17 December 1956

Mr. John Sprunt Hill
111 Corcoran Street
Durham, North Carolina

Dear Mr. Hill:

I wish to acknowledge your letter requesting me to use my influence with the voters of State College toward defeating the referendum providing for the fluoridation of Raleigh's city water. Your request came at a time when I was completely involved with other matters of very vital importance to the College.

It was not possible for me to take an active part in this controversy, which found an overwhelming majority of our students and faculty in favor of the proposal. You will understand that if there had been time for me to take an active role to help defeat the proposal, how great a danger would have been created in alienating the support of students and faculty, which I deem of great value to me and the College.

We are very much aware of the great interest you have had in North Carolina State College and of your contributions to dairying and forestry. They have been of great significance, and we shall always be very grateful to you and other members of your family. We shall continue to make the best possible use of facilities which have come to us through your generous benefaction. You may be assured that we shall always appreciate suggestions for improving the entire program at State College.

Very sincerely yours,

Carey H. Bostian
Chancellor

CHB:ho

JOHN SPRUNT HILL
111 CORCORAN STREET
DURHAM, N. C. December 6, 1956

Dr. Carey Bostian
Chancellor of State College
Raleigh, N. C.

Dear Chancellor Bostian:

I see from the papers that the City Council of Raleigh is insisting upon trying to put sodium fluoride in the City water supply of Raleigh.

I can think of nothing more aggravating to State College than to put sodium fluoride in the water and force the 5,505 students, and the faculty, to drink this water that is loaded with sodium fluoride, or rat poison. Nobody has ever been foolish enough to claim that fluoridation of water was of any benefit to anybody over eight years of age, and the records show that it is no advantage to children.

Several years ago, at the dictation of the Aluminum Trust and the Rockefeller interests that control the aluminum stocks, the three Commissioners, appointed by the President to control the government of Washington, D. C., were induced to spend $130,000 a year for the fluoridation of the water supply of that great City. Without any election, and for reasons best known to themselves, they added sodium fluoride to this water system. This action has resulted in a great many white people removing their residence from the City of Washington. While the general population of the City of Washington is drinking sodium fluoride in their water supply, official Washington refuses to drink this poisoned water. The President of the United States, members of the Senate and House of Representatives, and all their employees drink pure spring water bought at a great price from the Mountain Valley Water Company. The Justice Department also drinks pure bottled water, and the large body of Democrats, at their last Jackson Day Dinner, brought in one hundred cases of bottled water for use at this great dinner. It would seem, therefore, that there is something radically wrong with the Water Commission of the City of Washington when they add sodium fluoride, or rat poison, to their water system to be used exclusively by poor people, school children, and the great crowds of people who have business with United States Senator and Members of Congress in Washington.

I enclose herewith a picture of a can of sodium fluoride, on which is written in Capital letters- POISON, with skull and bones on each side. On this package also is the following WARNING: "May be fatal if swallowed or inhaled. Avoid breathing dust; store away from food and put out of reach of children and domestic animals." Directions for killing lice: sift powder carefully over neck and body of fowl, and get it well down into the feathers, but do not let sodium fluoride get into food or drink or into cuts and wounds. To avoid inhaling dust users should cover nose and mouth with wet cloth while applying.

JOHN SPRUNT HILL
111 CORCORAN STREET
DURHAM, N. C.

TURNER'S CHEMISTRY, PAGE 223: Water is known as H20 - 2 parts hydrogen and 1 part oxygen. When sodium fluoride is united with the juices of the stomach, largely consisting of water, you have hydrofluoric acid which is most destructive to animal matter. When a drop, the size of a pin head, comes in contact with skin instantaneous disorganization takes place and is followed by deep malignant ulceration. In other words, the unfortunate drinker has cancer. The vapor of hydrofluoric acid is more pungent than chlorine or any of the other irritating gases. It has a strong sour taste and, with alkaline substances, forms salts. When exposed to air, it flies off in dense fumes..

DORLANDS ILLUSTRATED MEDICAL DICTIONARY, 20th EDITION, PAGE 494: by SAUNDERS, has the following definition of mottled teeth: "A chronic endemic dental fluorosis that is found in communities using drinking water that contains one part or more of fluorine per million. Even in small quantities sodium fluorine is a deadly poison. It is the most effective rat killer."

ENCYCLOPEDIA BRITANNICA, VOL IX, P. 428: "Fluorine is the most active of all chemical elements. Water is decomposed by it under ordinary temperatures with a formation of hydrochloric acid. The aqueous solution is strongly acid and dissolves most metals directly. Its most important property is that it rapidly attacks glass and is used in etching."

DR. ALFRED, BIO-CHCMICAL INSTITUTE of the University of Texas, says: "Fluoridation is not in the public interest because the weight of scientific data leaves it still an open question whether such water could have harmful effects." "In experiments with white mice he finds that 30 mice at the University of Texas, drinking fluoridated water, all died of cancer in 30 days." When this report from Dr. Alfred Taylor came out, thirty-five towns in Texas that were being agitated by U. S. Health Employees, all rejected fluoridation of water and, in some towns, there was rioting by women.

About seven years ago Sidney Hillman, of well known political fame, passed the big idea of fluoridation of water over to his friend, Oscar Ewing, one of the attorneys for the greatest fluoride factory factory in the world. Ewing was U. S. Federal Security Adminstrator and, as such, was absolute master and controller of Federal Health, Welfare and Education. Mr. Ewing had full censorship powers over all information from:

17 Vital Bureaus
Food and Drug Administration
U. S. Public Health
Federal Office of Education
Old Age and Survivors of Insurance

There are 950 criminals in the State Penetentiary and 2400 inmates in Dix Hill, making a total of 3350 people who have no vote, but are forced to drink water that is adulterated with sodium fluoride or rat poison.It is difficult to understand why a majority of the City Council of Raleigh wish to impose fluoridated water on the office of the Governor and 134 other State employees, in order that they may indulge in wildcat experiments on helpless children.

JOHN SPRUNT HILL
111 CORCORAN STREET
DURHAM, N. C.

The State Legislature is responsible for the appropriations to State College, and other State institutions in Raleigh. You may be sure that the City Council is riding into a storm of protest against the action of the officials of Raleigh City Government.

I understand that the City of Raleigh furnishes nine million gallons of water per day. If fluoridation of water is adopted, nine gallons of sodium fluoride would go into the water mains each day. Of this nine million gallons of water, children eight years old and under, the only ones that could be benefitted by it, drink only 2885 gallons of water per day. These figures show the absolute absurdity of spending $30,000 per year to put sodium fluoride in the city water.

I became a member of the Board of Trustees of the University of North Carolina in 1905, and became a member of the Executive Committee in 1927. Being a large owner of real estate and three large dairies, I took a great deal of interest in State College and in its various departments pertaining to agriculture and dairying. If I remember correctly, I planned the dairy buildings that you have at State College.

In view of all the above information, I trust that you will use all your influence with the voters of State College to defeat the fluoridation of Raleigh's city water.

Yours very truly,

John Sprunt Hill

FACTS ABOUT FLUORIDATION

The American Mercury -
December 1956.

Page 125:

Anticipating a possiblerevolt by individual dentists members, the American Dental Association directors revised their by-laws before the fluoridation campaign was launched in 1950. A new provision, forbidding any member to disagree publicly with a policy or action endorsed by the governing body, provides a neat gag rule against members. Most other organizations have left the gag rule alone as being too dangerous to test memberships on.

Page 125:

Among the lay opposition it is generally conceded that women, individually and collectively, have been the deciding factor in the defeat or renouncing of fluoridation. Their opposition has been felt in over 500 cities and towns with more than 40,000,000 population. The Chicago and Cook County Federation of Women's Clubs, 52 women representing 35 organizations, appeared at City Hall in April 1956, and expressed determined resistance to the fluoridating of that city's water supply.

The New York City Federation of Women's Clubs and the Women's Patriotic Conference on National Defense, representing many from all walks of life, oppose fluoridation.

Page 128:

A Parish Priest who led the opposion that defeated fluoridation in Genesco, Ill., in 1954, said: "Many good men were deceived into joining this hideous plot. Fluoridation is a super-colossal hoax."

Page 126:

A past PTA president of Boston, Mass., indignant and concerned, wrote the Health Committee on fluoridation: "Until a short time ago I thought fluoridation was good. Recently I was shocked to find how poorly we have been informed of the danger involved in fluoridation. I have completely reversed my opinion and I hope every member of every PTA will do the same."

Page 124:

James Rorty, distinguished journalist and author of many exhaustive investigations of fluoridation, urges a new Congressional investigation. He says "such an investigation should at this time concern itself, not merely with the moot question of fluoridation's safety and effectiveness, but with probity of the Public Health Service and its allies, especially the American Dental Association; their ruthless methods of pressure and terrorization directed against scientific and lay opponents."

Top level authorities, constituting the exposed one-third of the anti-fluoridation iceberg, can and have been singled out for attack. Far more frustating, and in some respects more formidable, is the supporting two-thirds, the lay opposition. Their chilly reception strikes fear in P.H.S. officialdom.

At the 4th Annual Conference of State Dental Directors, held in Washington in June 1951, Dr. Frank Bull, one of the chief promoters, warned: "If you can--I say, if you can, because five times we have not been able to do it--keep fluoridation from going to a referendum."

Page 125:

The great American herd includes an uncomfortably large number of mavericks. For the bulk of the opponents of community water-supply fluoridation are the rank and file members of the very organizations whose leaders habe endorsed it. Just as many doctors, dentists, nurses, hospital personnel and water-works directors give the lie to the endorsements of their own professional groups by active opposition to fluoridation, so do thousands of members of Parent Teachers Associations.

May 8, 1956

Mrs. J. W. Harrelson
1016 Harvey Street
Raleigh, North Carolina

Dear Mrs. Harrelson:

Next Thursday at 12:15 an award will be presented to the most outstanding cadet in the Army ROTC which we are designating the John W. Harrelson Scholarship. This will consist of a monetary award worth $150.

At the same time, the William C. Lee Scholarship will be awarded the outstanding cadet in the Air ROTC. This latter award has been given for a number of years and Mrs. Lee comes to the campus and personally makes the award to the student. She will be here on Thursday.

We have been endeavoring to contact you by telephone for several days to invite you to come to the college next Thursday and make the presentation to the student who will receive the John W. Harrelson Scholarship. If you have not been contacted by the time you read this letter, will you please call me by telephone.

It is very fitting and appropriate that the award to the most outstanding cadet in the ROTC be named in honor of Colonel Harrelson and I trust that you share our pleasure in the institution of this annual award.

Sincerely yours,

Carey H. Bostian
Chancellor

CHB:H

February 15, 1956

Mr. Dick Herbert, Sports Editor
The News & Observer
Raleigh, North Carolina

Dear Mr. Herbert:

Your discussion in Sunday's paper of the problem of announcing the withdrawal of prominent students who have become involved in difficulties was read with much interest. I am inclined to agree with your point of view.

I would like to let you know that this policy which most colleges have of making anonymous announcements has been one recommended by students themselves. In our case there is a provision in the constitution and by-laws of Student Government directing that names not be published of students dropped for disciplinary or scholastic reasons. If all sports writers and radio sports-casters had the same high regard for the welfare of the individual who gets in trouble as that demonstrated by you and members of your staff, the suggestion you made for a simple announcement would suffice. I can hardly conceive that all reporters will be satisfied with the statement that a given student has withdrawn for scholastic reasons.

It is our hope that no more of our students will become involved in a situation similar to the one in which Hafer found himself. If such does occur, it is our intention to seek permission of the Judicial Board for making an announcement of the name of the individual as soon as the matter has been definitely settled. We shall not make an announcement while an appeal is pending. Usually appeals are heard and settled within forty-eight hours after the first verdict is reached.

I again want to commend you for the constructive suggestions presented in your column and for your desire to protect as far as possible interests of both the student and the College.

Sincerely yours,

Carey H. Bostian
Chancellor

CHB:H
cc: Dean J. J. Stewart

HIGHER EDUCATION

MONTHLY PUBLICATION OF THE U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education, Higher Education Division

VOL. XIII, NO. 4 WASHINGTON, D. C. DECEMBER 1956

Higher Education and the Federal Government

By LLOYD E. BLAUCH*

AS I BEGAN the preparation of this paper I was perplexed by a fact and a question. The fact is that the subject is extensive and there is a wealth of material on it, but the paper must not be too long. The question is: What can one say that is new; so much has been written on the subject in late years. In my perplexity I concluded that the paper should serve merely as an introduction to the topic, that it should attempt to outline some of the principal Federal programs which relate to higher education, leaving it almost entirely to you in the discussion to bring out the problems and issues entailed in the Federal relationship to higher education. I can perhaps indicate some of the main features of the relationship and provide a vocabulary that you will use in your communication with one another.

Two Concepts

As one surveys the evolving relationship between higher education and the Federal Government, he becomes aware that during the past 40 years this relationship has undergone considerable change. In former times it was developed largely around the concept of Federal aid to the States and institutions to assist them in their programs. In later years this relationship has become more and more one in which the Federal Government pays for services it needs. It is well that we distinguish between these two concepts, otherwise we may not understand the situation we now have. The contrast in the two types of relationship will appear as we note some of the Federal programs that impinge on higher education.

Aid to Institutions

The founding fathers entertained the idea of establishing a national university, but they took no serious step to set up such an institution. Instead, the Federal Government developed a practice of providing assistance, in the form of grants of public lands, to States formed from the public domain to encourage them in the establishment of various types of higher education institutions: seminaries, colleges, universities, normal schools, schools of mines. This practice was extended with the passage of the first

*Assistant Commissioner for Higher Education, Office of Education. The article consists of a paper read to Section VI of the 39th annual meeting of the American Council on Education, Chicago, Ill., October 11–12, 1956. It is preprinted from *Higher Education and the Society It Serves* to be published early in 1957 by the American Council on Education.

