION FROM SECONDARY SCHOOLS

	<i>Fall 1949</i>		<i>Spring 1950</i>		<i>Total</i>	
	<i>Applied</i>	<i>Admitted</i>	<i>Applied</i>	<i>Admitted</i>	<i>Applied</i>	<i>Admitted</i>
Agriculture						
Men.....	1019	401	63	16	1082	417
Women.....	122	60	3	..	125	60
Architecture						
Men.....	162	28	..	..	162	28
Women.....	40	13	..	..	40	13
Arts & Sciences						
Men.....	2182	448	36	4	2218	452
Women.....	1197	227	18	2	1215	229
Engineering						
Men.....	1404	518	12	..	1416	518
Women.....	12	4	..	..	12	4
Home Economics						
Women.....	561	180	3	..	564	180
Hotel Administration						
Men.....	274	59	38	9	312	68
Women.....	14	1	1	..	15	1
Industrial & Labor Relations						
Men.....	136	34	9	..	145	34
Women.....	22	11	..	..	22	11
Veterinary Medicine						
Men.....	..	..	2	..	2	..
TOTAL						
Men.....	5177	1488	160	29	5337	1517
Women.....	1968	496	25	2	1993	498
GRAND TOTAL.....	7145	1984	185	31	7330	2015

ADMISSIONS

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TABLE I—B
APPLICATIONS FOR ADMISSION FROM OTHER HIGHER INSTITUTIONS

	Fall 1949		Spring 1950		Total	
	Applied	Admitted	Applied	Admitted	Applied	Admitted
Agriculture						
Men.....	248	61	69	30	317	91
Women.....	30	10	7	3	37	13
Architecture						
Men.....	102	13	8	..	110	13
Women.....	11	6	2	..	13	6
Arts & Sciences						
Men.....	452	55	61	27	513	82
Women.....	265	29	54	17	319	46
Engineering						
Men.....	255	59	26	8	281	67
Women.....	1	..	..	..	1	..
Home Economics						
Women.....	119	31	10	..	129	31
Hotel Administration						
Men.....	164	30	70	27	234	57
Women.....	7	..	2	1	9	1
Industrial & Labor Relations						
Men.....	96	15	44	23	140	38
Women.....	8	4	6	3	14	7
Veterinary Medicine						
Men.....	354	49	5	1	359	50
Women.....	10	1	..	..	10	1
TOTAL						
Men.....	1671	282	283	116	1954	398
Women.....	451	81	81	24	532	105
GRAND TOTAL.....	2122	363	364	140	2486	503

TABLE II
SUMMARY FOR FALL TERM 1949—SPRING TERM 1950
FRESHMAN AND TRANSFERS

	Fall 1949		Spring 1950		Total	
	Applied	Admitted	Applied	Admitted	Applied	Admitted
Men.....	6848	1770	443	145	7291	1915
Women.....	2419	577	106	26	2525	603
TOTAL.....	9267	2347	549	171	9816	2518

TABLE III
APPLICATIONS AND ADMISSIONS IN LAST TEN YEARS

Year	From Secondary Schools		From Higher Institutions	
	Applied	Admitted	Applied	Admitted
1949-50.....	7330	2015—27%	2486	503—20%
1948-49.....	7701	1757—23%	3261	522—16%
1947-48.....	10108	1680—17%	4636	417—9%
1946-47.....	9424	1419—15%	4720	384—8%
1945-46.....	5282	1512—29%	2296	612—27%
1944-45.....	3329	1304—39%	857	265—31%
1943-44.....	3312	1226—37%	704	222—32%
1942-43.....	3402	1562—46%	607	219—36%
1941-42.....	3812	1672—44%	977	228—23%
1940-41.....	3788	1603—42%	1085	201—19%

TABLE IV
RELATIVE SIZE OF FRESHMAN CLASS

	Entering Freshmen	Total Undergrads.	Per Cent Freshmen
1946-47.....	1419	8279	17%
1947-48.....	1680	7890	21%
1948-49.....	1757	7664	23%
1949-50.....	2015	7668	27%
Typical Year—			
1940-41.....	1623	5468	30%

APPENDIX XXVIII

REPORT OF THE DEAN OF MEN AND DEAN OF WOMEN

To the President of the University:

SIR: We have the honor to present the report of the Dean of Men and the Dean of Women for the year 1949-50.

During the past year this office has felt an increase in its effectiveness with students both from a personal and organizational point of view. Students have shown that they consider this a place where they may come at any time for any problem which needs attention. We have attempted to give satisfaction and sympathetic understanding in all cases.

In November a letter was sent to the 2,000 parents of freshmen students inviting them to consider our office as one point of contact with the University. In response to this letter more than three hundred requests for clarification of student problems and difficulties were received. In cooperation with professors and college offices we were able to give detailed replies. Parents who came in person to our office appeared appreciative of information given and interest shown.

STUDENT PROBLEMS

A, Vocational Problems

The Office of the Dean of Men and Dean of Women has provided students with facilities to aid them in appraising their own interests and abilities and has made available various kinds of vocational information. Individual counseling was given, including selection, interpretation, and reports of test batteries. In all, 2,844 men and women were interviewed and 1,968 had complete test batteries given them. There has been effort on both sides to co-ordinate the work of this office with that of the colleges on campus; test results were sent to academic advisers and counselors; and students have been referred to this office by University staff. More parents were seen in 1949-50 than in previous years.

The Guidance Center continued in its second year of operation as a part of this office. Civilian Cornell students were accepted when referred by authorized members of the University staff. The trend is to increasing demand for facilities of the Center, both from students and staff members. The Service is being widely used by University personnel in arriving at decisions concerning admission, probation, dismissal, and transfer, as well as by students to aid them in arriving at appropriate educational and vocational plans. The veteran case load of 1,200 remained approximately the same as last year. Of the veterans 215 were Cornell students. In addition, there were 301 non-veteran Cornell students, and 43 fee-paying clients.

The Vocational Information Committee of WSGA added to the professional work done for women and was advised by the Vocational Counselor. It has done research to ascertain interests of women students and has planned programs in accordance with the trends of these interests and notified students of coming programs connected with their respective fields of interest. Some of the programs have been held under the joint sponsorship of the committee, Industrial and Labor Relations, Home Economics, or Cornell United Religious Work.

For the second year, summer employment has been a part of the vocational program. Early in the fall letters were sent to women students to obtain information on the jobs of the preceding summer: types of jobs held, money earned, and other facts. The office wrote employers later in the year, registered students, and scheduled employment interviews. An innovation this year was the Job Clinic, held to advise students on letters of application and techniques of employment interviews. It was carried out by two of the student deans in cooperation with colleges throughout the campus.

