When heart attack strikes
William B. Pollard, III, Arts and Sciences graduating senior, delivered the principal address at Washington University's 1970 Commencement. Pollard discussed the three social issues that, "collectively and individually, are capable of destroying this nation"—racism, militarism, and pollution, and declared that first priority must be given to securing real freedom for black people. In these times of rapid polarization of attitudes and opinions, many university students feel that it is urgently necessary that they communicate with the older generation and that a meaningful dialogue based on mutual trust and understanding be established. Bill Pollard is one of many students who are attempting to communicate their concerns and feelings in a constructive way. On page 42 is a joint statement by five students called "It's Time to Begin Communicating With Each Other." On page 46 is an interview with an Engineering School student, a most "Outspoken Quaker."
THE DANFORTH FOUNDATION has made a $15,000,000 grant to Washington University for general support. The grant is to be paid over a five-year period.

In announcing the grant, Merrimon Cuninggim, President of the Danforth Foundation, said, "We realize that these are times of unusual financial difficulty for private universities. Additional funds in sizeable amounts must be found if they are to continue to make a significant contribution to higher education. Much value would be lost if the private sector did not exist.

"Washington University has now become one of the finer private universities in our country. This grant reflects the achievement of the present administration and the Foundation's confidence in the ability of the University to maintain a high level of academic excellence."

IN ACCEPTING the grant Chancellor Eliot commented: "The magnificent gift by the Danforth Foundation is significant, encouraging, and challenging.

"Its significance lies primarily in the fact that the Foundation is thus massively supporting an institution of private higher education at a time when the future of private universities is clouded by financial difficulties.

"It encourages us at Washington University because, over the last two decades, we have been striving to put this university into the forefront among the nation's universities, in terms of academic quality and usefulness. The gift indicates both recognition of our progress and faith in our future.

"Finally, it is a challenge. To achieve its purpose, to maintain the strength and quality of the University, it must be more than matched with other contributions from private sources. I am confident that the challenge will be met—by the alumni and other friends of Washington
DANFORTH FOUNDATION GRANT

University, indeed by all who recognize the local and national need for independent and excellent institutions of higher learning in this country."

The grant will be paid in installments of $3,000,000 per year. Of these funds the University, exclusive of the Medical School, will receive $2,000,000 and the Medical School $1,000,000 in each of the five years.

Speaking for the Foundation, President Cuninggim said: "We are under no illusion that this grant will meet the needs of Washington University for the next five years, for the total needs will far exceed the amount of this grant. Rather, we see this grant as simply supplying the necessary funds over and above those which the University can reasonably expect to receive in contributions and gifts which will be required to provide a quality educational program."

The continuing financial need of the University was emphasized by Chancellor Eliot: "To maintain over-all quality we have to raise around $5,000,000 annually in operating support for the University exclusive of its School of Medicine. The Danforth Foundation's gift will help us tremendously in doing this, while not relieving us of our duty to operate as efficiently and economically as possible. The gift also gives new and needed assurance to our great Medical School, at a time when costs are rising and there is some question about the continuance of the present level of Federal support for medical education."

The Danforth Foundation, created by the late Mr. and Mrs. William H. Danforth in 1927, is a philanthropy concerned primarily with people and values. Presently the Foundation focuses its activities in two major areas, education and the city. In these areas the Foundation administers programs and makes grants to schools, colleges, universities and other public and private agencies.
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COVER: When heart attack strikes—an ambulance races for help with one of the 1.5 million coronary victims hit each year in this country. For the story of the University's part in this war on the No. 1 killer of our times, see "The Attack on Heart Attacks," beginning on Page 4.

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THE ATTACK ON HEART ATTACKS

One day last spring an 84-year-old man was visiting a patient at Barnes Hospital in the Washington University medical center. He was on the elevator when he was stricken with a sudden heart attack—a complete cardiac arrest. When the elevator stopped and the doors opened, he fell into the corridor almost into the arms of one of the Center's leading thoracic surgeons who happened to be standing there waiting for the elevator. The surgeon immediately began emergency resuscitation while calling out for help. By the time a coronary team arrived on the scene, the surgeon had restored the man's heart action. Within a few hours, he was out of immediate danger, comfortably resting in the Coronary Care Unit. A few weeks later, he went home.

That incident represented the optimum in swift coronary care, but unfortunately few victims of heart attacks collapse into the arms of a competent physician within a hospital equipped with a modern coronary care unit. In the more typical case, the victim begins complaining of "indigestion" after dinner, spends the evening taking baking soda and debating whether to bother the family doctor, and finally the next morning calls the doctor and begins the trip to the hospital. Statistics show that about 50 to 60 per cent of persons who die of heart attacks never make it to the hospital. Far too often there is literally a fatal delay between the onset of symptoms and the beginning of medical treatment; tragically often the patient is stricken on the golf course or in the office and dies before medical help can be summoned.