IN THIS ISSUE

	Page
Higher Education and the Federal Government	53
Educational Program of the Air Force Academy	60
Veterans' Orphans Schooling	65
Staffing Higher Institutions in the Next Decade	66
Postdoctoral Science Research Associateships	68
Duquesne African Affairs Institute	68
Council for Advancement of Small Colleges	69
Voluntary Support of Higher Education	71
U. S. Information Positions Abroad	71
Collegiate Newspapers in New Jersey	72
Estimate of Opening Enrollment, 1956	73
Free Tuition for Children of Cornell Employees	73
New Publications	74

408826—56——1

Morrill Act in 1862, which made grants of land for colleges of agriculture and mechanic arts, now commonly known as land-grant colleges and universities.

Federal appropriations to the land-grant institutions were initiated through the Hatch Act of 1887 which made grants for the maintenance of agricultural experiment stations. Three years later the second Morrill Act instituted appropriations for instruction in these institutions, and in 1914 the Smith-Lever Act began appropriations for cooperative extension work to be carried on by them. All these appropriations have been materially increased, and they now reach a total of more than $50 million each year. They have been the means of cementing a close relationship between the institutions and the Federal Government, particularly the U. S. Department of Agriculture. Some of the appropriations are made on a matching basis, others have no matching requirement. The amount of Federal direction and supervision over the activities supported varies with the programs.

Forty-five years ago the Federal Government began to make grants to State maritime schools, which train officers for the merchant marine, but the Federal relationship to these institutions dates back to 1874. Four such schools are now in operation.

Two specially designated higher education institutions—Gallaudet College and Howard University, both in the District of Columbia—now receive annual appropriations from the Federal Government. Gallaudet College, an institution for the deaf, was established in 1857. It enrolls about 300 students, about one-fifth of them in the preparatory curriculum, and the appropriation to it for the current year is $615,000. Howard University, established in 1867 and federally aided since 1879, has been devoted primarily to the education of Negroes. The Federal appropriation to it for the current year for maintenance and operation is $3,300,000. It receives additional appropriations for buildings. By far the largest part of the budget for the university is now from the Federal Government. The budgets of both Gallaudet College and Howard University are under the direction of the U. S. Department of Health, Education, and Welfare.

A recent addition to Federal assistance for higher education is provided for in an act approved August 9, 1956, which authorizes the appropriation of $550,000 annually for grants to be made by the Secretary of the Interior to universities and colleges to promote the education and training of professionally trained personnel needed in the field of commercial fishing. To date, no appropriation has been made for the program.

These examples illustrate the practice of making grants-in-aid for higher education. It will be observed that, except for the early grants of land, they have been made for particular forms of education or to serve particular purposes. They represent no recognition of a Federal obligation to aid higher education in general.

Two current proposals for Federal aid to higher education deserve mention here. One is in the form of a bill (S. 4160) introduced in the Senate jointly by Senator Lister Hill and Senator H. Alexander Smith to authorize assistance to the States in developing general university extension education in their land-grant colleges and State universities. The appropriation authorized for the first year would be $9,020,000 and for succeeding years "such sums as may be deemed proper." Another proposal (S. 4301) would extend the aid to vocational education by encouraging the States to establish area vocational schools and programs which would train youth 16 years of age and over, adults, and older persons, as technicians in various fields. Payments would be made for salaries of various types of personnel and for other purposes, including transportation and subsistence for students. The bill would apparently place under the control of the State boards for vocational education much occupational education above the high school level which does not specifically lead to college degrees. It would include work now being done in many recognized technical institutes, in many junior and community colleges, and by extension divisions of colleges and universities.

Education for National Defense

In 1802, the United States Military Academy was established at West Point, N. Y., to train officers for the Army. From this early beginning, the defense departments have developed extensive programs for the preservice and the inservice training of their personnel. Five departments of the Federal Government maintain undergraduate academies to train Regular and Reserve officers of the Armed Forces.

Military training has been one of the functions of the land-grant colleges and universities since their establishment. For it the Federal Government has provided instructors and military equipment but no financial assistance. This training is re-

quired by the First Morrill Act under which the land-grant institutions were established.

In 1920, the Government went a step further in using civilian institutions for military training when it instituted a policy of establishing in such institutions a Reserve Officers' Training Corps through which persons completing the 4-year course of study in military training could receive commissions in the Army Reserve. Five years later the Naval Reserve Officers' Training Corps was established, and in 1946 the Air Force Reserve Officers' Training Corps was instituted. In these programs the military departments provide faculty for the military courses, textbooks, and military equipment. The colleges provide all facilities and their upkeep, storage space, and other services. They receive no compensation from the Government.

Students in these programs who are working for commissions in the Reserves receive commutation allowance at the rate of 90 cents a day while enrolled in the advanced course—the last 2 years of the 4-year course. The Naval Reserve Officers' Training Corps, however, includes, under what is known as the "Holloway plan," a number of students who have been appointed as midshipmen, USNR, and are candidates for Regular commissions in the Navy and Marine Corps. The Navy pays them a retainer fee of $50 a month during their 4 years in college and provides for their tuition, fees, books, instructional equipment, and uniforms.

During the year 1954–55 a total of 337 colleges and universities had ROTC units of some kind; 34 of them had all three kinds. In the fall of 1955, the 482 units enrolled more than 376,000 students.

The ROTC programs have a distinct impact upon both the facilities and the finances of the colleges and universities. They also affect the educational programs which the institutions provide for students. The military instruction is broader than formerly, and it now includes much material of a nonmilitary nature. Moreover, these programs now require a considerable percentage of the students' time, in some instances as much as 20 percent. Academic credit is generally given for the classroom instruction, but in this there is wide variation among institutions and departments.

Assistance to Students

Federal assistance to college students dates from the depression of the 1930's. A college student-aid program, providing part-time employment, was a feature of the early Federal relief measures, and eventually it was placed under the direction of the National Youth Administration. Some idea of the size of the program is gained from the fact that during the year 1936–37 a total of 180,900 college and graduate students were aided, and the amount of aid came to $16,225,994. These students were found in 1,656 higher education institutions—practically all the colleges and universities in the Nation. The program was discontinued in 1943 when economic conditions had improved and the demand for manpower had increased.

The second Federal venture in assisting college students began in 1942 as the student war loans program. From an appropriation made by Congress, loans were made to college students in technical and professional fields in order that they might continue in school. The program was discontinued in 1944. Since that time, a small staff in the Office of Education has been collecting repayments of the loans. A total of $3,327,836 was loaned to 11,044 students in 287 institutions. As of June 30, 1956, the amount of principal collected had reached $2,588,160, and the amount of interest collected $358,985. A total of 1,970 loans were still outstanding, many of them partially repaid.

By far the largest Federal student-assistance program was that providing for the education of World War II veterans and later for veterans of the Korean conflict. The first of these came to an end last July for all but a few veterans of World War II. It is estimated that 2,200,000 veterans attended college. Education and rehabilitation programs continue for veterans of the Korean action. These programs were administered by the Veterans' Administration.

A related program was provided by the 84th Congress through which educational assistance will be given to children of servicemen who died as a result of disability or disease incurred in the line of duty during World Wars I and II and the Korean conflict. Approximately 156,000 war orphans are covered by the act, which entitles each to 36 months of education and training beginning with his graduation from high school or his 18th birthday and ending with his 23d birthday.

The Federal Government provides no assistance to undergraduate college students except that for veterans, for Reserve officer training, for the education of Federal civilian employees and military personnel, and for a limited number of traineeship programs. For graduate students, however, the Federal Government provides considerable assist-

ance in the form of fellowships and traineeships. The offices and agencies through which most of this assistance is made available are the Public Health Service, the Atomic Energy Commission, the National Science Foundation, and the Veterans' Administration.

The Air Force, Army, and Navy have a senior medical student program under which seniors in medical schools may apply for commissions as second lieutenant and ensign, as the case may be, in the Reserve Corps with full pay and allowances. Applicants must agree to accept reappointment upon graduation. The Air Force has a similar program for junior medical students; the Navy, one that includes first-, second-, and third-year medical students.

A survey made in 1954 by the National Science Foundation reported that in that year 1,560 graduate students had Federal fellowships, that 636 postdoctoral students had similar support, and that 2,280 graduate and postdoctoral students had traineeships. At the same time more than 5,900 graduate students were employed on projects under Federal grants and contracts. The Federal funds expended for these graduate students amounted to $23,591,000. The National Science Foundation reported also that in 1954 a total of 6,779 Federal civilian employees and military officers received graduate training for which the Government expended $6,644,000. There is reason to believe that the amounts that will be expended by the Government for graduate training during the current year will be considerably larger than those reported for 1954. The data indicate that large numbers of graduate students are dependent upon Federal financial assistance. Almost 70 percent of these graduate students were in the natural sciences.

One of the most recent developments in providing Federal assistance to students is the enactment of a law by the 84th Congress which provides graduate traineeships to increase the supply of public health specialists. The same law authorizes appropriations for traineeships to increase the supply of professional nurses who are qualified to teach or supervise nurses. The appropriations for these purposes for the current fiscal year amount to $3,090,000.

Two types of proposals aimed at financial assistance to college students have been receiving consideration in Congress. One of these would provide scholarships and fellowships either under a general program or under a program providing student assistance in recognized "shortage" areas. At least 50 such bills were introduced in the 84th Congress. The other type of proposal, represented in at least 30 bills, would provide income tax credits for tuition payments by parents supporting students in colleges.

Financial assistance for college students is now a very live issue. There is widespread concern on the part of prospective students as to how, in the face of rising prices, they will be able to obtain higher education. Philanthropy is carrying a substantial burden in supporting students, and funds from private sources for this purpose are increasing. Some States provide funds for student assistance, and others are contemplating plans for this purpose. There is likely to be great pressure on the Federal Government to assist in this matter. No doubt you know that Federal assistance to college students would involve some very difficult questions.

Physical Facilities

Apparently the first significant connection of the Federal Government with the physical facilities of colleges was through the Public Works Administration, initiated in 1933 as a means of providing jobs, stimulating business, restoring purchasing power, and helping to fulfill the need for permanent public services. During the 6 years of this agency's operation it made allotments to 662 college projects. It granted to the projects a total of $80,447,053 and loaned to them $30,458,829.

The Government's assistance in providing physical facilities for higher education was carried a step further under the Surplus Property Act of 1944 and additional legislation through which many millions of dollars' worth of real and personal property were donated or sold at large discounts to colleges and universities. This program is still in operation. During the last fiscal year the property so acquired by higher education institutions had a value of almost $76 million. The most recent Congress provided for improvements in the administration of the program to the advantage of the colleges and universities.

Through the college housing program instituted in 1950, colleges and universities have been enabled to obtain from the Federal Government long-term loans at low-interest rates for the construction of student and faculty housing. The legislation has been broadened recently to include dining and other facilities. The total amount authorized for these loans is $750 million. Since the inception of the

program in 1950 until the close of August of this year, 327 institutions received loans totaling $280,123,000.

An act of the 84th Congress in its last session goes a step further in this matter of physical facilities by providing for a 3-year $90 million program of grants for construction of research facilities in medical, dental, public health, and other nonprofit institutions. The request to Congress, made by the administration, was for $250 million for a 5-year program, and it included teaching as well as research facilities, but the measure passed was for a smaller appropriation.

The expanded ROTC programs in recent years have produced a demand for Federal aid in providing the physical facilities required for them. A survey by the American Council on Education during the past year revealed that these programs use facilities valued at more than $175 million. Thus far the Government has neither reimbursed the institutions for the use of these facilities nor provided, even in part, the funds required for new facilities needed for ROTC purposes. College presidents are now demanding that the Government subsidize new buildings to the extent of at least 50 percent of the cost, and a bill (S. 4179) has been introduced in Congress to accomplish this purpose.

We note then that the Federal Government has undertaken, in a modest way, to provide some assistance to the higher education institutions toward the construction of physical facilities. This help has taken the form of donations of property, grants, and loans at low interest rates.

Research

The research programs of the Federal Government today involve the expenditure of more than $2½ billion, of which a sizable amount goes to colleges and universities through contracts and grants. Just prior to World War II the Public Health Service initiated a small program of medical research grants to universities. Currently this program involves grants to every medical school, most universities, some hospitals, and some private laboratories, and the grants will amount to between $110 and $120 million for the year. Defense-related research was begun on a fairly large scale in a few institutions during World War II, and during the current year the Department of Defense will spend about $100 million on research at colleges and universities and an additional $100 million on the operation of large research centers managed for the Government by a number of universities. Since the Atomic Energy Commission was organized in 1951 it too has had a large number of research contracts at colleges and universities.

Information on these research programs and their involvement in higher education is scattered, and it has not been carefully studied. Some facts are available, however, from a survey of 32 colleges and universities made in 1952 by the American Council on Education. It reported that 14,000 people on their staffs were employed full time and part time on Government research, and that the percentage of Government-contract employees in these institutions ranged from a low of 1 percent to more than 50 percent.

This Federal research relationship has, of course, had a large impact on the higher educational institutions. While it has no doubt benefited them, it has also created some serious problems. The contracts have greatly expanded university research and have thereby strengthened the institutions. In many cases, however, they have not covered the full costs of the research and have therefore been something of a drain on institutional resources. There has been complaint that the contracts and grants have been too much concentrated geographically. There has also been some concern about the research emphasis on the natural sciences with little attention to the social sciences and the humanities, as well as about the apparent stress on applied and developmental research rather than on basic research. These are matters that you may wish to consider in your discussions.