B. Educational Problems

Students were counseled on problems such as study skills, poor achievement, advisability of and procedures for transferring. Referrals were made to appropriate faculty advisers in the various colleges.

C. Personal Problems

Students having difficulties in personal adjustment in their Cornell experiences, in their social development, and in setting their values, came in for help. Many were referred by faculty advisers, student counselors, and others; several hundred students visited the office voluntarily; many were called in as a result of information received. Those students having medical implications were referred to the Medical Department. There were over two hundred in this category.

D. Financial Problems

Students were aided in their financial problems by means of scholarships, grants-in-aid, loans, part-time work, and summer employment. More emphasis was given to financial counseling and budget planning.

The Committee on Student Aid awarded \$19,067 in scholarships and grants-in-aid throughout the year to men and women students. Careful interviewing of students and evaluation of requests is extremely necessary but quite time-consuming.

The Faculty Committee on Undergraduate Scholarships awarded five LeFevre and 18 University Undergraduate scholarships. Approximately 1,100 students applied for aid, and a total of \$10,385 was granted.

Students were awarded a total of \$39,125 from the Teagle Foundation during 1949-50; \$61,341 has been made available to Cornell for 1950-51.

During the year the Deans' Office granted from special funds 33 scholarships to women in the amount of \$1,981.15, which is an increase this year of 12 scholarships and \$194.20. The office recommended to other committees 21 students who were granted a total of \$4,599.99.

The demand for scholarship funds has far exceeded the resources available to the committees. Unless more unrestricted funds are found, the committees must continue to be quite limited in aid to needy students.

There were 578 loans authorized; 517 of which were to veterans and 47 to women. The total amount of loans authorized was \$94,172.12, an increase of \$1,596.00 over last year's figure. The increase may be a reflection of the completion of GI subsistence by many veterans as well as the higher cost of living in Ithaca.

Because of the increasing needs of students, the tempo of job-finding activities was increased and, as a result, the total traceable earnings of men amounted to \$337,486.13, several thousand dollars over the previous year. The total number of men students known to have jobs during part or all of the academic year increased slightly to 1,851. There was an increase of 23 per cent in the total number of calls to the office for part-time jobs, despite the fact that calls from university departments decreased about 31 per cent. Jobs were held in university residential halls and dining rooms, cafeterias on and off campus, Willard Straight Hall, fraternities and sororities, University departments, and in the City of Ithaca.

Approximately 280 women students earned room, board, or both during the year; approximately 410 other jobs were filled in office work, housework, child care, and similar work.

Letters were sent to about 600 agencies and business firms in an effort to discover summer employment for students; and arrangements for interviews on campus were made. Registration of men students totaled 1,027, an increase of 26 per cent over 1948-49; and reported placements to date total 102, an increase of 42 per cent. Registration of women students remained about the same (235) and reported placements totaled 89 in June. It is expected that more interviews and placements will have taken place after examinations and a more complete survey of placements can be made in the fall. In general, jobs were harder to find than in 1948-49.

E. Foreign Students

The foreign student enrollment during the year was 351 from 62 countries. Of these, 305 were men and 46 were women; 198 graduate students and 153 undergraduates.

The financial situation of most foreign students, which was precarious a year ago, has become worse during the past year as a result of the devaluation of the pound sterling. Finances have been a major problem of all foreign students. The University awarded scholarships and fellowships to 76 foreign students for a total value of \$40,400 and assistantships to 50 foreign students for a total value of \$82,100.

In addition to the financial assistance given by the University, twelve foreign students received aid from eleven fraternities and one co-operative which provided free room and board. The value of their contribution totaled approximately \$8,500.

This co-operation on the part of the fraternities has been the most significant development during the year. In addition to offering financial assistance to foreign students, the fraternity and sorority groups have contributed much in the way of good public relations and moral support; by widely accepting the foreign students in the close relationships of their groups. During the past year twenty-nine houses, three co-operatives, four sororities, and twenty-two fraternities have chosen fifty foreign students for membership. All of the houses that entered into this plan during the past year are continuing it for the next year, and six more fraternities and one sorority will be added to the group. A religious group of students has also undertaken to provide complete maintenance for a foreign student. Consequently, 20 foreign students will be supported by groups of American students at a value of about \$15,000.

The Counselor to Foreign Students had extensive correspondence with both undergraduate and graduate foreign students concerning admission. He worked closely with the admission officials throughout the year.

F. Selective Service

This office continued to have the responsibility of registering Cornell students and University employees under the Selective Service Act of 1948. This year 336 men were registered. Current information on Selective Service procedure is available for all students in the University.

G. Scheduled Student Contacts

A friendly letter was sent to new entering students inviting them to visit our offices. In addition, students were referred to the office through the professors, student counselors, head residents, student deans, other students, and other members of the University staff. This year there were more than 20,000 visits from students to this office.

Exit interviews are encouraged though greater co-operation of the interested agencies is still possible. The head residents, student counselors, student deans, and W.S.G.A. officers have been effective in encouraging students to come in before withdrawing from the University. More college officials each year see the value of these exit interviews. As a result of co-operation this year, many students intending to leave for financial or other reasons received help and decided to stay; having clarified their position on campus, they had become adequate for their work. Students leaving for academic reasons were given information on other colleges and on procedures for re-application to Cornell. The practice does much for the morale of departing students and good public relations.

STUDENT ACTIVITIES

A. Social Activities

The total number of social events scheduled during the year was 1,579, as compared with 1,554 in 1948-49. 1,050 informal parties and dances were scheduled during the year; 95 more than in 1948-49.

Some members of our staff met regularly during the year with the social coordinator of W.S.G.A. concerning social programs, and with the president of

I.F.C. on the development of a social code and a chaperon's role. The setting of the social code has already had some effect in raising social standards throughout the campus.

B. *Student Organizations*

This office participated in the following student activities:

As advisers for:

Credo
Dance Club
Desk Book Committee
Independent Council
Interfraternity Council
Mortar Board
Panhellenic Council
Religious Emphasis Week
Student Council
Student Council Survey Committee
W.S.G.A.

As members of:

Campus Chest
Cornell Charities Drives Committee
Cosmopolitan Club
CURW Board of Control
CURW Freshman Camp Conference
Freshman Camp
Freshman Council Advisory Committee of CURW
Pi Lambda Theta
Pilots' Club
Student-Administration Committee
Student Leadership Conference
Willard Straight Board of Governors

A current file is kept on each student organization, and information is available on request from other University departments and students. Applications for recognition of new organizations were received in this office and processed through a Student Council committee and the Faculty Committee on Student Activities.