Cardiovascular disease is our No. 1 killer. In the United States alone, about 1.5 million are stricken with heart attacks each year, 600,000 fatally. Every minute around the clock someone dies of a heart attack.

Medical scientists are convinced that this appalling toll can be substantially reduced with the knowledge and techniques already available. Much can be done through the education of the public to recognize early signs of heart attack, but to make any serious inroads on the death toll, the interval between attack and treatment has to be drastically reduced. Since more than 50 per cent of sudden heart attack deaths occur within twenty-four hours of the first symptoms, the name of the game in coronary care is speed; the enemy is time.

A recent development that is already cutting into the death toll and which promises great advances for the future is the establishment of coronary care units in hospitals throughout the country. There are about 2000 of these units today, varying greatly in size, capacity, and sophistication. However, they all share the same basic idea: to segregate coronary patients in a specialized area of the hospital, to make available in that area all of the latest tools and techniques of medical technology, to staff the unit with a well integrated team of medical specialists, and to base the operation of the facility on modern management principles and an organization geared to the systematic delivery of health care. In hospitals equipped with such units, the death rate from heart attacks has already been reduced by about a third and experts feel that widespread application of the approach could save 60,000 lives a year.

The Coronary Care Unit in the Washington University medical center was opened in October, 1969. It is organized as a section of the Division of Cardiology of the Department of Medicine in the Washington University School of Medicine. The physical facilities are financed and operated by Barnes Hospital and by the Cardiovascular Research Laboratories of the School of Medicine. Its objectives are threefold: to provide optimal care for patients with serious cardiovascular disorders, to educate physicians, nurses, and paramedical personnel in cardiovascular intensive care, and to further research into the diagnosis and treatment of disorders of the heart and circulation.
Cardiovascular disease is our No. 1 killer. A million and a half persons suffer heart attacks each year in the United States and more than 600,000 die. At Washington University, medical scientists are fighting this scourge on many fronts. One of the most promising lines of attack centers around the Coronary Care Unit at Barnes Hospital, established and operated as a joint endeavor of Barnes patient care experts, Washington University medical scientists, and the computer scientists of the University's Biomedical Computer Laboratory.

Photographs by HERB WEITMAN

The name of the game in coronary care is speed. Here, members of the Coronary Care Unit team rush a patient from the emergency room to the intensive care area.
Dr. Gerald A. Wolff (center), director of the Coronary Care Unit, confers with the Unit's staff of residents, interns, nurses, and technicians during regular morning rounds.
Establishment of the million dollar facility required about $500,000 for renovation of the building area, $250,000 for electronic equipment and other furnishings, and about $200,000 for computers and associated equipment. Approximately $750,000 of the total cost was underwritten by Barnes Hospital and the balance by the Washington University Biomedical Computer Laboratory through grants from the National Institutes of Health. Research laboratories were outfitted by the University’s Department of Internal Medicine. Of the $750,000 underwritten by Barnes Hospital, $400,000 was provided by the generosity of the Barnes Hospital Auxiliary and $310,000 by the Albert M. Keller Trust Fund.

The Unit’s operations are overseen by the Coronary Care Committee, made up of the chairman of the Department of Internal Medicine, the chief of the Division of Cardiology, the director of Barnes Hospital, the director of the Nursing Services, selected members of the Division of Cardiology and of the private medical staff, the director of the Washington University Biomedical Computer Laboratory, and the Coronary Care Unit director.

Dr. Gerald A. Wolff, director of the Unit and an assistant professor of medicine, helped plan the facility he now directs. Dr. Wolff, who had started out intending to be a lawyer and completed one year at Harvard Law School before switching to medicine, received his M.D. from Washington University in 1961. He interned and served as assistant resident at Boston City Hospital and then went to Peter Bent Brigham Hospital in Boston as a cardiology fellow. At the Brigham, he worked with Dr. Bernard Lown, the internationally known cardiologist who is also director of that hospital’s coronary care unit. He also spent a year as a cardiology fellow with Dr. W. Procter Harvey at Georgetown University and served two years in the Navy as a cardiologist at the Oakland Naval Hospital.

At the Coronary Care Unit, he directs a team of cardiology fellows, residents, interns, nurses, and technicians. As in all the hospital areas within the medical center, the private physicians retain their roles as attending physicians for their patients.

The most important factor in intensive coronary care is the nurse. The well trained nurse and the vital role she plays is the key to the success of any coronary care unit. Through continuous assessment of the patient by direct observation and cardiac monitoring, she can immediately detect the first signs of complications and initiate appropriate therapy herself when feasible, saving precious time when minutes and even seconds count.