International Educational Relations

The Federal programs of international educational exchange and technical assistance to foreign countries directly involve many of our institutions of higher education. The exchange program was initiated through the Buenos Aires Convention of 1936, which provided for the exchange of graduate students and professors among the signatory nations. It was greatly expanded under the Fulbright Act of 1946 and the Smith-Mundt Act of 1948. Hundreds of colleges and universities are engaged in the education of foreign students or in providing specialized programs for foreign visitors, and, of course, many faculty members become exchange professors or travel and study abroad through the exchange programs.

Under the auspices of the International Cooperation Administration, 62 colleges and universities now have contracts with 38 countries for which they provide technical staff and management services. The purpose is to encourage in those countries the development of indigenous centers of technical assistance which will provide for their own nations the types of higher education and the university extension, demonstration, and advisory services to agriculture, industry, and government which have made such an outstanding contribution to the development of the United States. Demands for staff, both permanent career and temporary, are increasing. As of December 1955, approximately 500 American professors were engaged in these services overseas. Obviously, the colleges and universities are the primary source of the men and women for this program as well as for others requiring trained personnel. The university relationships involved in this program were the subject of a conference convened by the American Council on Education at Michigan State University, November 17–18, 1956. An excellent summary of the conference proceedings was published by the council in 1956 under the title *University Projects Abroad.*

Several proposals have been made in the 84th Congress which would extend international educational relations. One, in the form of a resolution presented in both the Senate and the House of Representatives, would provide for an eight-member commission to study the possibility and desirability of establishing a University of the Americas as "a center of higher education for the people of all Nations of the Western Hemisphere." Another (S. 4293), introduced by Senator Allott, of Colorado, would authorize the Commissioner of Education to make grants to colleges and universities to help them "(1) develop and carry out programs of organized study by United States citizens of the cultural background, habits, customs, mores, and underlying motivations and interests of the people in foreign countries in which such studies are invited; and (2) establish or expand, or both, centers of learning in foreign countries for the purpose of providing to the people in economically less advanced areas of the world, access to modern techniques and sciences in order that they may develop their human and natural resources."

Information and Service

I cannot conclude this paper without a statement about the services to higher education that are provided through the U. S. Office of Education. Established in 1867 to collect and disseminate educational information and otherwise promote the cause of education, the Office has become a well-recognized source of information on higher education in the Nation. Its recurring statistics are the most comprehensive that are available on the status and progress of higher education. Special statistical studies are also being developed, and they bid fair to become of increasing significance. The Office recognizes that its numerous calls upon the colleges and universities for statistics place upon the institutions a heavy burden, but it is heartened by the cordial responses it receives. As an example, all but 19 of the 1,800 colleges and universities last fall sent in reports on their enrollments; this record is not matched by any other data-collecting agency.

The Office also supplies information that is descriptive and interpretative. It gathers information from other Federal agencies on their policies and practices which affect higher education, and from the institutions and associations it obtains information concerning their plans and operations that are of general interest. This information it distributes in the form of publications to those who have in hand the higher education enterprise in order that they may continually improve their service to the people. In a nation where the control and management of higher education are so decentralized as in the United States, this informational service makes a significant contribution to the progress of higher education.

Other services which the Office performs to higher education include assistance on State surveys and planning of higher education; consultative and advisory service to individuals, institutions, and agencies on higher education matters; and the discharge of certain statutory responsibilities such as the annual inspection of Howard University, the issuance of a list of nationally recognized accrediting agencies and associations, and the administration of funds for the land-grant colleges and universities.

The Office is now developing a cooperative research program in education under which funds will be granted to higher education institutions and to State educational agencies for educational research. Funds available for this purpose during the current fiscal year amount to $1,020,000, of which $675,000 was earmarked by Congress for research on mentally

retarded children. The grants are made through contracts the first two of which were announced on October 4 by Secretary Folsom of the Department of Health, Education, and Welfare. One grant went to Indiana University and the other to Vanderbilt University.

I mention here, but shall not discuss, the President's Committee on Education Beyond the High School, which I understand will be described at another session of this meeting.

In Conclusion

This paper does not mention all areas in which the Federal Government has established relationships with higher education. I have not, as examples, alluded to the program of social security, which now covers many college and university staff members, nor have I referred to selective service and its impact on higher education enrollments, nor have I suggested the vast resources available in the Smithsonian Institution, the Library of Congress, and the departmental libraries in Washington which are available to scholars and research workers. You may wish to deal with these areas in your discussion.

I now return to the two concepts mentioned at the beginning of this paper. As you have followed the paper you have noted that the Federal Government gives only very limited aid to higher education and that most of the funds which go to the institutions are for services to the Federal Government, that is, for Federal purposes.

Many observations could be made regarding the Federal relationships to higher education briefly outlined in this paper, but I shall indicate only two. *First*, there is no clearly discernible Federal policy toward higher education. There are many Federal programs which affect higher education institutions. They have been instituted over a period of a century and for diverse purposes; they are administered by numerous Federal agencies and departments. They do not, however, reveal an overall policy. Insofar as there may be a policy it seems to be a pragmatic one of doing what is needed or strongly urged at a particular time. Several efforts have been made to suggest a Federal policy, notably those by the National Advisory Committee on Education in 1931 and the President's Commission on Higher Education in 1947, but neither resulted in the adoption of an overall policy. The work of the President's Committee on Education Beyond the High School, as you know, may point the way in this matter.

The *second* observation is that the situation we have been describing is a dynamic one. There have been many and diverse developments in recent years, and they are continuing at a rapid rate. The Congress is faced with an increasing number of proposals to extend the relationship of the Government to higher education, some of them urgent. It seems obvious that a "do-nothing" practice will not prevail in the future any more than it has in the past. We may expect, therefore, that the role of the Federal Government in higher education will continue to expand as the Nation is confronted with increasing needs for higher education services. I leave to you the discussion of the directions it should take and the philosophical considerations involved in it.

Bibliographical Note

In preparing this paper the author has drawn upon his personal knowledge, and he has used numerous sources, among which are: (1) Federal Aid: A Dubious Concept in the Relations of the National Government to Higher Education (manuscript), by Raymond F. Howes; (2) The Relationships between the Federal Government and Education Beyond the High School (manuscript prepared for the Committee on Education Beyond the High School), by Richard G. Axt; (3) Legislation in the 84th Congress of Interest to Higher Education, by Ward Stewart, in *Higher Education*, September 1956; (4) Services of Higher Education Meeting National Needs for Which the Federal Government Has Special Responsibility, by Russell I. Thackrey, in *The Strength to Meet Our National Need*, published in 1956 by the American Council on Education; (5) *Federal Educational Activities and Educational Issues before Congress*, by Charles A. Quattlebaum (Committee print for the Committee on Education and Labor, House of Representatives, 1951, 3 vols.); (6) *Federal Aid to Students for Higher Education*, by Charles A. Quattlebaum (Committee print for the Committee on Education and Labor, House of Representatives, 1956); (7) *Federal Support for Science Students in Higher Education, 1954*, a National Science Foundation study published in 1956; (8) Federal Relations to Education, by Lloyd E. Blauch, in the *Encyclopedia of Educational Research*, rev. ed.

Educational Program of the Air Force Academy

COLONEL JOHN L. FRISBEE *

IT MAY SEEM a bit incongruous to speak of the educational program of the Air Force Academy—one of the Nation's newest collegiate institutions—as having developed through a rather lengthy process of evolution. That, however, is the case, for the first studies relating to an academy for air officers were conducted 35 years ago, immediately after World War I. The several curriculum concepts developed during the 1920's and 1930's reflected the rapidly increasing stature of airpower and a correspondingly broadened range of responsibilities of the air officer.

Academy Planning Board, 1948

In 1947 the Air Force became an autonomous service within the National Military Establishment. The following year, the Honorable W. Stuart Symington, then Secretary of the Air Force, directed that the question of an Air Force academy be reopened, since the two existing Service Academies could not continue to provide the Air Force with a sufficiently large number of young Regular officers.

In August 1948, an Air Force Academy Planning Board was established to complete plans for an academy similar in purpose to the United States Military and Naval Academies. The board, headed throughout most of its existence by Lt. Gen. Hubert R. Harmon, who subsequently became the Academy's first Superintendent, was composed of both Regular and Reserve officers with experience in the field of education. These officers were given invaluable assistance by the staffs and faculties of the Military and Naval Academies and by a group of some 60 distinguished civilian educators. Thus, the Air Force Academy program, like its civilian counterparts, was also heir to the evolutionary ferment taking place in the world of civilian higher education in the post-World War II period.

Air Force Academy Established, 1954

The Academy Planning Board continued its development and refinement of educational, training, and facility plans until the Air Force Academy Bill (Public Law 325, 83d Cong.) received President Eisenhower's signature, April 1, 1954. The Air Force Academy was formally established on July 27, 1954, in temporary facilities at Lowry Air Force Base, Denver, Colo. The Academy is expected to move to its permanent site, 6 miles north of Colorado Springs, during the summer of 1958.

The process of evolution has gone forward as educational plans have been translated into an operating program. It is to be hoped that this will continue so long as the Air Force Academy stands as a national monument and as an institution dedicated to producing professional Air Force officers.

The Academy's Frame of Reference

The frame of reference within which the faculty has operated during the Academy's first years and which was probably generally accepted by the Planning Board may be summarized thus:

It is assumed that the Military Establishment will continue to play a leading role in our national life, and that airpower will be of vast importance to our security. Technological advances have placed on military men responsibilities which are either heightened or entirely new. These responsibilities are both technical and nontechnical. The military leader must first of all be competent in the handling of military forces, which implies that he must have enough scientific knowledge to understand the complicated machines with which he works and the principles by which they are developed. Beyond that, he must know enough of human nature to lead effectively the men under his command.

Sound national policy can be made only with full participation of military leaders. Nor is the military divorced from questions of domestic policy. The proportion of the Nation's wealth, both material and human, which is directed toward support of the Armed Forces is staggering. There is virtually no facet of national life which is not touched in some way by military affairs.

Finally, our military men are destined for years to come to serve on far-flung peacetime fronts and in close association with citizens of other nations. They must be able to deal effectively and justly with foreign nationals in both official and unofficial relations. They should represent the best that

*Colonel Frisbee is professor of history, U. S. Air Force Academy.

America offers and they should be able to explain lucidly both the good and the bad of that which is uniquely American.

The ideal Air Force officer should be many things—strategist and tactician, leader and teacher of men, master of machines, policymaker, diplomat, and citizen of a democratic republic. He must be not only a knowledgeable man but also an understanding man, not only a man of action but also a reflective man, a man courageous not only physically but also morally. He should be something of a 20th century, American version of the Platonic ideal. Although this is a rather large order, it is an objective which should not be abandoned for lesser goals.

B. S. Degree To Be Conferred

Air Force Academy cadets will graduate at the completion of their 4-year course with a bachelor of science degree, a commission as second lieutenant in the Regular Air Force, and the aeronautical rating of navigator. The entire course of instruction is divided into the airmanship program, under supervision of the commandant of cadets, and the academic program, under the dean of faculty. The allocation of contact and semester hours to each of these programs is shown in the accompanying table. Courses within the airmanship program do not require outside preparation; hence, though the contact hours within each program are roughly equal, semester-hour credits attached to airmanship courses total only one-third the semester hours earned in the academic program.

Airmanship Program

The airmanship program includes three areas of formal training; military training, flying training, and physical training. The last of these areas, *physical training*, operates throughout the 4-year program, during both the academic year and the summer training period. Physical training at the Air Force Academy is more than a program of conditioning; its objectives include the development of an aggresive, competitive spirit, and training in leadership. Heavy emphasis is placed on contact sports—football, boxing, wrestling, judo—and on team sports, though individual sports which will be a part of the officer's recreational and conditioning program after graduation are not overlooked. As part of the Academy's leadership training program, upperclassmen serve as physical training instructors and intramural coaches. The intercollegiate athletic program is entirely separate from physical training with the director of athletics under direct supervision of the Superintendent.

Military training is concentrated in the summer with a minimum of military classes during the academic year. During the 4 academic years, cadets study such subjects as airpower and national security; the organization, functions, and equipment of the combat and support commands; Army and Navy doctrine and operations; joint and combined military operations; and leadership. The summer training period of 15 weeks (4 of which are leave time) is devoted to field trips to Air Force, Army, and Navy installations, and to a study of airbase functions, Air Force weapons, employment of airpower, Air Force administration and management, leadership, instructor training, and, starting in the summer of 1958, when the first class of cadets will have completed their junior year, actual instruction of the incoming freshman class.

The *Flying Training Program* is concentrated in the sophomore and junior years. It includes both classroom work in the theories of navigation and practical experience in aerial navigation in the T–29 aircraft, an airborne classroom equipped with advanced radar navigation devices. Flying training is closely coordinated with instruction given by the department of mathematics and with the department of graphics which teaches maps and charts. No pilot training is now given except for a short familiarization course during the summer following the freshman year when each cadet receives 10 hours of instruction in a primary trainer. An extracurricular glider training program is being established by the cadets and, in addition, the possibility of increasing the amount of pilot training is under study.

The Nonmeasurable Program Phase

Perhaps the most vital part of the entire Air Force Academy program is not measurable in contact or semester hours, nor is it describable in terms of curriculum content. Cadet life is actually a 4-year laboratory exercise calculated to produce a disciplined, motivated, selfless Air Force leader with unimpeachable character, a strong sense of duty, and unflagging devotion to the service of his country. These characteristics cannot be fully instilled into a student in a classroom situation. They must be

absorbed from daily contact with officers who have been chosen because of their outstanding records as Air Force leaders, and from a life enfolded in and governed by military and Air Force traditions.