This year a staff member worked on a sub-committee of the Committee on Student Activities in preparing a complete classification of all student organizations and compiling pertinent information concerning each organization: definition of a recognized organization, application for recognition, meaning of recognition, standards for maintenance of recognition. This material is to be distributed to all organizations in the fall of 1950.

C. *Housing*

This year for the first time an all-freshman dormitory for men was set up in Cascadilla Hall and proved a successful experiment. Plans for next year include Cascadilla as well as three temporary dormitories to be set aside for exclusive use of freshmen. It is hoped that within the next few years the program can be expanded to reach every member of the incoming freshman class.

To foster closer relations between this office and students, especially freshmen, in co-operation with Residential Halls, the proctor system was revised. The title of student proctor was changed to student counselor. Members of this staff, together with the Director of Residential Halls, planned and carried out the training program. The program proved effective to personalize Cornell to parents as well as to students. It has helped with difficulties beginning among our students. There has been a new emphasis on counseling responsibilities. There are plans for further development of this program next year.

The dormitory clubs met with success this year. Student counselors will be given greater assistance for fostering programs in their respective units next year.

D. *Orientation of new students*

The orientation program for freshmen has received careful attention. Staff members met during the year for two hours each week and have placed special emphasis on the academic life of the college student.

There has been a vigorous training program during the year for the student leaders involved in orientation and more emphasis this year has been given to the problem of reaching off-campus students.

Orientation interviews of freshmen women, begun in 1948-49 for Arts College students, were expanded this year to include freshmen and transfer women from all colleges. The student deans have been helpful and effective in develop-

ing this program, which does much to acquaint students with the office as a whole, its philosophy, and the services available throughout the campus.

This office is interested in the fact that the Deans' Committee on Orientation Policy brought out student problems not connected directly with orientation and, on its recommendation, further committees were appointed to work out a more effective advisory system, closer faculty-student relationship, and to study the problem of transfer from one school to another in Cornell. This is a very encouraging situation.

E. Publications

Members of the office staff served as advisers to the publication of the following: Co-eds' Creed, Cornell Desk Book, Newsletter for Student Dean Alumni, Orientation Week Program, Scholarship and Financial Aid Pamphlet, Weekly Social Calendar.

The office also makes available the following: Expense and budget leaflets, lists of student organizations with their officers, weekly bulletin to dormitory head residents.

STAFF ACTIVITIES

A. In-Service Training Program

In-service training for student deans, head residents, and student counselors is part of the program of this office. It includes weekly meetings, occasional field trips, speakers, bibliographies, and individual conferences. In addition, members of the staff supervise a significant portion of graduate student work through conferences, dormitory programs, and serving on special committees.

B. Committee Participation

Members of the staff were active in the following University groups and several special committees: Board of Governors, New York Hospital School of Nursing; Committee on Advisory Systems; Committee on Student Aid—Executive Secretary; Deans' Committee on Orientation Policy; Faculty Committee on Undergraduate Scholarships—Executive Secretary; Freshman Camp Policy Committee; Graduate School Faculty; Housing Committee; Medical Staff; National Scholarship Committee; School of Education Faculty; University Committee on Scholarships and Grants-in-aid—Secretary; University Committee on Student Activities—Executive Secretary.

C. Professional and Community Activities

AAUW—local program consultant; Advisory Committee for Willard Straight lecture series; American Council on Education—consultant in guidance and personnel; member of committee writing brochure on student activities; Board of Foreign Scholarships in U.S. Department of State; CURW Memorial Building Committee; Hazen Associates; Member Board of Directors, National Association of Foreign Student Advisers—Chairman, Committee on Immigration Problems; National Association of Deans and Advisers to Men—Executive Committee; National Association of Deans of Women—Secretary, consultant at '50 convention, member Meetings Committee; National Interfraternity Council; National Vocational Guidance Association; New York State Association of Deans and Guidance Personnel—Program Chairman for '50 annual conferences, member Publications Committee, member Membership Committee, discussant at '49 conference; Phi Delta Kappa—president; Red Cross; United States Air Corps Reserve; United States Naval Reserve.

Campus talks: WSGA, Panhellenic, Freshman Camp, Freshman Class banquet, Student Council orientation for new officers, Independent Council, Cornell Dames Club, School of Nursing seniors, Sun banquet, Freshman Camp, Lyle Conference of counselors of freshman camp, Student Council Leadership Conference at Hidden Valley, Phi Kappa Psi, Phi Kappa Sigma, Phi Sigma Kappa, Sigma Alpha Epsilon, Theta Xi.

Discussions and talks to the following: AAUW meeting for high school students; over local radio network on Student Council Workshop; young people's groups affiliated with churches in community; teenage group at YWCA in

Cortland; high school girls in Binghamton, Corning, Dobbs Ferry, and in Auburn; vocational guidance teachers in Binghamton, Corning, Dobbs Ferry, and in Auburn; Cornell Clubs in Boston, Buffalo, Elmira, Binghamton, Gloversville, Glens Falls, Norwich, Garden City, West Orange, and Amsterdam.

Professional writing: invited by Metropolitan School Study Council to condense parts of doctoral dissertation, to be published; invited by New York publisher to write a book on college entrance and problems of college adjustment; wrote reviews of children's books for New York Times and Saturday Review of Literature; wrote reviews of professional books and materials in New York Times, The School Review, Journal of Social Case Work, Social Education, and the Social Studies.

D. Staff Changes

Mr. Herbert Ranney will join the staff temporarily next year to assist Mr. Shaffer in scholarship administration.

Mrs. Ralph Brown will be replaced in the position of Vocational Counselor by Miss Mary K. Hudson.

Miss Lila MacLeod has been appointed to the staff to replace Miss Dorcas Dealing in charge of the Social Calendar, social advising, and the scheduling of social events.

New head residents in the dormitories are Miss Josephine Williams, Clara Dickson 6; Mrs. M. A. Switzer, Comstock B.

New head residents in the sororities are Mrs. Ruth E. Cavetz, Alpha Phi; Mrs. Albert E. Phin, Kappa Alpha Theta; Mrs. Florence Durham, Sigma Delta Tau.

SUMMARY

The new office of the Dean of Men and Dean of Women has charted its course in the past five years and decided on its policies. It is a counseling office to supplement and in no way duplicate college offices. It works closely with professors, college counselors, and college offices. It is not disciplinary and exercises no judicial power, but its staff does try to find every student in need of assistance and render that assistance or refer the student to a professor or agency more closely related to the problem.