Two of the most noteworthy elements of cadet life are the honor code, which is administered by a cadet honor committee, and the aptitude rating system under which each cadet is rated periodically on the qualities of an officer by his training officers and by his peers. To both of these groups and to himself, the cadet is responsible for his every action.

Academic Program

The academic curriculum of the Air Force Academy might well be characterized as a program of general education designed to meet the needs of a particular profession—that of the Air Force officer. It is neither an engineering nor a liberal arts curriculum but contains more of the liberal arts than any existing engineering curriculum and more scientific and engineering studies than any existing liberal arts curriculum. Like all educators everywhere, the Academy faculty has faced a recognized need to do more than can possibly be done in 4 years. The problem has been reduced by the fact that professional Air Force officers constitute a relatively homogeneous group, although there are many specialties within the Air Force.

For pedagogical reasons, as well as to meet the inalterable dictates of time, the Academy curriculum has been established as one cumulative learning process. The courses are arranged to provide both vertical and horizontal integrations and have been planned with continuous interdepartmental consultation. Thus, it has been possible to eliminate some of the time-consuming elements of "introductory" courses. The majority of courses are of a terminal nature; the general course orientation may be somewhat more pragmatic than would be the case in most civilian colleges since all courses contribute directly to the Academy's objective of producing a particular type of professional man rather than being primarily background for more advanced courses. Courses are of varying length to meet the requirements believed to be essential rather than to fit a semester or quarter pattern.

16 Departments, 4 Divisions

The 16 academic departments are grouped in 4 divisions—the divisions of basic sciences, applied sciences, social sciences, and humanities. Division chairmen are selected from among the department heads, and have a coordinating rather than a directive function. The division chairmen, together with the dean of faculty, constitute a curriculum committee. Each division chairman also heads a class committee and is a member of the Academy's policymaking

U. S. Air Force Academy Curriculum

Subject	Total semester-hours	Semester-hours by year			
		Freshman	Sophomore	Junior	Senior
Scientific studies	64				
Mathematics	16	10	6		
Graphics	4	4			
Chemistry	6	6			
Physics	9		9		
Mechanics	6			6	
Electrical engineering	9			9	
Thermodynamics	6				6
Aerodynamics	8				8
Social sciences and humanities	65				
English	16	6	5	5	
Logic	2½	2½			
Geography	2½	2½			
Psychology	5		5		
History	11		6	5	
Economics	6			6	
Political science	6				6
Law	3				3
Military history	3				3
Foreign languages	10				10
Airmanship (academic year)	12				
Physical training	4	2	⅜	⅜	⅜
Military training	2⅜	⅜	⅜	⅜	⅜
Flying training	5⅛		2⅜	2⅜	
Total (4 academic years)	141	33⅜	35	35	37⅛
Airmanship (summer training)	31				
Physical training	5	1½	½	2½	½
Military training	19⅛	4⅛	4	4	7
Flying training	6⅜	⅜	2	2	2
Grand total	172	40⅙	41½	43½	46⅝

body, the Academy Board. All department heads are members of the Faculty Council, which is chaired by the dean of faculty. This organizational pattern should insure at least an acceptable degree of inter- and intra-divisional integration, and in no way limits direct interdepartmental cooperation and coordination.

The courses of instruction which make up the Air Force Academy curriculum are, in the main, similar to those found at the civilian undergraduate level. Where differences do exist, they are largely attributable to the facts that the entire curriculum is a planned sequence, and that, where appropriate, courses have been oriented toward filling recognized Air Force needs. In most areas, advanced courses are offered for cadets who have had previous college experience or who show outstanding ability in a particular field. These are the only departures from the planned sequence. The small size of classroom sections, insistence on active student participation, and conscious effort to stimulate analytical and creative thinking produce a methodology, discussed below, which varies from the usual collegiate pattern.

Division of Basic Sciences

The division of basic sciences includes the departments of mathematics, chemistry, physics, and graphics. The mathematics sequence is taught in the freshman and sophomore years and conforms to the traditional basic pattern for science courses; algebra, trigonometry, analytical geometry, differential and integral calculus, introduction to differential equations, and spherical trigonometry, the last named to support the navigation training program. Each course is tailored to include only those materials essential to the technical courses which follow, and to the career needs of an Air Force officer. The department of mathematics offers an accelerated program for talented cadets in which the skills in each basic area are covered rapidly, followed at the end of the first, second, and fourth semesters by statistics and probability, vector algebra, and differential equations, respectively.

The freshman course in chemistry differs from a standard college course principally in laboratory work, where stress is placed on gathering and analyzing data and drawing conclusions rather than on description. For qualified cadets, the department of chemistry offers an advanced course in analytical chemistry, in lieu of the regular course.

The 9 semester-hour sophomore course in physics is a standard college course which is oriented toward Air Force application. The departments of physics and chemistry use combination lecture-laboratory rooms, an arrangement which lends considerable flexibility to course administration and results in economies of time.

The department of graphics teaches maps and charts, and engineering drawing as a 4 semester-hour, freshman program. Instruction in maps and charts is designed to support the navigation training program and also to give future officers a knowledge of the use of these tools in operational planning and in joint combat operations. The objective of the course in engineering drawing is to develop an understanding of drafting methods and skill in reading engineering drawings rather than to train skilled draftsmen.

Division of Applied Sciences

The division of applied sciences includes the departments of mechanics and materials, electrical engineering and electronics, thermodynamics, and aerodynamics. Each of these departments will offer a full year of instruction, their courses ranging from 6 to 9 semester-hours. The course in aerodynamics includes 2 hours of design appreciation, based on case studies which illustrate the necessity for compromise between aeronautical performance and weapons-system engineering. The objective of these courses, all of which are now in the process of development, is to provide training in engineering science which will serve as a background for those Academy graduates who may later specialize in engineering, and to give other graduates a sufficient knowledge of engineering to support them as career officers in a highly technical service.

Division of Humanities

The division of humanities includes the departments of English, foreign languages, and law. English is taught in the freshman, sophomore, and junior years. The emphasis in freshman English is on communication skills with a rather brief introduction to literary forms. Sophomore and junior English courses are primarily a study of literature with continuing but lesser emphasis on communication skills. The literature courses have been coordinated with the cadets' courses in history so that the two studies are to a large extent in chronological and areal parallel.

The department of law offers a 3 semester-hour senior year study of law as a social institution with minor attention to military law, and a 2½ semester-

hour course in logic during the freshman year. The logic course deals with propaganda and fallacies, semantics, syllogistic reasoning, and the scientific method.

All cadets will take a 10 semester-hour conversational course in a foreign language during their senior year. The language program will start with French, Spanish, and possibly Russian. Additional languages will be added as classes increase in size.

Division of Social Sciences

The division of social sciences includes the departments of history, military history and geography, psychology, political sciences, and economics. Psychology, a 5 semester-hour sophomore course is divided evenly between principles and application of psychological principles to leadership and managerial problems which confront the Air Force officer. The other social science courses form a closely integrated program comprised of physical and economic geography (2½ semester hours) in the freshman year; history of world civilization (6 semester hours) in the sophomore year; United States history (5 semester hours); principles of economics, international economics, and economics of national security (totaling 6 semester hours) in the junior year; and military history (3 semester hours); United States and foreign governments, and international relations (totaling 6 semester hours) in the senior year.

The department of history offers advanced courses in history of the Middle East, United States diplomatic history, and Latin American history for cadets who can pass qualifying examinations in the regular courses. Likewise, cadets who can demonstrate an acceptable level of accomplishment in communications skills will take sophomore English as freshmen, junior English as sophomores, and will receive a special course in literature and fine arts during their junior year. The department of political science plans to offer political theory for cadets who are competent in United States government.

The degree to which the entire curriculum may be integrated, both horizontally and vertically, can be judged rather closely from a glance at the table. No arrangement of courses guarantees that a program will be either integrated or coordinated, however. That difficult process depends upon interdepartmental cooperation and breadth of faculty understanding at least as much as on course arrangement. Faculty effort, both conscious and concentrated, has been directed toward presenting to the cadet a systematic, continuous process of learning rather than a series of seemingly unrelated courses. Some means which have been used to integrate instruction are interdepartmental cooperation in course planning, coordinated scheduling to allow a maximum of horizontal integration (for example, United States history and American literature in the junior year), and interdepartmental seminars and research papers. In all courses, cadets are graded on effectiveness of expression as well as on subject matter.

Extracurricular Program

Some educational needs of future Air Force officers which are real but less pressing than those recognized in the curriculum will be met through academic extracurricular activities. A number of clubs, both recreational and educational, were established during the first academic year, and plans have been made to add voluntary seminars in such subjects as political theory, philosophy, and great issues as soon as there are upper classes at the Academy. Members of the freshman class conducted a successful voluntary Sunday afternoon forum on public affairs during the past year.

Class Size and Instruction

Cadets attend classes in sections of approximately 12 men. This small-group teaching situation allows instructors to know their students well and to give a great deal of attention to individual learning problems. Since cadets are sectioned homogeneously in all regular courses, the pace of instruction may be adjusted to the competence of each group.

Generally instruction is of the discussion, seminar, or demonstration type, with occasional lectures to an entire class. Instructional aids are used extensively; the director of audio visual aids maintains an excellent library of films, filmstrips, slides, and recordings.

Evaluation

Because of the diversity of subject matter, it is difficult to generalize about evaluation programs conducted by the various departments. In freshman mathematics, which met 3 times weekly for 80-minute periods during 1955–56, cadets were tested almost daily. The department of English used quizzes rather infrequently since freshmen are required to write 24 themes and make a number of

speeches and presentations in their English course. The testing program of the department of history is probably a fair mean. Here tests were administered at about 40 percent of classroom attendances. The majority of history tests were 7- to 10-minute objective quizzes. Twenty-minute essays were given about every fifth lesson. The 1-hour midterm and 2-hour term-end examinations combined objective and subjective devices.

Library

The Air Force Academy library will ultimately contain some 200,000 volumes in its general collection and a specialized aeronautical collection of 50,000 volumes. The library's immediate goal is a collection of approximately 60,000 volumes to support the freshman, sophomore, and junior year programs while at the temporary site. The library is administered by a staff of civilian librarians under the supervision of a professionally qualified Air Force officer. During the Academy's first year, the class of 300 cadets averaged approximately 1,400 library attendances per week, despite a very tight academic and training schedule.

Faculty

The Air Force Academy faculty has been selected from among Regular and Reserve Air Force officers on active duty. Selection has been based on criteria of academic preparation, teaching experience, and quality of performance as an officer. All faculty members have a dual function: First, that of teaching subject matter, and secondly, that of assisting the commandant of cadets in developing character and in motivating cadets for a lifetime of service to their country.

The faculty for the freshman courses during the Academy's first year numbered 49, of whom one-third hold doctor's degrees. Of the remainder, all but two have earned master's degrees, and most of the M. A.'s have completed a substantial part of the requirements for a doctorate. The average length of college-level teaching experiences for the initial faculty group is approximately 5 years. With few exceptions, instructors have traveled extensively and lived abroad for several years. This experience is particularly valuable to those teaching in the social sciences and humanities areas.

Instructor Training Program

Each academic department conducts an instructor-training program during the summer months. In general, these programs emphasize methodology and evaluation with lesser attention to subject matter. Departmental training courses range in length from 3 weeks in the department of history to 8 weeks in the department of mathematics. Inservice training is continued throughout the academic year in instructor lesson conferences and by supervisory personnel who visit classes frequently and cooperate with instructors to improve the effectiveness of instruction.

Class of 1959

The 306 members of the class of 1959 were selected from some 5,500 nominees. Approximately half of the initial nominee group was eliminated for physical defects or withdrew for unknown reasons. Final selection was based upon nominee performance on the College Entrance Examination Board tests in scholastic aptitude, English composition, intermediate mathematics, and social studies; on aptitude for training as pilot and navigator; and on an evaluation of high school performance including participation in extracurricular activities which give evidence of leadership potential. The class of 1959 achieved a higher average on all CEEB tests, except the social studies test, than that of students admitted to liberal arts colleges.

At the end of the Air Force Academy's first year, all members of the freshman class were given validated examinations in general chemistry and in European history. In both cases, more than 90 percent of the class stood above the median for college freshmen and sophomores. There is no indication that cadet performance in other areas would have been substantially different. This is encouraging evidence of early progress.

Veterans' Orphans Schooling

More than 1,100 young men and women applied for War Orphans Schooling benefits during October 1956, bringing the total number of applications under Public Law 634 (84th Cong.), to 4,300, Veterans Administration has disclosed. The total is expected to reach 10,000 to 15,000 by next summer. Over 96 percent of the first group of young people are using their War Orphans benefits to go to college. The remaining 4 percent are taking below-college-level courses, permitted by law so long as they lead to a vocational goal.

Staffing Institutions of Higher Education in the Next Decade

By ROBERT E. IFFERT*

BY 1965 approximately 100 persons will be required for every 60 now employed in the institutions of higher education in the United States. The estimates presented here show something of the magnitude of this manpower problem. There is a growing realization that more than bricks, desks, and ivy will be needed to contain the "oncoming tide" of enrollments in higher education, but on many campuses there is evidence of more concern about physical plant requirements than about personnel needs.

The estimates shown in the tables are based on the record of the past 10 years and upon certain assumptions. Biennial surveys of education in the United States, conducted by the Office of Education, provide the 10-year record. Among assumptions considered in making the estimates are:

(1) There will be relatively few changes in policy with respect to student selection, admission, and retention.

(2) The average number of students per staff member will remain constant.