The office represents the University in advising campus-wide organizations and co-operates and serves on the board of those volunteer agencies that wish to work closely with the University.

The office carries on in-service training in groups but needs more staff to reach the entire student body during these critical years.

Staff members serve on committees where University policy is related to student welfare and make an effort to interpret student needs.

The office gives much time and study to organizational procedure which will facilitate the making of social order without regimentation.

The staff members give unstintingly of their time and energy night and day as well as during the weekends.

More staff, either faculty volunteers or regular staff members, is needed to discuss the many questions students raise. At least two secretaries to release counselors for more time with students are urgently needed to obtain the best work for the total program. Memoranda are necessary and the failure to write them at once may cause serious damage to students and to Cornell.

Each year holds a challenge that is unique and the careful and constant effort of this staff will meet it as best it can. This is work in which no specific predictions can be made, but interest, alertness, and concern at all times are fundamental to the execution of the total program.

LUCILE ALLEN,
Dean of Women.

FRANK C. BALDWIN,
Dean of Men.

APPENDIX XXIX

REPORT OF THE DIRECTOR OF THE UNIVERSITY
PLACEMENT SERVICE

To the President of the University:

SIR: I have the honor to present the report of the University Placement Service for the year 1949-50.

GENERAL

A pessimistic economic outlook last fall was reflected in the Placement Service by pressure for help from Cornellians seeking positions. Students needed more of our time in personal interviews because it appeared that job hunting would require more careful planning and counseling. By the first of January this situation began to change, and once again the greatest demand for our service came from employers. Demand increased so that as early as May we had to discourage some employers from visiting Cornell because students in certain fields were disinterested in more job offers. These changing conditions kept us busy beyond our ability to keep up all our services at a level that satisfied me. Excluding about one thousand Alumni registered either with this office or in our office in New York City, 670 men and 164 women students used the service this year, and each expected and deserved individual attention. For the men this would have meant that I could allow each man only one fifty-minute interview a term if I did no administrative work, saw no employers or alumni, and did nothing but interview all day continuously throughout the school year. I was forced to spend less and less time on alumni placement and finally shifted this work to my assistant, Miss Potter. She has done an admirable job, but this meant a sacrifice in her women's placement efforts, a field neglected by us for some time and which Miss Potter has been developing successfully.

The war in Korea means that mobilization plans may again affect the emphasis of placement activities. Men's senior placement, which accounts for about 50 per cent of our activities, may be greatly overshadowed by the importance of alumni and women's placement. As it is possible that I may be leaving as Director of Placement because I am an active reservist in the United States Army, I would like to point to the future and urge that the problems of the Placement Service be carefully observed so that its organization will be kept adequate for its mission. Its importance to Cornell must be fully appreciated. This office is the main contact that many employers in industry, business, and government have with Cornell. It is essential that these influential people be served well by the Placement Service; because, regardless of the excellence of our Faculty and facilities, a lasting impression of all of Cornell is gained by their visits to and correspondence with the Placement Service. In addition, the Placement Service is for many students the last, most intimate, and sometimes most continuing contact with Cornell. It is through us that these students learn of their lifetime vocations. Such an influence on a student's life should not be regarded lightly or handled hastily. I have felt that facilities have not kept pace with needs for so important a responsibility.

ALUMNI PLACEMENT

Alumni placement fell off during the year partly because of the economic recession of 1949 and partly because we have been unable to devote as much time to the placement of alumni. Table I indicates the results of this year's efforts.

SENIOR PLACEMENT

In spite of a discouraging beginning, we have had an excellent year in this division of our efforts. The number of companies visiting our campus dropped about 20 per cent below last year's high of 200 employers, which was partly

due to a slow recruiting season during the first term. Our second term was as busy as ever, but, more important, each company had more openings than last year. By the end of May many students had received several job offers, and we found ourselves in the embarrassing position of not having enough students for some employers to interview. This was quite a change from the early months of 1950 when students, frightened by publicity about unemployment, jammed our office in a frantic effort to interview every employer that visited Cornell. This, of course, was impossible as each employer can see a small percentage of the students, and they rely on the Placement Service to select the most appropriate candidates.

Women's placement for 1950 was particularly interesting as the class of 1950 had taken advantages of the opportunities for diversity of training offered by Cornell, and, as a class, their academic achievement was appreciably higher, so that the majority of those who wanted jobs had little difficulty in finding good ones. In some cases they found opportunities of the highest order, such as scientific administration paying \$350 a month to start. There were other interesting jobs such as opportunities for administrative statistical work with the United States starting at \$3,400 a year, an opportunity in France doing educational work with French children, and various administrative secretarial jobs in banks, insurance companies, and publishing houses. Well-prepared science majors found good opportunities. Opportunities in personnel and journalism were difficult to find, although some women found that secretarial skills were a good entree to these fields.

Table II indicates that the percentage of unemployed was less than last year in almost every division of the University. Not indicated by the table is the fact that the total number of jobs reported is considerably higher than last year. It is worth pointing out that this report must be prepared too early after graduation to give a true picture, as many students are still negotiating job offers received several months ago. Indications are that all who want jobs should have them by the end of the summer. Last year's graduates who did not find a position before July 1 found it extremely difficult to find employment during the summer, and many of them were without jobs as late as November.

SUMMER EMPLOYMENT

Although we do not register students for summer employment, we are actively engaged in this work in cooperation with the part-time employment offices run by the Dean of Men and the Dean of Women. We use our established contact with business, industry, and other organizations to obtain job leads for the use of these offices.

JOHN L. MUNSCHAUER,

Director of the University Placement Service.

TABLE I
ALUMNI PLACEMENT STATISTICS

	1950	1949	1948
<i>Ithaca Office:</i>			
Number of placements	23	35	38
Number of positions listed	1504	1243	1828
Number of active registrants on June 30	333	334	313
Number of inactive registrants	4060	3705	3365
<i>New York City Office:</i>			
Number of placements	70	91	86
Number of positions listed	1504	1243	1828
Number of active registrants	280	294	235
Number of inactive registrants	4163	3698	3333

TABLE II
EMPLOYMENT OF 1949-50 GRADUATES
(Employment Reported to the Service and the Various Colleges
and Departments as of June 30, 1950)

College	Positions Reported	Continuing Studies	Total Class	Per Cent Unemployed or Not Reporting		
				1950 %	1949 %	1948 %
Agriculture						
Men.....	225	64	379	24	22	25
Women.....	12	4	30	47	46	45
Architecture						
Men.....	38	4	42	0	0	8
Women.....	3	0	3	0	78	11
Arts and Sciences						
Men.....	92	168	421	38	35	26
Women.....	58*	27	126	32	65	64
Business and Public Administration	42	1	50	14	33	10
Engineering						
A.E.....	48	1	55	13	(reported with M.E. previously)	
Ch.E.....	51	3	76	29	34	13
C.E.....	68	4	101	29	40	29
E.E.....	91	10	162	38	31	19
M.E.....	87	20	127	15	32	23
Home Economics.....	82†	17	151	34	30	55
Hotel Administration.....	72	2	92	19	23	11
Industrial and Labor Relations....	40	13	88	39	45	30

*Includes 22 married.

†Includes 15 married.

APPENDIX XXX

REPORT OF THE DEAN OF THE SCHOOL OF NURSING

To the President of the University:

SIR: I have the honor to present the report of the School of Nursing for the year 1949-50.

FACULTY

Several changes occurred in the department head and administrative positions in the fall.

Miss Sarah Moore retired from her position of Administrative Assistant after thirty-six years of service with the school and hospital. Miss Moore was graduated from the New York Hospital School of Nursing in the class of 1913 and served both in the old hospital and in the new Medical Center in the capacity of head nurse, instructor, Assistant Director, and Administrative Assistant. Her work brought her in touch particularly with applicants and alumnae and her knowledge of the earlier years of the school and hospital was an invaluable asset which cannot be replaced. Another member of our staff, Miss Flora Bergstrom, a graduate of the class of 1927, retired from her position of librarian after a long association of twenty-two years with the school and hospital.

Mrs. Elizabeth Wright, Associate Professor of Psychiatric Nursing, began her work with us when she assumed her duties as Director of Nursing in the Payne Whitney Clinic. Miss Kathleen Newton, formerly an instructor in Medical Nursing, was appointed Assistant Professor of Nursing with responsibility for staff education. Mrs. Margery Overholser, Associate Professor of Public Health

Nursing, returned after a year's leave of absence with the New York State Department of Health, and Miss Muriel Carbery, Assistant Professor in Surgical Nursing, was granted a leave of absence for study, her place being taken by Miss Edna Tuffley as Acting Head of Operating Room Nursing.

In February, Dr. Leo Simmons joined the faculty as Visiting Professor of Anthropology in Nursing, an appointment which he holds jointly with an appointment in the Medical College as Visiting Professor of Anthropology in Medicine. This appointment was made possible by a grant from the Russell Sage Foundation.

We were fortunate in being invited to send a member of our faculty to a three weeks' institute on cancer education for nursing instructors, held at the University of Minnesota under the auspices of the United States Public Health Service. Thirty-six nurses from thirty schools and public health agencies of the country participated. Two members of the faculty in the Department of Obstetrics also attended a week's institute in obstetrical nursing offered at Yale on the care of the mother and baby in the rooming-in plan.

Miss Lyons, Assistant Dean and Associate Professor of Nursing, has served this year as Chairman of the national Joint Committee on the Unification of Accrediting Activities, which brings together accrediting programs previously carried on under several national nursing organizations. Others of the faculty have also assisted on national accrediting committees or in accreditation visits to schools.

ADMISSIONS

This was the fourth year in which *all* students admitted to the school have been required to have completed two years of general liberal arts work in college before admission. We admitted 76 students, the largest number ever admitted to the degree program in a single class, and nearly the largest class ever admitted to the school (the classes admitted at the height of the war, September 1943 and 1944 having been only slightly larger, and having included a number of high school students).

Colleges of 20 states and Hawaii were represented in the new class, 58 per cent of the students having come from colleges outside New York State.

The Pre-Nursing test offered by the National League of Nursing Education replaced the lists previously required for admission. The advantage of this test over the one offered previously is mainly that it gives the faculty an opportunity to compare the aptitude of each applicant with those of other students in the first and second year of liberal arts college. This is important since we are now recruiting from colleges. Counselors in those colleges are in need of advice from our faculty relative to the degree of scholastic aptitude necessary for success in this school.

For the class to be admitted in the fall of 1950 we anticipate a full registration of 80 to 85 students.

ENROLLMENT

	Completed during the year	Enrolled as of 6/30/50
<i>Three-year course</i>		
First year students . . . . .	.. ..	68
Second year students . . . . .	.. ..	36
Third year students	27 ..	38
	27*	142
<i>Courses for affiliates and graduate nurses</i>		
Affiliating students (4-8 mo.)	85 ..	35
Field students registered in Columbia University	14 ..	0
	99	35
GRAND TOTAL FOR ALL STUDENTS	126	177

*Twenty-six were in the graduating class of September 1949 and one additional student completed the program in January but will not be awarded the degree until Commencement in September 1950.

STUDENTS GRADUATED IN SEPTEMBER 1949 AND POSITIONS NOW HELD

The year was marked by the graduation of the first class in which all students were degree candidates. Twenty-six students graduated. This relatively small class was admitted in 1946, the year in which the total admissions to schools of nursing in the United States as a whole were lower than they had been at any time since 1930.

A review of the positions in which these young graduates are serving at the end of their first year in nursing shows a larger number in public health than in former years, about half of the class married, and nearly all of them active in nursing.

By Field of Employment:

Hospital staff.....	8
Public Health Staff.....	11
Visiting Nurse Services.....	7
County Health Departments.....	4
Teaching.....	1
Industrial.....	1
Mission field.....	1
Doctor's office.....	1
Not active in nursing.....	3
(All three are outside the mainland of the United States and two are married)	
	26

<i>Marital status:</i>	Married	12
	Single	14
		26

Location by states: Half are in New York State, the remainder are in five other states, one in Hawaii, two in or on the way to Germany, and one on the way to Iran.

Classification of all nurses now graduating from the school as "Public Health Nurses Grade I," which became effective following the January 1949 Joint Accreditation of the school by the National Organization for Public Health Nursing and the National League of Nursing Education is undoubtedly partly responsible for the relatively large proportion of the 1949 graduates entering public health nursing. This is a situation which cannot be regarded as lacking in advantages to hospitals as well. The relationship of care in the hospital to care in the home is a matter receiving much greater attention now than in the past. Length of hospital stay and successful outcome of much medical care are dependent upon continuity of care between hospital and visiting nurse services or other public health staffs. This school is in an enviable position to prepare nurses for public health as well as for hospital positions, and hospitals too are in need of nurses who know the situation in homes. The adequacy of public health nursing staffs has a very important bearing on the proper development of hospital services. From the point of view of economics as well, modern medical programs bring out more clearly than ever the necessity for care in the home whenever it can take the place of the much more expensive hospitalization. We therefore take pride in the fact that our present program is working for better care in both homes and hospitals.