(3) Observed trends will continue to operate with the same rate of change.

(4) The classification of existing institutions will remain the same.

(5) The recommendations of commissions, committees, and survey groups will have some influence on the type and control of new institutions.

(6) Physical facilities will be provided to accommodate anticipated enrollments.

Estimates Based on Total Staff

The statistical tables in the *Biennial Survey* reports show total staff, resident instructional staff, and full-time equivalent faculty. Differences in definition or interpretation among institutions and within the same institutions from biennium to biennium account for some lack of uniformity in grouping data for resident instructional staff and full-time equivalent faculty so that the data for total staff appear to be the most reliable. The most important single element involved in forecasting staff requirements is enrollment. Total staff has been more closely related to enrollment over the past 10 years than has either resident instructional staff or full-time equivalent faculty. For these reasons the estimates that appear in the accompanying tables have been made in terms of total staff requirements.

Enrollment and Staff Distributions

The total resident enrollment estimates in table 1 were released in March 1956 by the Research and Statistical Services Branch of the Office of Education.

Table 1.—Actual and estimated resident fall enrollments and size of staff in institutions of higher education in the continental United States under public and private control, 1945–65

[In thousands]

Fall of—	Total resident enrollment (Fall)	Total staff [1]	Publicly controlled		Privately controlled	
			Enrollment	Staff [1]	Enrollment	Staff [1]
	ACTUAL					
1945	1,074	165.0	502	84.0	572	81.0
1947	2,339	224.0	1,153	112.9	1,186	111.1
1949	2,443	247.0	1,208	125.0	1,235	122.0
1951	2,102	246.0	1,038	137.7	1,064	108.3
1953	2,218	266.0	1,176	140.3	1,042	127.7
	ESTIMATED					
1955	[2] 2,695	327.0	[2] 1,508	183.0	[2] 1,187	144.0
1957	3,104	375.0	1,738	210.5	1,366	164.5
1959	3,399	412.0	1,971	239.4	1,428	172.6
1961	3,790	459.0	2,274	276.0	1,516	183.0
1963	4,189	507.0	2,597	313.7	1,592	193.3
1965	4,677	566.0	2,946	357.0	1,731	209.0

[1] Total number of different persons including administrative, resident instructional, and organized research staffs.
[2] Actual.

*Specialist for Faculty and Facilities, Office of Education.

The breakdown by publicly and privately controlled institutions is the responsibility of the author. It may be noted parenthetically that the March 1956 enrollment forecast for the fall of 1956 is about 1.0 percent below what now appears to be the actual enrollment. It cannot be concluded from this fact that the forecasts for subsequent years are too conservative, but it is clear that 8.7 percent of the predicted 15.2 percent increase in fall enrollment between 1955 and 1957 has already been attained. The estimates of the distribution of enrollment between publicly and privately controlled institutions have been made on the basis of the trends over the past 10 years and in consideration of the assumptions that have been set forth.

The total resident fall enrollment figures in table 1 show marked irregularity in growth. The most significant factors in this irregularity were military service and the veterans educational program. There was an increase of more than 100 percent in enrollment from 1945 to 1947, only 5.5 percent between 1951 and 1953 and nearly 22 percent between 1953 and 1955. These sharp variations were not accompanied by the same fluctuation in total staff membership. The most representative overall ratio of total staff to total enrollment seems to be 1 to 8.25. The ratio varies from year to year and among types of institutions.

A more detailed analysis of the staff requirements is presented in table 2. The figures show an estimated 94-percent increase in staff requirements of publicly controlled universities, colleges, and professional schools between 1955 and 1965. During the same period the estimated increase in publicly controlled junior college staff is more than 100 percent. The estimated increase in staff requirements of universities, colleges, and professional schools under private control between 1955 and 1965 is about 53 percent. It should be noted that the figures, both actual and estimated, for publicly controlled teachers colleges are not completely realistic because institutions that were earlier classified as normal schools were included in this column. Some of these institutions were later classed as junior colleges. The volume of future shifts of this character cannot be accurately anticipated, but the estimates reflect adjustments in accordance with the trends. Necessity may cause teachers colleges to assume more of the functions of the community college. The predictions are based on the assumption that the effect will be noticeable in about 5 years.

Table 2.—Actual and estimated size of staff in institutions of higher education in the continental United States by type, by control, 1945–65

[In thousands]

Fall of—	Publicly controlled			Privately controlled		
	Universities, colleges, professional schools	Teachers colleges	Junior colleges	Universities, colleges, professional schools	Teachers colleges	Junior colleges
	ACTUAL					
1945	65.5	11.0	7.5	75.3	.9	4.8
1947	88.3	14.3	10.3	103.7	1.1	6.3
1949	99.3	14.2	11.5	114.4	1.3	6.3
1951	109.4	15.3	13.0	102.3	1.1	4.9
1953	114.4	15.7	14.7	116.0	.9	6.3
	ESTIMATED					
1955	144.5	18.3	20.2	135.1	1.0	7.9
1957	168.5	19.1	22.9	154.7	1.2	8.6
1959	194.0	19.1	26.3	162.3	1.2	9.1
1961	220.8	22.1	33.1	173.9	1.3	7.8
1963	254.1	22.0	37.6	183.7	1.4	8.2
1965	292.6	21.5	42.9	198.6	1.4	9.0

Possible Remedial Measures

In general, institutions of higher education must produce their own staff members. The extension of the curve of growth in the number of postbaccalaureate degrees shows that proportionately many more graduates with master's and doctoral degrees will have to enter service in higher education if present student-staff ratios are to be maintained. Numerous studies are in progress in colleges throughout the country to determine the feasibility of certain innovations in the instructional pattern for higher education. Many of these studies involve the use of potential teachers, now students, to perform the nonprofessional housekeeping tasks of teaching in order to relieve faculty members of these chores. The evaluative procedure should include the determination of the effects of these practices

upon the potential teachers. Will the students with the best intellects have opportunities to enjoy some of the satisfactions associated with the professional aspects of teaching?

One element of academic freedom, namely the freedom of the professor in his classroom, will be put to the test when job analyses are required as the bases for training technicians to assist the professor. Greater uniformity requires more conformity. Another difficulty with the technician approach is the danger that the technician's function will be performed by the trainee and that there will be no place for the technician to go after he is trained.

Other proposals for the solution of the staffing problem have been made and some are being practiced with reported success. Increasing the numbers of women staff members has been advocated. Utilization of displaced intellectuals from other countries has relieved shortages of research workers and teachers in some institutions. Experimentation with closed-circuit television suggests the possibility of more economical and effective use of good teachers. These and many other suggestions are well summarized in a report by the Committee on Utilization of College Teaching Resources published by the Fund for the Advancement of Education in October of this year.

Postdoctoral Resident Science Research Associateships

THE NATIONAL ACADEMY of Sciences-National Research Council has announced that its programs of Postdoctoral Resident Science Research Associateships will again be offered for the 1957–58 academic year at the Argonne National Laboratory, the National Bureau of Standards, and the Naval Research Laboratory. The NAS–NRC also announces the inauguration of a new associateship program at the Oak Ridge National Laboratory. The associateships are tenable at the Argonne National Laboratory in Lemont, Ill.; at the Washington, D. C., and Denver, Colo., laboratories of the Bureau of Standards; at the Naval Research Laboratory in Washington, D. C.; and at the Oak Ridge National Laboratory in Oak Ridge, Tenn.

These associateships have been established to provide young scientists of unusual ability and promise an opportunity for advanced training in basic research in a variety of fields. The most modern facilities are available in the general areas of biology, ceramics, chemistry, electronics, mathematics, metallurgy, and physics. Examples of some of the more specific fields within these areas are as follows: Radio astronomy, statistics and mathematical biology, computer design, radiation and high temperature chemistry, microwave component theory, semiconductors, numerical analysis, liquid metals, low temperature, solid state, and reactor physics. In addition to the above, research in visual psychophysics and engineering psychology is also available.

Applicants must be citizens of the United States. They must produce evidence of training in one of the listed fields equivalent to that represented by the Ph. D. or Sc. D. and must have demonstrated superior ability for creative research. The maximum stipend is $7,035 a year.

Further information and application materials may be secured by writing to the Fellowship Office, National Academy of Sciences-National Research Council, 2101 Constitution Avenue, NW., Washington 25, D. C. In order to be considered for awards for the academic year 1957–58, applications must be filed at the fellowship office on or before January 11, 1957. Awards will be made about April 1, 1957.

Duquesne African Affairs Institute

DUQUESNE UNIVERSITY has established an Institute of African Affairs in which students may qualify for a B. A. and M. A. degree in African affairs.

The purpose of the institute, which will begin operations in September 1957, is to stimulate serious thinking on African affairs and to provide trained personnel for government and industry. The institute will offer courses in African history, politics, sociology, and other related subjects; provide systematic scholarly research; publish learned journals and periodicals; and provide seminars, conferences, and similar convocations of leading African experts from the academic, commercial, and governmental fields. It will also encourage American students to a greater interest in Africa by providing African courses in the regular undergraduate curriculum, arrange tours for American students to Africa, provide a speakers' bureau of African experts, and conduct an exchange program of African scholars and students with their American counterparts.

Council for the Advancement of Small Colleges

ALFRED T. HILL*

WILL THE COLLEGES BLOW THEIR TOPS? asked Peter F. Drucker in a recent magazine article.[1] The author dramatized the situation by talking about an "explosion in college enrollments" and reached the conclusion that by 1975 the facilities needed for 5 million additional students would represent "twice as much as all the college plants that have been built in America since Harvard was founded in 1636."

The supply and demand problem has been so widely publicized that there is no need to stress the point further for the readers of this periodical except to remind them of two important groups which are dedicated to spreading the word to every area of the country and through a cross section of society. One is the President's Committee on Education Beyond the High School with its concern over needs and resources and its plans for regional conferences and committees for State action. The other is the Council for Financial Aid to Education in collaboration with the Advertising Council of America with plans for a 2-year, nationwide public relations campaign stressing the importance of higher education and emphasizing the necessity of good teaching.

If the emergency is as great as it appears to be and if it warrants as much public attention as it is receiving, then some questions arise: Can the existing colleges and universities expand fast enough to carry the extra load? Would such an expansion result in a lowering of academic standards? Should we follow the advice of James B. Conant in greatly increasing the number of 2-year colleges and limiting the offerings of 4-year colleges and universities to courses at an advanced level? How far is it desirable to go in the direction of Federal aid and for what purposes? How much support is it reasonable to expect from foundations, corporations, alumni groups, and individuals?

Small Colleges and the Higher Education Crisis

How would the picture look if we were to discover some available resources which had not been developed to their maximum potentialities? Suppose there were 50 small colleges distributed throughout the country with a possibility of doubling or even tripling their enrollments in the next 5 years. Suppose that they were alert to the situation and had the initiative to organize a self-help society. Suppose they dedicated themselves to strengthening their faculties, improving the teaching methods in their classrooms, conducting experiments leading to more interesting, vital, and realistic curriculums. Imagine what it would mean if they could provide not only *more* but *better* classrooms, libraries, laboratories, dormitories, and other facilities than they now have. Consider for a moment the fact that it would cost about ten times as much to replace these colleges if they were allowed to die as it would to double their effectiveness by capitalizing on their existing resources in plant, personnel, leadership, and experience. Would the prospects look any brighter if such a group—even though small in total number and small in individual size—were to tackle 1 or 2 of the critical national problems such as the shortage of physical facilities, the shortage of teachers, the shortage of scientists and engineers, or the need for pioneering on academic frontiers?

According to a press report, "One of the most hopeful signs in higher education this year is the banding together for mutual self-help of more than 50 small colleges into the Council for the Advancement of Small Colleges." [2] This "banding together" was accomplished last spring by a group of college presidents with enough imagination to do a lot of supposing. They responded to an invitation from K. Duane Hurley, president of Salem College, Salem, W. Va., who had caught the attention of the country by referring to those colleges which had not benefited by the multimillion-dollar grant of the Ford Foundation as the "forgotten colleges." [3] Of course, those colleges were not really forgotten. They simply were not included because they had not yet attained accreditation by their regional associations. The

*Executive secretary, the Council for the Advancement of Small Colleges, 726 Jackson Pl., Washington 6, D. C.

[1] *Harper's Magazine*, July 1956.

[2] *Christian Science Monitor*, Aug. 18, 1956.

[3] *Time Magazine*, Mar. 5, 1956.

foundations and corporations have to draw the line somewhere—what better place than on this boundary? Nevertheless, Dr. Hurley pointed out that the result was to trap these colleges in a "vicious circle." "You need accreditation to get money," he said, "and money to get accreditation."

Organization

The response to his invitation was strong and sincere. A group met in Chicago in April 1956, prepared a constitution, elected officers and directors, established dues of $400 per member to underwrite their program for the first year—rolled up their sleeves and went to work. Their attitude was not one of complaint. Rather they said, in effect, "Let's find out what is the matter and do something about it." Furthermore, they followed the advice of educational leaders like Theodore A. Distler, executive director of the Association of American Colleges; William K. Selden, executive secretary of the National Commission on Accrediting; Wilson Compton, president of the Council for Financial Aid to Education; and many others.

The result is that the newly formed council now numbers 53 charter members from 28 States. Their distribution by regions of accreditation is as follows: Middle States, 3; New England, 9; North Central, 29; Northwestern, 2; Southern, 8; and Western, 2. Of the total, 31 are church-related colleges, and 7 others are classified as nondenominational but with a strong religious emphasis. There are 15 with no church affiliation or emphasis on religion.