CURRICULUM

There have been no marked changes in the curriculum, but within several clinical fields there have been significant shifts in emphasis in keeping with trends in medical care. Particularly has this been true in obstetrics, where early ambulation, early discharge from the hospital, the development of a modified "rooming-in" program which places the mother and baby in the same room, and new steps in preparation for labor have all affected the content of student experience and instruction to conform with changes in patient care. Students have responded with new interest to the opportunity to care for mother and

baby together, and to help the mother to be comfortable with her baby and more assured in her care of him. Each student assigned to this unit presents a study of mother and baby which places emphasis on feeding, behavior of the infant, and family relationships. The kind of preparation needed to give competence and a sense of adequacy to the nurse working in the rooming-in situation makes more obvious the need for knowledge of child development, the role of the family, and the meaning of behavior than did the earlier plan of care which left many of the problems for the mother to face alone after leaving the hospital. The nurse in this situation is an educator in a very practical way. Everything she does or says educates. The patient will be out of the hospital in a few days and what she learns in these few days in which she meets so many new and important situations in her life can mean a great deal if it fits the needs of her home situation. Instruction therefore becomes more and more integrated into the bedside care of the patient. In order to understand and assist the mother, students are taught the exercises and relaxing techniques which the mother learns in preparation for labor. A very satisfactory arrangement has been made whereby this instruction is given jointly by the physical education instructor and the instructor on the obstetrical faculty as part of the physical education program.

The importance of preparing nurses for tuberculosis nursing programs raises certain questions as to the type of experience and general preparation which can best bring the needed understanding and other qualifications for this work. Medical research being done in chemotherapy in tuberculosis has led to the admission to our tuberculosis service of large numbers of extremely complicated and terminally ill cases. While this has the advantage of presenting many nursing problems and of pointing up the variety of involvement that can occur in tuberculosis, it emphasizes the extremes of the disease and fails to give the more common picture wherein the patient, through a planned program of rest, and progressive activity, is able to return gradually to normal life. Since tuberculosis continues to be a major public health concern, an experience in a different type of tuberculosis service than we have been offering may become desirable.

A reorganization of the first-year schedule in an effort to bring the class load and total work-week down to a more reasonable and livable level has been watched with interest. There is general agreement that tension and pressure have been reduced, but problems arising out of the shortened practice hours in the first seven weeks of the clinical experience are still to be worked out.

COOPERATION IN NORM-SETTING TESTS

Senior students have taken part in a national effort to determine the level of knowledge in the clinical areas which should be expected from the graduate of a collegiate school. Along with the senior students in other collegiate schools, the seniors have taken special examinations on nursing in public health and in six clinical areas (medicine, communicable diseases, surgery, pediatrics, obstetrics, psychiatry).

STATE BOARD EXAMINATIONS

Twenty-six graduates took the State Board examinations in New York State and passed with very satisfactory grades.

Effective this year it is no longer necessary to send to the New York State Department of Education a transcript of each student's completed record. As verification of the date of completion is now the only report required, a tremendous amount of office work will be eliminated.

SCHOLARSHIPS

The Committee for Scholarships presented the school with \$3,000 for the scholarship fund in May. This is the third successive year in which a generous contribution has been received from the committee, the total amount having been \$7,400. When it is recalled that in 1946 no scholarship funds were available to the school and all funds such as were provided as a war measure through the U.S. Cadet Nurse Corps were discontinued, it is not difficult to

understand the importance to the school of this new fund. The continuing interest of the Committee is greatly appreciated by faculty and students.

Twenty-six students now in the school are benefiting from the Scholarship Fund.

THE COUNCIL AND THE FEDERATION OF CORNELL WOMEN'S CLUBS

The Council of the school held meetings in November and March, and four members paid special visits to the school. It is hoped that the schedule for the coming year will give opportunity for more frequent meetings with the Council to discuss policies, plans, and progress.

The Federation of Cornell Women's Clubs has continued its interest and support. As in the last few years, various local clubs of the Federation in the eastern section of the country have invited a representative of the school to meet with them to speak on the school. In some of these the club has made opportunity for the school representative to meet with potential applicants and their parents. With their knowledge of what university education has meant to women in other professions, Cornell women have given invaluable support to the school and to nursing through informing themselves of what the needs of nursing are and what the school has to offer, and through giving opportunity for these facts to be understood better in schools and among their friends. We were pleased to have the Executive Committee of the Federation hold its annual winter meeting at the Medical Center this year.

STUDIES IN NURSING CARE

Two studies for the improvement of nursing care and instruction of patients, begun in 1948, have been underway during the year and are nearing completion. These are: Teaching the patient with tuberculosis, and care of the patient with diabetes. Through representation on the committees, we have had the help of medicine, nutrition, social service, physical therapy, occupational therapy, the Visiting Nurse Service of New York, and the New York Tuberculosis and Health Association. These studies give promise of being a stimulus to improved nursing care in this Center and elsewhere. They have also served as a pattern for cooperative planning to the end that the patient may benefit from coordinated services of different professional workers and agencies.

Through the generosity of the Russell Sage Foundation, Professor Leo Simon's appointment as Visiting Professor of Anthropology is making it possible to study the question of what the social sciences have to contribute in the preparation of nurses and what, in turn, nursing can contribute to the social sciences. Under the direction of Professor Simmons, a plan has been made for next fall to study emotional problems which confront the nurse in caring for the patient in the hospital, and how she can meet them effectively. Beginning in January of this year the nursing faculty of the Psychiatric Department made themselves available on a consultation basis to be called upon by nurses of other departments of the Center to help them with patient care problems. This has proved valuable and will be continued. In addition to this, the research study which will begin in the fall will be carried on in one general surgical pavilion where such a service will be made available more intensively. One member of the psychiatric nursing faculty will give a considerable portion of her time to this project. Because of the significance which this study can have in the care of all types of patients, it is anticipated with interest by nurses in all departments.

FACULTY PUBLICATIONS

One member of the faculty was author of a new book published this year and two others were co-authors of revisions:

Kathleen Newton, Assistant Professor of Nursing: *Geriatric Nursing*, C. V. Mosby, June 1950

Elizabeth Harmon, Instructor in Surgical Nursing, co-author with Dr. John West and Manelva Wylie Keller of an extensively revised textbook: *Nursing Care of the Surgical Patient*, The Macmillan Company, 1950

Henderika J. Rynbergen, Assistant Professor of Science, Associate author

(with L. S. Cooper, E. M. Barber, and H. S. Mitchell) of *Nutrition in Health and Disease*, J. B. Lippincot Co., 1950

In addition, Laura Dustan, Instructor in Obstetrics, has re-written her section on Maternity Nursing and Nurse Midwifery in *Careers for Nurses*, by Dorothy Deming, now under revision.

At the biennial meeting of the American Nurses' Association, National League of Nursing Education, and the National Organization for Public Health Nursing, in San Francisco in May, Miss Verda Hickcox, Associate Professor of Obstetrics, presented a paper on "Changing Maternity and Newborn Care in the Hospital," which was based on the program carried out in the Department of Obstetrics in the last few years.

LIBRARY

With the appointment of a new librarian in the fall of 1949, we embarked upon a review of our library needs. The library has been made the center for ordering and returning audio-visual aids as needed by faculty members. In February, all library items were placed in one of three categories: reference, reserve, and circulating. Heretofore there have been no circulating items. This liberalization has made it easier for students and faculty to use the library. One goal for the coming year is to complete our file of the AMERICAN JOURNAL OF NURSING, of which we now lack the first ten years, 1900-1910. As these issues are no longer available through ordinary channels, we hope to obtain them through alumnae and friends of the school. We are very grateful to several friends of the school for gifts to the library during the year.

HEALTH AND THE STUDENT HEALTH SERVICE

In most respects this has not been an unusual year in the Nurses' Health Service. With the larger number of both students and hospital graduate staff the number of health service visits, out-patient referrals, consultations, physical examinations, and diagnostic tests have all shown a related increase. The number of admissions to the Infirmary have not increased in the same proportion. The total number of respiratory conditions showed a decided increase and reached its peak in March. The dental service which was made available to nurses in January 1949 has been used by both students and graduates throughout the year. The largest number of visits were made for extractions, a good many for full mouth X-ray, the cleansing service having been used to the least extent. An orthodontist is now available in the clinic for consultation.

In November, one student in the school developed poliomyelitis, with extensive paralysis. Her discharge from the hospital in June, with completed plans for transferring to work as a medical librarian, was the outcome of combined efforts of many experts in both the acute and the rehabilitation stages of her illness.

SPECIAL PROGRAMS FOR GRADUATE NURSES

Institutes in the Care of Premature Infants:

In November, the Department of Pediatrics offered the first of a series of institutes for graduate nurses and physicians in the care of premature infants. This program has received the financial support of the State Department of Health from Children's Bureau funds, and is being offered at their joint request. Four institutes were held during the year, with a total attendance of 23 nurses and 21 physicians, representing both public health and hospitals. Hawaii and several distant parts of the country have been represented. Priority is given nurses and pediatricians who come in pairs from centers where programs for the care of premature infants are being established. Special preparation in this type of care is being offered in only three other places in the country and this is at present the only program set up to take nurses and doctors in teams together. We were fortunate in being able to add to our staff a nurse who had had the combination of experience in public health, teaching, pediatrics, and the care of premature infants, without which the program could not be offered.

Field students in clinical specialties:

We have continued to serve as a practice field for a limited number of graduate nurse students registered for advanced clinical courses at Teachers College, Columbia University. Fourteen students completed practice assignment (all but two being in the pediatrics major). One student in nursing service administration spent the major part of a semester in the field work; the others devoted much shorter periods ranging from 20 to 80 hours each.

COURSES FOR AFFILIATING STUDENTS

Students from four hospital schools and one collegiate school received experience and instruction in obstetrics and/or pediatrics. As of January 1, the affiliation for students from the Moses Taylor Hospital School of Nursing in Scranton, Pennsylvania, was discontinued, and on January 9, students from the the Mountainside Hospital School, Montclair, New Jersey, were accepted for the first time.

<i>Schools of Nursing from which students come to us for affiliation</i>	<i>Clinical Course offered</i>	<i>Number of Students Completing 1949-50</i>
Skidmore College	Obstetrics 16 weeks	29
Department of Nursing New York City		
Burbank Hospital School	Pediatrics 16 weeks	13
Fitchburg, Massachusetts		
Presbyterian Hospital School	Pediatrics 16 weeks	19
Newark, New Jersey		
Mountainside Hospital School	Pediatrics 16 weeks	8
Montclair, New Jersey		
Moses Taylor Hospital School	Obstetrics 16 weeks	5
Scranton, Pennsylvania	Pediatrics 16 weeks	11
TOTAL		85

COUNSELING SERVICES

The role of the Counselor of Students continues to be of particular importance, and working relationships between the Counselor's office and the departments of the hospital in which the students are assigned for experience is excellent. In addition to the work directly with individual students, the Counselor has taken an increasing part in teaching programs of the school and to some extent in staff education programs for hospital nursing personnel. She has offered the unit on personnel practices in the senior course in Ward Activities and Relationships, and in the seminars for new head nurses. She has participated in a staff program on evaluation of work of graduate staff nurses, and assisted in the program for the orientation of auxiliary staff.

RESIDENCE AND RECREATION AND STUDENT ACTIVITIES

Student activities in dramatics, Glee Club, Hobby Shop, Christian Nurses' Fellowship, Newman Club, and student publications have in most instances been carried on very successfully in conjunction with graduate nurses, and in a number of instances with students in the Medical College. The limited space for out-door recreational activities increases the importance of other activities. In the Fall ahead of us we are facing a shortage of rooms in the Residence brought about by two conditions for which we have been working for some time—an increased student body and a larger graduate nurse staff for the hospital.

DEVELOPMENTS IN THE NURSING SERVICE OF THE HOSPITAL WHICH HAVE AN IMPORTANT BEARING ON THE SCHOOL

For the first time since the war the Nursing Department felt the long-hoped-for release from some of the war tensions, and was able to look forward to

planning and providing the type of patient care which gives proper support to the medical programs carried on in the Center. This was made possible not only by the increase in staff, not obtainable in earlier years, and improved provision for orientation, but equally by progress in readjustment of duties both within the department and in cooperation with other departments of the hospital. These readjustments had until this year been impossible of accomplishment because of shortages and high turnover which were characteristic of other categories of personnel as well as of the graduate nurse group. While a relatively high turnover persists and the staff of the Nursing Department has been below quota throughout the year and especially in the summer months, the progress made during the year has been encouraging.

Practice in teamwork with the nursing aide is developed satisfactorily throughout the different departments and is regarded as an important experience in which the student gradually learns to take the responsibility for the work of the aide working with her.