The group represents a total enrollment of more than 25,000 students. Three of the group have enrollments of more than 1,000 each; five have less than 100; the average is 500. There are 45 coeducational colleges, 5 for women only, and 3 for men only. The total capital investment of the 53 institutions is about $65 million, and their total annual budget is $15 million. The institutional age range is from less than 5 years to more than 100 years.

Membership in the group is limited to 4-year colleges of arts and sciences. It is further characterized by two important conditions: (*a*) All colleges must have their academic credits approved by their State department of education, State university, and three other institutions at the graduate or undergraduate level holding membership in their regional associations; and (*b*) they must be officially committed to a program of self-development consistent with membership criteria of the various regional associations and keyed to the emerging demands on higher education.

Achievements to Date

Aside from forming an organization and setting up a Washington office to serve as a clearinghouse and coordinating agency, these colleges have undertaken one major project to date in an effort to help themselves by group action. This was a 1-week workshop on the campus of Nasson College, Springvale, Maine, last August directed to the question: *What should a small liberal arts college be?* This thought was explored under four subheadings: Curriculum, teaching methods, management, and development programs. Considerable attention was given to the subject of regional accreditation as a step on the road of general progress rather than as an end in itself. Attention was also given to fund raising but with the clear statement that the council was not a fund-raising organization in disguise. Its purpose was to put its members in a better position to help themselves. The identification of sources of financial support was conceived as one among many means to this end.

The workshop was attended by about 100 college administrators, speakers, and consultants. As a result of their deliberations a 3-year program emerged keyed to the theme *Advancing Quality Education*. This program was to be implemented by the exchange of information through a newsletter, cooperation with other educational associations, the use of consultants in the management of nonacademic affairs as well as in areas of educational experiment, the arrangement of regional and national meetings, and the planning of future workshops. Two points were emphasized—self-improvement through self-help ("operation bootstrap") and tangible evidence of progress (not just words) towards recently reviewed and clarified goals.

It is sometimes more effective to let others speak for you then to speak for yourself. At the Nasson workshop two ideas came out clearly: The case for the small colleges and the most promising lines for their future development. An indication of the thoughts expressed in these areas is given in the two sections that follow.

The Case for the Small College

"The small college," said Wilson Compton, "has the means of doing two things which are very precious." First, it can treat "the individual student as an individual"; and second, "more than

any other part of the system of higher education," it can "maintain the religious and spiritual element in life." The attention the small college is able to give the individual student was also emphasized by Wade Arnold, consultant in television, when he said, "In this jungle of pressures" to make us all dress, look, think, and act alike, "the small college is a ray of light, a reminder that teachers in communion with students are more important than buildings." A. V. Wilker, of the Union Carbide Educational Fund, noted the small college's relatively greater opportunity to provide "exceptional handling of the exceptional scholar. . . ."

David Church, executive director, American Association of The Fund Raising Council, observed that "a small college may offer a distinctive service in a comparatively low cost education." "It may well be," he said, "that small colleges have a case to present in the sound education they offer in an atmosphere of normalcy rather than one of constant intellectual competition. Another element in the case for the small college," he said, "is its value to its immediate community."

Guides to Future Development

The conference participants also emphasized the need for excellence on the part of the small college as a means of attracting support. "The surest way to attract students and the surest way to attract financial support," said Karl W. Bigelow, Teachers College professor, "is to have a superior educational program, superior curriculum, and superior teachers." "Small colleges," he said, "should study student needs, teaching methods, the community at large, and the learning progress."

Theodore A. Distler advised that "small colleges should search their souls clearly and objectively with respect to aims, functions, and performance." "All of them," he said, "should make sure they have used their natural constituencies—alumni, friends, trustees, and community—before asking corporations and foundations for assistance."

David Church stressed the importance of "sound management" to the college seeking support from business men, and Ernest T. Stewart, Jr., executive director, American Alumni Council, noted the primary elements in "fund" and "friend raising" campaigns. These, he said, are: "(*a*) a solid alumni program, (*b*) a well-rounded development program, (*c*) readable and reliable alumni publications, and (*d*) a strong alumni fund."

Summary

Thus, as the Nasson conference showed, the small college has a unique function to perform in higher education, both for the present and for the critical years that lie ahead. It is especially fortunate, therefore, that we have a new organization dedicated to the ideals and practices of education in small colleges; committed to the self-improvement of its members; eager to conserve, improve, and expand educational resources—a group which has already taken action, a group with a program for the future, a group with friends to state its case and consultants to guide its plans. The members hope that its action will deserve support and its achievements will constitute a significant contribution to higher education.

Voluntary Support of Higher Education

The Council for Financial Aid to Education, Inc., has announced that in 1954–55, business interests contributed to 701 degree-granting institutions the sum of $39.5 billion. This was 14.6 percent of all outside support for these institutions' current operations. The council estimates that during the same year, business grants for scholarships, contract research, and educational foundations and trusts amounted to an additional $50-60 million, thus bringing the year's total contribution for higher educational purposes to $90-100 million.

U. S. Information Positions Abroad

The U. S. Information Agency is seeking candidates for overseas posts as Cultural Affairs Officers, Information Officers, and Bi-national Center Officers. Only those with a record of achievement in public affairs, cultural affairs, including artistic and scholarly work, English-language teaching, or some medium of communication should apply. Age limits are 31 to 55. The salary range is from $5,700 to $10,700, plus allowances. Candidates must be willing to serve anywhere in the world. Application forms and further information may be had from Argus Tresidder, Cultural Affairs Advisor, Room 652 Walker-Johnson Building, U. S. Information Agency, Washington 25, D. C.

Collegiate Newspapers in New Jersey

By HERMAN A. ESTRIN*

A STUDY of collegiate newspapers, with special attention to their public relations on the campus and off, has been made among the 15 colleges that belong to the New Jersey Collegiate Press Association. The study was based upon a questionnaire prepared and distributed by the Committee on School Publications of the National Council of Teachers of English.

Coverage

Ninety-three percent of the colleges stated that their newspapers try to cover impartially all club activities, although most of the editors use their own opinions for editorial writing. All 15 papers try to encourage the various extracurricular activities of the college, and their sports sections cover defeats as well as victories. In an effort to give readers what they want, editors use personal contacts, letters to the editor, leadership surveys, and polls. To help students better understand the college staff, 93 percent of the editors run human-interest stories about members of the faculty and administration. Welfare drives are not well supported by the papers, and the most popular drive—the Blood Bank—was advocated by less than 50 percent of them.

Policies on Controversial Material

In 50 percent of the papers, final authority on controversial material is vested in the editor. Other authorities listed were the faculty adviser, an editorial board of students, and the dean. All editors except one have a set of principles to guide them in deciding what should or should not be published. The lone editor stated: "We're unprincipled." Fifty percent of the editors stated that there are no subjects which they feel are necessarily prohibited. Others prohibit use of material relating to administrative policy, or material containing gossip, or unwarranted criticism of the faculty.

The main functions of the faculty advisers, according to the survey, are to serve as a liaison between the staff and the faculty and the administration, and to suggest articles, promote morale, train editors, and approve copy. Most of the advisers had had college and high school journalism experience.

Finances

Practically all papers are allowed money to cover publication expenses. Only 20 percent of them are self-supporting. The chief means of financial support are the student activity fund, advertising, subscriptions, and support from the administration. Sixty percent of the papers have a faculty business adviser. The funds of all papers are kept in separate accounts and are not used for general college activities. The staff decides on the disposition of surplus money. If may be used for extra editions, office improvements, student government supplies, next year's account, awards to the staff, and staff dinners.

Staff

Volunteers compose the bulk of most college news paper staffs. These are recruited through the orientation program, the English classes, and the office of the faculty adviser. The average term of a staff member is 3 years. Only a third of the papers provide some financial compensation for staff participation, keys and certificates being the usual awards for service.

Two-thirds of the newspapers have exchange editors, keep a file of exchange copies, and use exchange copy in their papers. Almost all the editors by means of press associations meet with other newspaper editors.

Public Relations

Copies of the college newspapers are sent regularly to boards of trustees, patrons, advertisers, local newspapers, other colleges, and the alumni. Only 20 percent of the papers feature writeups on outstanding alumni. All editors encourage their readers to patronize their local advertisers, although they do not run items pointing to the merits of the businesses advertised.

Editors make little attempt to interpret to the public such college policies and practices as extracurricular activities, guidance programs, grade reports, and discipline. Only 13 percent run articles on civic problems or praise civic leaders who do something constructive to improve the community.

*Dr. Estrin is associate professor of English, Newark College of Engineering, Newark, N. J.

Fifty percent of the newspapers have a liaison with local newspapers and send press releases to them. Most editors participate in such press conferences as the Associated Collegiate Press, the New Jersey Collegiate Press Association, the New Jersey State Teachers College Press Association, and the National Scholastic Press Association. By means of interviews, forums, and campus radio stations, several college newspapers have contacts with commercial radio and television stations. The editors agree that their papers' public relations might be improved by a larger coverage of college, community, national, and world news.

Estimate of Opening (Fall) Enrollment, 1956

ENROLLMENT of degree-credit students in institutions of higher education in the fall of 1956 is 8.7 percent higher than that of 1955, according to Office of Education estimates. In reports of enrollment by the Office, a "degree-credit" student is one whose current program in an institution of higher education consists wholly or principally of work which is creditable toward a bachelor's or higher degree—either in the student's own institution or by transfer, as from a junior college to a 4-year institution.

The enrollment figures shown below are for the continental United States and outlying parts.

Type of enrollment	Fall 1956 (estimated)	Fall 1955 (actual)	Difference between 1955 and 1956	
			Amount	Percent
First-time enrollment	735,065	689,635	45,430	+6.6
Total enrollment	2,957,227	2,720,929	236,298	+8.7

The opening (fall) enrollment is smaller than the regular-session enrollment, because of midyear or second- and third-quarter entries into college. In general, the total regular-session enrollment is at least 10 percent greater than the opening fall enrollments.

The estimates for fall 1956 are based on returns from the first 1,195 institutions reporting to the Office of Education. Only those returns were used in the estimate which had been carefully reviewed for accuracy. The 1,195 institutions constitute 64.6 percent of the total 1,850 units to which requests for data were sent. In 1955, the total opening fall enrollment of degree-credit students in these 1,195 institutions constituted 46.4 percent of the opening fall enrollment of degree-credit students in all institutions. The disparity between 64.6 percent and 46.4 percent indicates that the first 1,195 institutions reporting to the Office of Education are, on the average, smaller than the typical institution of higher education.

In general, the estimates for fall 1956 enrollment may be regarded as at least moderately accurate. Corresponding estimates of last year's enrollment, based on the first 1,196 institutions reporting, were accurate to within 0.2 percent of the final (actual) figure for total enrollment, and to within 0.7 percent for first-time enrollment.

Free Tuition for Children of Cornell Employees

CORNELL UNIVERSITY's board of trustees has voted to grant free tuition at that university for children of any employee with 10 years of continuous service. The board voted the same privilege, regardless of length of service, to nonacademic employees in administrative, supervisory, or professional positions in certain classifications and salary ranges. The university has long given, and will continue to give, free tuition to children of full-time faculty members in the rank of professor, associate professor, or assistant professor, regardless of length of service.

The free-tuition privilege continues while an employee remains in the university's service, or if he retires, dies, or becomes permanently disabled. The ruling covers 14 semesters of academic work, so long as the student is an accepted candidate for a degree. Any study at other colleges, however, is counted as part of the 14 terms. The privilege does not include the college and university general fee, which will amount to $175 a year in most Cornell divisions, beginning next fall. The tuition rate in endowed colleges, effective next fall, will be $925 a year, so that the free tuition privilege may mean a saving up to $6,475 for the student who takes advantage of the full 14 semesters.

NEW PUBLICATIONS

Government Publications

How To Obtain

(*1*) *Cost Publications: Send request, enclosing remittance (check or money order), to the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.*

(*2*) *Free Publications: Request direct from the agency issuing them.*

From the Office of Education

A Directory of 3,300 16-mm. Film Libraries, by Seerley Reid *and* Others. Washington, D. C., U. S. Government Printing Office, 1956. Paper, 198 p. 70 cents. (Bulletin 1956, No. 12.)

Extraclass Activities, in Aviation, Photography, Radio for secondary school pupils, by Willis C. Brown. Washington 25, D. C., U. S. Government Printing Office, 1956. Paper, 48 p. 25 cents. (Bulletin 1956, No. 11.)

Resources for Teaching English: References for Teachers of English as a Foreign Language, by Marjorie C. Johnston *and* Arno Jewett. Washington 25, D. C., Processed. Paper, 9 p. (Circular No. 401, Revised.)

Statistics of City School Systems: Staff, Pupils, and Finance 1953-54; Biennial Survey of Education in the United States, 1952-54, Chapter 3, by Lester B. Herlihy *and* Emery M. Foster. Washington, D. C., U. S. Government Printing Office, 1956. Paper, 153 p. 60 cents.

Statistics of Higher Education: Faculty, Students, and Degrees 1953–54. Biennial Survey of Education in the United States, 1952–54, Chapter 4, Section 1. Washington, D. C., U. S. Government Printing Office, 1956. Paper, 142 p. 45 cents.

Teachers of Children Who Are Blind, by Romaine P. Mackie, Lloyd M. Dunn, *and* Others. Washington, D. C., U. S. Government Printing Office, 1955. Paper, 109 p. 40 cents.

Teachers of Children Who Are Partially Seeing, by Romaine P. Mackie, Edith Cohoe, *and* Others. Washington, D. C., U. S. Government Printing Office, 1956. Paper, 71 p. 30 cents. (Bulletin 1956, No. 4.)

Non-Government Publications

Obtain direct from the publishers. Prices are indicated when known.