As of May 31 the employed staff of the Nursing Department was composed of 632 graduates nurses and 397 auxiliary staff, including practical nurses, nursing aides, attendants, orderlies, and clerical workers. In addition, 143 students were in clinical assignments. Increase in staff has made it possible to improve particularly the evening and night care so important to the patient and his recovery. It has also made it possible to resume to some degree conferences of medical and nursing staffs in the interest of patient care.

We are indebted to many members of the medical staffs and of the hospital administrative departments for the helpful support which they have given to the program of the school. The advantages available to the school are so great that our responsibility for leadership is inescapable.

VIRGINIA M. DUNBAR,

Dean of the School of Nursing
(and Director of the Nursing Service of The New York Hospital).

APPENDIX XXXI

REPORT OF THE DIRECTOR OF VETERANS EDUCATION

To the President of the University:

SIR: I have the honor to present the report of the Office of Veterans Education for the year 1949-50.

Six years have elapsed since the first G.I. enrolled in the University under educational training benefits made available by the U.S. Veterans Administration and certain foreign governments. Other veterans to the number of 10,826 have followed this first G.I. student, and Cornell has billed governmental agencies for more than \$9,600,000 for charges incurred by veterans for tuition, fees, books, and supplies. Amounts paid to these veterans by the U.S.V.A. and other veterans' agencies in subsistence allowances are additional and would in themselves total well over \$10,500,000. Thus in six years Cornell veterans alone have been subsidized in an amount exceeding \$20,000,000 for training at the college level.

Between 1944 and 1950 veteran enrollments for separate terms and summer sessions in all divisions of the University reached a total of 45,729. A summary of the number of individual veterans enrolled each year and the proportion of men students enrolled as veterans at Ithaca is as follows:

	<i>Veterans</i>	<i>Percent of All Men</i>
1944-45.....	362	17
1945-46.....	2932	58
1946-47.....	6227	77
1947-48.....	6033	68
1948-49.....	5203	57
1949-50.....	3916	44

A progressive reduction of veteran enrollment from 1946-47 is apparent, the total for last year being but 63 per cent of that of the peak year. A further accelerated decrease is indicated.

By Colleges, the greatest reduction in veteran enrollment has been in Engineering, which in the fall term of this last year had enrolled only 38 per cent of the number of veterans registered in the fall term of 1946. In contrast, the Graduate School last fall had enrolled 135 per cent of the number of veterans registered in the fall of 1946. The 684 veterans enrolled in the Graduate School in the spring of 1950 is the largest number enrolled for any term and is over 100 more than for any term in a preceding year.

No decrease was recorded in the number of married veterans as compared with last year, and the total of 1,368 constitutes 35 per cent of the total veteran enrollment for the year. The 848 children represent a year's increase of over 100.

The Cornell Guidance Center, which is now a joint operation of the University Testing Service, and the Deans of Students, under contract with the Veterans Administration, tested 1,185 veterans during the year, an increase of about 10 per cent over the number in 1948-49.

In June the Office of Veterans Education occupied new and smaller quarters in the basement of the Administration Building B-15.

VETERANS EDUCATION

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ENROLLMENT OF VETERANS, 1949-50

<i>Summer Courses</i>	<i>Fall Term</i>	<i>Spring Term</i>
1153	3242	2895
Total Enrollments.....		7290
Less Duplicates.....		3374
Total Veterans Enrolled.....		3916

ENROLLMENT BY SCHOOLS AND COLLEGES

	<i>Summer</i>	<i>Fall</i>	<i>Spring</i>
Aeronautical Engineering.....	..	10	9
Agriculture.....	19*	487	421
Short courses.....	..	13	2
Architecture.....	27	87	72
Arts & Sciences.....	..	390	346
Business & Public Administration.....	11*	75	67
Engineering.....	61	707	551
Chemical.....	(4)	(98)	(84)
Civil.....	(28)†	(135)	(89)
Electrical.....	(29)	(229)	(193)
Mechanical.....	..	(233)	(176)
Engineering Physics.....	..	(12)	(9)
Extension education.....	6	..	..
Extramural Courses.....	24	64	50
Field school in geology.....	6	..	..
Graduate School.....	272	670	684
Home Economics.....	..	5	2
Hotel Administration.....	7*	185	179
Hotel unit courses.....	43	..	..
Industrial & Labor Relations.....	25*	136	114
Law.....	..	278	264
Nutrition.....	..	7	10
Summer Session.....	652	..	..
Veterinary.....	..	128	124

	<i>For Year</i>
Married veterans.....	1368
Children.....	848
Canadian veterans.....	19
Disabled veterans (Public Law 16).....	285

*Cooperative Training, whereby a veteran obtains V.A. benefits during his required periods of work practice or internship.
†Summer Survey Camp.

DONALD H. MOYER,
Director of Veterans Education.

APPENDIX XXXII

REPORT OF THE DIRECTOR OF THE DIVISION OF
EXTRAMURAL COURSES

To the President of the University:

SIR: I have the honor to present the report of the Division of Extramural Courses for the year July 1, 1949 to June 30, 1950.

Extramural courses have been offered during the summer, 1949, and in each of the winter terms. Three courses were offered during the summer in co-operation with the Departments of Sociology and Anthropology, Agronomy, and Entomology. There were 112 registrations in the three courses for a total of 246 credit hours.

Six off-campus courses were offered in the fall term in six centers—Ithaca, Elmira, Binghamton, Canisteo, Phelps, and Cato. These courses were arranged with the approval and co-operation of the Departments of Fine Arts, Rural Education, Psychology, and Electrical Engineering. A total of 81 registrations was recorded in the six courses. The total number of credit hours was 175.

Five extramural courses were offered during the spring term in four off-campus locations—Ithaca, Elmira, Binghamton, and Endicott. The registrations totaled 73 for 175 hours of credit. The Department of Mechanical Engineering cooperated in offering two of the five courses. The other cooperating Departments were the same as the fall term except for the Department of Psychology.

For the year the total registration in extramural courses amounted to 266 students for 596 hours of credit.

In addition to the administration of off-campus or extramural courses, the Division has enrolled during the fall and spring terms 291 students for on-campus courses. These were nonresident, employed persons who are unable to spend full time as students. The varied nature of their interests and needs is evidenced in the fact that the enrollments were for courses in nine Schools and Colleges of the University and in 54 different departments. The total credit hours for which these students were registered was 967. The average number of hours per student was approximately three and one-third.

The cooperation of the Faculty and Administration in making the services of the Division available appears to be justified and appreciated. The persons being served, many of whom are former students of the University, have increased in number. The education being sought is becoming more varied.

W. A. SMITH,

Director of the Division of Extramural Courses.