Adult Education and Adult Needs, by Robert J. Havighurst *and* Betty Orr. 940 East 58th St., Chicago 37, Ill., 1956. Paper, 66 p. Single copy free.

Adult Education in the Canadian University: Bibliography. Prepared by the Canadian Association for Adult Education, Toronto. Distributed by the Center for the Study of Liberal Education for Adults, 940 East 58th St., Chicago 37, Ill.

Admission Requirements of American Medical Colleges. 185 North Wabash Ave., Chicago 1, Ill., Association of American Medical Colleges, 1956. Paper, 193 p. $2.

The American Student and the Non-Western World, by Vera Micheles Dean. Cambridge, Mass., Harvard University Press, 1956. 28 p. $1.50.

The Inglis Lecture, 1956. Suggestions for developing better understanding of the non-Western World by American students.

Better Utilization of College Teaching Resources: A report by the Committee on Utilization of College Teaching Resources, October 1956, New York 21, the Fund for the Advancement of Education. Paper, 45 p. Free.

Columbia's Bicentennial: An account of the planning and execution of a world-wide program of observances centering on the theme, "Man's Right to Knowledge and the Free Use Thereof." New York 27, N. Y., Columbia University, 1956. Paper, 196 p.

Conference on American Student Life and Higher Education, June 7–11, 1955, under the sponsorship of the University of Buffalo, in cooperation with the Conference Board of Associated Research Councils. Buffalo 14, N. Y., University of Buffalo, 1956. Paper, 45 p.

A Description of the College Board Achievement Tests. Box 592, Princeton, N. J., or Box 27896, Los Angeles, Calif., College Entrance Examination Board, 1956. Paper, 135 p. 50 cents.

A Description of the College Board Scholastic Aptitude Test. Box 592, Princeton, N. J., or Box 27896, Los Angeles 27, Calif., College Entrance Examination Board, 1956. Paper, 63 p. 50 cents.

Developments in Accreditation of Teacher Education, by George F. Donovan. 1785 Massachusetts Ave., NW., Washington 6, D. C., National Catholic Educational Association, 1956. Paper, 66 p. $1.25.

Educational Exchanges: Aspects of the American Experience. Report of a conference sponsored by the Committee on International Exchange of Persons of the Conference Board of Associated Research Councils, Princeton, N. J., Dec. 2–4, 1954. Washington, D. C., National Academy of Sciences, National Research Council, 1956. Paper, 74 p.

Education and Economics: The Yearbook of Education, 1956. Robert King Hall *and* J. A. Laurverys, *editors.* Yonkers-on-Hudson, N. Y., World Book Co., 1956. 595 p.

A total of 48 chapters by different authors in 19 countries grouped in four sections: The demand for education, the acquisition and distribution of resources, problems of management, and socioeconomic consequences and determinants.

Future School and College Enrollments in Michigan, 1955 to 1970. Ann Arbor, Mich., J. W. Edwards, Publisher, Inc., 1954. 65 p. $1.50.

A report by the Population Study Group, Higher Education Study, the Michigan Council of State College Presidents. Describes: (1) basic population trends in Michigan, and (2) elementary, secondary school, and college enrollment trends and forecasts.

General Motors Aids to Educators in Science and Engineering, Social Studies and Economics, Guidance and Counseling, Vocational and Home Economics, Driver Training: P. O. Box 177, North End Station, Detroit 2, Mich., Educational Relations Section, Public Relations Staff, General Motors, 1956. Paper, 104 p.

Liberal Education: Summary of a Discussion by the Trustees of the Carnegie Foundation for the Advancement of Teaching, Nov. 16, 1955. Reprinted from the 1955–56 Annual Report. New York 17, Carnegie Foundation for the Advancement of Teaching, 1956.

Music in Michigan's State Supported Institutions of Higher Learning. Ann Arbor, Mich., J. W. Edwards, Publisher, Inc., 1956. 64 p. $1.50.

A report by the Music Study Group, Higher Education Study, the Michigan Council of State College Presidents. Includes a historical summary and chapters on (1) degree and other programs and enrollments; (2) cooperation, quality, and economy in the music instruction of the State colleges; (3) nature and magnitude of future needs; and (4) conclusions.

National Scholarship Service and Fund for Negro Students, Annual Report, 1954–55; Annual Report, 1955–56. 6 East 82d St., New York 28, N. Y., 32 p., 28 p.

Need A Lift? Educational Opportunities. 6th ed., revised August 1956. Indianapolis 6, Ind., Scholarship Information Service, National Child Welfare Division, The American Legion, 1956. Paper, 67 p.

Proceedings of the Fourth Annual Oklahoma Conference on Liberal Arts Education, April 27–28, 1956, Oklahoma Baptist University, Shawnee, Okla. Conference Theme: Accent on Teaching. Shawnee, Okla., Oklahoma Baptist University. Paper, 60 p.

Proceedings of the Twelfth Annual Meeting of the Midwest Conference on Graduate Study and Research, Chicago, Ill., April 9–10, 1956. Edited by the secretary, D. R. Clippenger, Ohio University, Athens, Ohio. Paper, 91 p.

Report of The Fund for the Republic, May 31, 1955. 60 East 42d Street, New York 17, N. Y., The Fund for the Republic, Inc. Paper, 46 p.

Report of the Princeton Conference on the History of Philanthropy in the United States. 505 Park Ave., New York 22, N. Y., Russell Sage Foundation, 1956. Paper, 84 p. $1.

Research Service in Education: Keeping in Touch With the Public Schools. Harrisburg, Pa., Department of Public Instruction, 1956. Paper, 37 p. (Bulletin 74, Research Circular No. 14.)

The Role of the Independent School in American Democracy: Papers delivered at a conference on Education, the fifth in a series of Anniversary Celebrations, May 8–10, 1956. Milwaukee, Wis. Marquette University Press, 1956. Paper, 146 p. Free to colleges and universities.

Author's Correction

In the article, "Survey of Public Higher Education in West Virginia" (*Higher Education*, May 1956), the statement (p. 143) that "only Bluefield State College and West Virginia State College offer terminal vocational programs," should have read, "Marshall College, Bluefield State College, and West Virginia State College offer terminal vocational programs."

Salaries Paid and Salary Practices in Universities, Colleges, and Junior Colleges, 1955–56. National Education Association Research Bulletin, Vol. XXXIV, No. 3, October, 1956. Washington, D. C., National Education Association of the United States. Paper, 163 p. 50 cents.

Scholarship, Beneficiary Aid and Loan Funds of Harvard College, 1956–57: Official Register of Harvard University, Vol. LIII, September 1956, No. 18. Cambridge, Mass., Harvard University. Paper, 156 p.

Some Impressions of Social Services in Great Britain by an American Social Work Team. United States Educational Commission in the United Kingdom, 1956. Printed in Great Britain by the Alcuin Press. Paper, 283 p.

This report was prepared for the Fulbright Commission by a group of American specialists in social work. They had been invited to consider certain aspects of the British social services to discover those areas of study which would be of greatest interest and value to social workers with Fulbright grants.

Standards of Education and Experience for Certified Public Accountants. Ann Arbor, University of Michigan, 1956. 151 p.

A report prepared by the Bureau of Business Research, University of Michigan, for the Commission on Standards of Education and Experience for Certified Public Accountants. Considers the following topics: The professional practice of CPA's, legal regulation of public accountancy, educational facilities for CPA's, experience requirements, and the CPA examination. Includes a series of recommendations.

A Study of Dental Manpower Requirements in the West, by Division of Dental Resources, U. S. Public Health Service, in cooperation with W. K. Kellogg Foundation and Council on Dental Education, American Dental Association, for Western Interstate Commission for Higher Education. H. L. Enarson, Western Interstate Commission for Higher Education, University of Oregon, 1956. Paper, 247 p.

The University, the Citizen, and World Affairs, by Cyril O. Haule *and* Charles A. Nelson, Washington, D. C., American Council on Education, 1956. 179 p. $3.

One of a series on Studies in Universities and World Affairs. This study sponsored by the Carnegie Endowment for International Peace, the Adult Education Association, the Association of University Evening Colleges, and the National University Extension Association. An extensive analysis of present practices of an adult education for international understanding.

The Use of Print in Adult Educational Agencies, by Cyril O. Haule, for the National Society for the Study of Education. (Distributed by the Center for the Study of Liberal Education for Adults, 940 East 58th St., Chicago 37, Ill.)

HIGHER EDUCATION

Published monthly from September through May. Its printing was approved by the Bureau of the Budget on September 28, 1954, as required by Rule 42 of the Joint Committee on Printing.

Publication Office: Office of Education
U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE - - - WASHINGTON 25, D. C.

Subscription: In advance, 75 cents a year (10 cents a single copy), to foreign countries, $1. For orders of 100 copies or more in bulk to one address within the United States, 25 percent discount is allowed. Send remittance to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

U. S. GOVERNMENT PRINTING OFFICE: 1956

NORTH CAROLINA STATE COLLEGE
OF AGRICULTURE AND ENGINEERING
THE BUSINESS OFFICE
OF THE UNIVERSITY OF NORTH CAROLINA
RALEIGH

J. G. Vann
Business Manager

August 14, 1956

Mr. George H. Hudson, Director
General Services Branch
HOUSING AND HOME FINANCE AGENCY
Washington 25, D. C.

My dear Mr. Hudson:

Thank you very much for your letter of recent date conveying expressions of appreciation for help rendered by various members of our organization in your several practice periods here.

It is always gratifying to hear reports of this kind concerning the cooperation of our people, and we very much appreciate your expression. In the meantime, please be assured that we will certainly endeavor to continue cooperating with your agency in the future as best we can.

With kind personal regards, I am

Very sincerely yours,

J. G. Vann

JGV:jh
BC: Dr. C. H. Bostian

HOUSING AND HOME FINANCE AGENCY
OFFICE OF THE ADMINISTRATOR • Washington 25, D. C.

Mr. J. O. Vann
Business Manager
North Carolina State College
Raleigh, North Carolina

Dear Mr. Vann:

I hope I have conveyed to you in the many conversations we have had how truly grateful I am for the continual interest you have taken in our operations in Raleigh. Each time I review our experiences there, I am more aware of your contribution.

I should like also to thank Mr. Betts again. His personal interest and cooperation astound me. Although it was not possible to conduct the exercise in the Coliseum this year, Mr. Betts' desire to be of help did not lessen at all. He made many suggestions about other possible sites and offered any assistance which he might be able to provide. At times I felt that we called on him for help too often--but the next time some particular problem confronted us, we found ourselves unhesitatingly presenting it to him. Our requests were always graciously received and capably handled. I have the greatest respect and the deepest admiration for Mr. Betts. He is truly a fine gentleman.

I do not know what may be ahead of us in the way of Civil Defense assignments for the coming year, but whatever it is, I am sure I can count on you and other members of your staff to help us out.

Thank you for everything you did to make our test exercise successful.

Sincerely yours,

George H. Hudson
Director
General Services Branch

HOUSING AND HOME FINANCE AGENCY
OFFICE OF THE REGIONAL ADMINISTRATOR

REGION III

Room 223 Peachtree Seventh Building, N. E.
Atlanta 23, Georgia

May 24, 1956

Dr. Carey H. Bostian
Chancellor
North Carolina State College
of Agriculture and Engineering
Raleigh, North Carolina

Re: Application N.C. 31-CH-7 (D)
Dormitory Facilities
North Carolina State College

Dear Dr. Bostian:

We are happy to inform you that your application for a loan of $2,000,000 has been approved for the purpose of constructing dormitory facilities at North Carolina State College of Agriculture and Engineering. Detailed instructions concerning the procedure to be followed in placing this project under construction will be forwarded to you in the near future.

Sincerely yours,

William Henry Harrison

William Henry Harrison
Regional Administrator

cc: Mr. J. G. Vann
Business Manager
North Carolina State
College

CONFIDENTIAL

HOUSING AND HOME FINANCE AGENCY

OFFICE OF THE ADMINISTRATOR • *Washington 25, D. C.*

May 1, 1956

Mr. J. C. Vann
Business Manager
North Carolina State College
Raleigh, North Carolina

Dear Mr. Vann:

In accordance with our conversation of April 23, we should like to begin planning for an increase in the facilities that could be made available to this Agency at the North Carolina State College in the imminence or event of an enemy attack.

Our present agreement with the College is in a letter dated June 1, 1954, to Dr. Carey H. Bostian from Administrator Albert M. Cole, accepted by W. D. Carmichael, Jr., for the College. The facilities to be made available are described in an attachment, marked Exhibit "A", to that letter. We stated then that from time to time due to changed conditions it would be necessary for us to amend or supplement Exhibit "A".

The space in the 1911 Building allotted to this Agency can accommodate about 300 employees. We estimate that the wartime functions assigned to us by the Office of Defense Mobilization and the Federal Civil Defense Administration, and our present functions on a limited basis, will require about 3,000 employees. Therefore, we should like to have you consider the possibility of expanding our facilities to accommodate an additional 2700 employees.

Although our need is primarily for office space, we can use the Coliseum, Thompson Gymnasium, and the Student Union Building. However, these buildings alone would not be sufficient to provide office space for the total number of personnel to be assigned. Since emergency conditions would undoubtedly interrupt normal activities at the College, we would like now to arrange to include in the letter of agreement, in addition to the buildings enumerated above, other facilities that would perhaps not be required for normal academic pursuits.

In order to properly plan for the emergency establishment of offices in Raleigh, we need to know the facilities and the approximate order in which they can be made available. On the basis of my knowledge of the physical capacities of the 1911 Building, the Coliseum, Thompson Gymnasium, and the Student Union Building, I believe that we could provide working areas for approximately 2100 employees which actually means that we would need perhaps 3 additional buildings the size of the 1911 Building for emergency use.

CONFIDENTIAL

In our discussion on April 23, I recall you mentioned that a request of this kind would perhaps require a discussion with the heads of the consolidated universities and perhaps the further attention of the Executive Office of the State. At your discretion, I would be glad to appear before the consolidated heads of the universities at a time convenient to them. In any event, I shall appreciate your taking such action as may be necessary to bring our request to the attention of the appropriate College officials.

Sincerely,

George H. Hudson
Director
General Services Branch

MARRIED STUDENT HOUSING

Summary of situation with regard to the proposal for permanent married student housing:

On Tuesday of this week Mr. Vann and I had a conference with a private developer relative to the proposal for building some permanent apartments for married students. Summary of the results of this conference were:

This developer is very much interested in pursuing a proposal to build these apartments, if a site can be made available in the vicinity of Meredith College. He states that he would investigate the proposal of building these apartments elsewhere, but would be doing so only as a favor to the college. And states quite frankly that his company would not be interested from their point of view. He gives two basic reasons for his attitude:

1. A development to provide apartments at a rental low enough for students to afford will not be a profitable operation for the developer unless located so that it can be connected with a shopping center from which collateral profits will be derived.

2. He thinks that in an arrangement of this kind the developer must be protected by having the location desirable to occupants other than college students. He is well aware of the married student need at the present time and believes fully that we could furnish an ample number of occupants for the next few years. However, he states that in dealing with lending organizations, as he will have to do in this development, he will not be able to show them what the student demand ten years from now will be.

In my opinion, the present situation leaves us with the following possible decisions:

1. We can attempt to provide the site in which this developer is interested. If this is done, it is my feeling that he will pursue the project with a great deal of vigor and that if agreements can be reached it can be underway soon.

2. We can attempt to interest another developer in the site presently agreed upon (Method cut-off area).

3. We can appeal the Federal Housing Office ruling against lending to the Foundation and attempt to get them to lend to a special State College Housing Corporation, organized for that purpose, and in this way attempt to construct the apartments on the Method cut-off site.

4. We can delay the project until the next meeting of the Legislature and appeal for:

   a. Appropriations for this purpose.

   b. If appropriations are denied, authority to borrow.

5. We can decide that the college will at this time not attempt to meet this housing need and proceed to liquidate the Vetville operation over a period of years, as buildings become unfit for further use - thus relying on the Raleigh Real Estate developers to provide quarters for our married students.

It is my opinion that we should consider this matter and, if possible, arrive at some decision as to our course of action as soon as possible.

March 2, 1956

JWD

NORTH CAROLINA STATE COLLEGE
STATE COLLEGE STATION
Raleigh, N. C.

OFFICE OF STUDENT AFFAIRS
Holladay Hall

[HOUSING]

January 20, 1956

The critical need for a new married student housing project to replace the present sub-standard Vetville has been cited numerous times to various groups of individuals at all levels of the College and University. None of these groups have questioned the need as the facts and figures present a convincing picture. The authority to finance such a project has been the area in which little or no progress has been made.

The best plan for action in the matter at the present time seems to be to enter into an agreement which will permit a private individual or firm to develop the desired housing for the College under conditions favorable to both parties.

If such an agreement can be worked out, the following conditions should be incorporated in the plan:

1. The College to provide the land via lease at no cost to the developer.
2. Developer to carry out all financing and construction to the point of ready for occupancy.
3. All details of the project plans to be approved by both the College and the developer.
4. Sufficient amortization period to permit monthly rentals to be within the reach of the married students. Fixed maximum rental to be established.
5. Housing units to be planned to provide comfortable quarters in keeping with the dignity of the institution and at the same time omitting those features which will increase the cost of the project unreasonably.
6. Priority and certification of occupants to be determined by State College. Policy to contain agreement to permit units to be occupied by non-State College personnel if demand for housing of State College personnel becomes non-existant.
7. The project to become the property of the College at end of amortization period.

Many other details will need to be worked out, but the important issue at this time is to receive the authority to proceed with such a plan and to determine who will represent the College in seeking a developer who will undertake such a project.

The location of a permanent housing project for married students will be one of the determining factors in the consideration of the developer. Clearance for several sites should be obtained at the earliest convenience.

N. C. STATE COLLEGE FRATERNITY HOUSING PROPOSAL

1. That the N. C. State College Foundation ~~will~~ assume the responsibility of acting as borrowing agent for a group of N. C. State College Social Fraternities for the purpose of building a fraternity housing project to cost approximately Eight Hundred Thousand Dollars ($800,000).

2. Each of the fraternities will deposit with the Foundation Ten Thousand Dollars ($10,000) as the initial payment on ~~their~~ this housing project, which will amount to Eight Hundred Thousand Dollars ($800,000) total and Eighty Thousand Dollars ($80,000) per fraternity. After this initial payment a Seven Thousand Two Hundred Dollar ($7,200) debt service payment by each fraternity to the Foundation will be made annually.

3. N. C. State College will provide land to the Foundation and fraternities for the construction of the housing project at no cost to either party on the basis of a long-term lease arrangement, first to the Foundation and then to the individual fraternity when the fraternity debt has been paid in full.

4. N. C. State College Foundation, the ten (10) fraternities, and the Student Affairs Office will recommend an architect to the College Administration for the overall project, and it shall be his responsibility to prepare project plans. This will permit each fraternity to use the services of individuals on their separate projects, but each must be approved by the project architect.

5. The fraternities will be permitted to make any additions above the overall cost, provided they furnish the funds and provided these funds are in addition to the initial payment and the regularly-scheduled debt services payments.

6. To illustrate the potential revenue of each fraternity, let us assume a twenty-dollar-a-month debt service charge for a room in the fraternity house and a housing capacity of forty (40) men:

What about extra cost of heat, lights, water per month?

Loan of $80,000 for 25 years at 5% --

Interest will decrease annually.

Income $7,200 / year

Outlay - Interest $80,000 x .05 -- $4,000

Principal - $80,000 / 25 -- $3,200

$7,200

PHI ETA SIGMA
FRESHMAN HONOR SOCIETY
N. C. STATE COLLEGE CHAPTER
RALEIGH, N. C.

December 3, 1955

TO ALL MEMBERS OF PHI ETA SIGMA:

The Editor of the Agromeck wishes to take the picture of PHI ETA SIGMA immediately following the initiation of new members next Wednesday night, December 7, 1955, at 7:00 p. m., at the COLLEGE UNION.

Please come to the meeting promptly and wear a coat and shirt with collar and tie.

E. L. Cloyd
Faculty Adviser

ELC:mjm

This is a conservative estimate based on a forty-man house; no summer income, no profit from dining operations, no alumni contributions, and no dues.

PHI ETA SIGMA
FRESHMAN HONOR SOCIETY
N. C. STATE COLLEGE CHAPTER
RALEIGH, N. C.

November 29, 1955

TO THE ACTIVE MEMBERS OF PHI ETA SIGMA:

There are fourteen (14) new members to be initiated into Phi Eta Sigma.

We want to initiate these men on December 7, 1955, at 7:00 p. m., in the College Union, on the second floor.

Please mark your calendar for this date and make every possible effort to be present.

The initiation ceremony is not long, need not be more than an hour.

When there is a good attendance by active members, the morale of the initiates is considerably improved - a good feeling of welcome is created.

The new members to be initiated are:

Donald Wilson Bean of East Bend, N. C.;
David Bright Hilburn, Jr., of Bladenboro, N. C.;
George Getzen Mathews of Laurel Hill, N. C.;
Joseph Hugh Nanney of Hendersonville, N. C.;
Joe Allen Nuckolls of Hendersonville, N. C.;
Robert Jerome Orrell of Wilmington, N. C.;
Carl Duncan Parker of Cordova, N. C.;
Charles Leonard Parker of Varina, N. C.;
Jerry Pryor of Mount Holly, N. C.;
Wiley Fletcher Ritter, Jr., of Carthage, N. C.;
Jerry Allan Roberts of Landis, N. C.;
Kenneth Franklin Stout of Asheboro, N. C.;
Gene Thurmond Whicker of Walkertown, N. C.;
J. C. Yancey of Newton, N. C.

We shall look forward to a good attendance at the initiation Wednesday, December 7, 1955, at 7:00 p. m.

Cordially yours,

E. L. Cloyd, Faculty Adviser
Phil Settlemyer, President

ELC:mjm

Dr. Boston -

I Gather this Evening's in your file. I have had favorable replies from 3 of Committee members on Recommendation of Architect Hayes for married Student Housing -

No answer yet from Wade or from Whitehead

Grafton V -

NORTH CAROLINA STATE COLLEGE

OFFICE OF THE CHANCELLOR

To: J. G. Vann Date:

Attached is membership of Bldg. Comm. Addresses are in my office unless they were only in Miss Haywood's mind -

Perhaps you should mention our recommendation J. Hayes for married-Stu. housing to WDC Jr. or Pres. F before writing to the Comm -

ATTACHED PAPERS

____ Please note and return
____ For your records
____ Please handle
____ Note opinion and return
____ Needs your signature
____ Please answer and send me copy of your reply

CHB

NORTH CAROLINA STATE COLLEGE
OF AGRICULTURE AND ENGINEERING
OFFICE OF THE CHANCELLOR

OF THE UNIVERSITY OF NORTH CAROLINA
RALEIGH

[Housing Frat.]

March 27, 1956

TO: Members of the Trustees' Building Committee

Mr. G. N. Noble, Chairman
Mr. C. A. Cannon
Dr. H. B. Mann
Mr. R. I. Mintz

Sam L. Whitehurst, New Bern is new member.

Gentlemen:

Mr. Vann and I wish to recommend the designation of the firm of Small and Boaz, an architectural firm located here in Raleigh, as architects for the proposed fraternity housing project.

We have been giving consideration to firms located away from Raleigh but because of the peculiar nature of this project think that it can be handled much better by a local firm. The first phase of this project will include ten houses and the separate fraternities will have the privilege of conferring with the architects as plans and specifications are prepared. When construction has begun, there will need to be more supervision than can be provided by an outside firm.

Small and Boaz were the architects for the Nuclear Reactor Building and are also currently designing the new Students Supply Store. Employment of the firm for the fraternity housing project has been recommended to us by the fraternities and by the Office of Student Affairs. We, therefore, recommend them for this project.

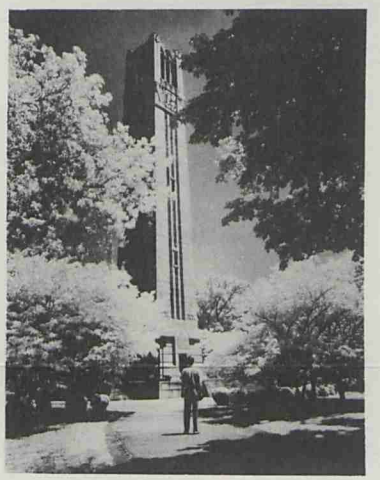
If you wish to have further information, I shall be glad to furnish it.

Sincerely yours,

Carey H. Bostian
Chancellor

CHB:H
cc: Mr. William Friday, Acting President
Mr. J. G. Vann

North Carolina State College



Invites High School Juniors And Seniors

To Its 1956 High School Day, December 8

To Visit The Home Of...

. . . The Reynolds Coliseum, largest indoor stadium between Atlantic City and New Orleans.

. . . The Burlington Nuclear Laboratory, first college-owned Atomic Reactor in America, open for public visits by staff guides.

. . . The College Union, one of the most modern student-faculty centers in the nation.

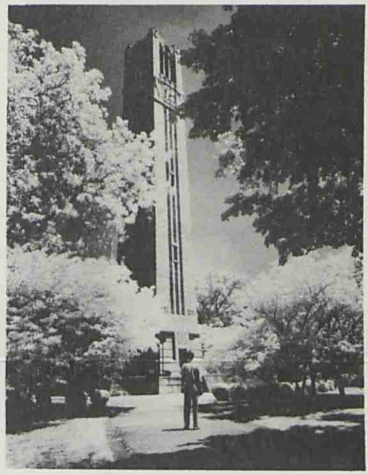
. . . The N. C. State Wolfpack, Southern Conference and Atlantic Coast Conference Basketball Champs for 9 out of 10 years.

. . . Seven Schools of Agriculture, Engineering, Textiles, Design, Forestry, Education, and General Studies, with 48 departments where over 5,500 students are taught and 365 research projects conducted to improve the everyday living of all North Carolinians.

Registration begins at 11 a.m. in the Coliseum. Tours will run from 2 to 5:30 p.m., and basketball game at 8 p.m.

Assembly at Coliseum, 1 p.m.—Tickets to basketball game will be given at registration time.

North Carolina State College



Invites High School Juniors And Seniors

To Its 1956 High School Day, December 8

To Visit The Home Of...

. . . The Reynolds Coliseum, largest indoor stadium between Atlantic City and New Orleans.

. . . The Burlington Nuclear Laboratory, first college-owned Atomic Reactor in America, open for public visits by staff guides.

. . . The College Union, one of the most modern student-faculty centers in the nation.

. . . The N. C. State Wolfpack, Southern Conference and Atlantic Coast Conference Basketball Champs for 9 out of 10 years.

. . . Seven Schools of Agriculture, Engineering, Textiles, Design, Forestry, Education, and General Studies, with 48 departments where over 5,500 students are taught and 365 research projects conducted to improve the everyday living of all North Carolinians.

Registration begins at 11 a.m. in the Coliseum. Tours will run from 2 to 5:30 p.m., and basketball game at 8 p.m.

Assembly at Coliseum, 1 p.m.—Tickets to basketball game will be given at registration time.