All nurses on the staff of the Coronary Care Unit receive intensive training in a special eight-week coronary care course taught by Barnes Hospital. Only after she has completed the course does the nurse begin work in the Unit, and then she goes through an apprentice training period before she takes on the full responsibility of a coronary care nurse. Intensive coronary care is a team operation requiring the knowledge and skills and services of many different kinds of professionals, but the keystone of the whole operation is an elite corps of specially trained nurses with strong motivation and high morale.

The Coronary Care Unit on the eighth floor of the Rand-Johnson Memorial Surgical Wing of Barnes Hospital consists of a six-bed acute area and a nine-bed graduated area. Each bed is in a private room with sliding glass doors so that the staff can keep a constant eye on all patients but with full draperies if privacy is needed. To help reduce the disorientation and anxiety that often afflict heart attack patients in the first hours and days, each room has a window, a clock, and a calendar. The rooms are tastefully furnished, soundproofed, and temperature-controlled.

In both units, wall-shelf mounted equipment at each bedside contains an electrocardiogram amplifier, a heart rate meter with high and low alarm limits, a dual channel oscilloscope screen that gives a constant display of the patient’s ECG signal, and blood pressure-monitoring equipment.

At the center of each unit are two separate consoles containing monitoring equipment for each patient. The nurse’s console contains a 19-inch oscilloscope, giving a constant reading on each patient, and a set of status lights that give instant alarms on changes in heart beat or on malfunction of any equipment. Each ECG is also
THE ATTACK ON HEART ATTACKS

automatically and continuously inscribed on paper rolls and is instantly available. A separate console called a discussion station is available to physicians to review the status of any patient. The discussion station contains a dual channel oscilloscope, a paper ECG recorder, and a blood pressure indicator. In each unit there are two ceiling-mounted oscilloscopes giving constant readings on every patient.

Resuscitative equipment is available immediately in both units. Oxygen, suction equipment, electric shock apparatus, defibrillators, catheter pacemakers, and mechanical cardiac compressors are on constant standby status. In each unit an emergency cart, containing a complete supply of all drugs and emergency equipment that might be needed, is instantly available.

In addition, between the two units is a specially equipped room where pacemakers can be installed and supportive cardiac procedures of all kinds can be performed without delay. Laboratories for heart and blood research are adjacent to the units.

The Coronary Care Unit here is similar in organization, equipment, and operation to other intensive care coronary centers throughout the country. In one respect it is unusual, if not perhaps unique. That is in its use of the computer as a diagnostic tool.

It is not unusual that Washington University’s facilities should employ the computer more thoroughly than most institutions, for the University has for some years been among the leaders in the application of computer technology to biology and medicine. Washington University has long had a vigorous computer science program. In 1965, this program was enormously strengthened when a group of computer scientists from Massachusetts Institute of Technology moved to Washington University. The group, along with the previously formed Biomedical Computer Laboratory, has been extremely active in the design of new computers and the application of computer techniques to the biomedical field.

The Washington University computer laboratories have been active in the use of the LINC computer (perhaps the first mini-computer) as an important part of experimental apparatus working “on-line” and in “real time” with the patient. The Biomedical Computer Laboratory staff, working with scientists in medicine and biology on practical application to research and therapy, is closely tied with an allied organization, the University’s Computer Systems Laboratory, a research center built around the team of scientists who originally designed the LINC and are now engaged in the design and development of new computers and computer techniques for use in the biomedical field.

When Washington University and Barnes Hospital experts first began planning the new Coronary Care Unit, the Biomedical Computer Laboratory staff was called in to help plan the equipment and to determine how best biomedical computer technology could help.

Dr. Jerome R. Cox, Jr., director of the Biomedical Computer Laboratory, was named to the Coronary Care Committee and worked very closely with Dr. Wolff and other members of the committee in designing the Unit and its equipment. Computer scientist Floyd Nolle was directly in charge of development of the Coronary Care Unit monitoring system and of the Unit’s unique digital computer system for monitoring electrocardiographic rhythms.

The major challenge faced by the computer team was to design equipment capable of giving advance warning of electrical malfunctions of the heart. A characteristic of coronary disease is sudden death, often occurring without any known preliminary symptoms. In many cases, postmortems on the victims reveal no damage to the heart, no visible deterioration of heart tissue, in effect, no obvious cause. These are the “hearts too good to die.” They simply stop like a clock that has quit ticking.

It has long been known that death from heart attack can result from a power failure or an electrical failure. In the first case, massive or critically located destruction of heart muscle prevents it from pumping blood efficiently, although it continues to beat regularly. In electrical failure, the heart’s muscular action is intact, but something goes wrong with the rhythm of the heart. There is a breakdown in the heart’s biological pacemaker that generates the “spark” initiating the heart muscle contraction. This breakdown usually leads to ventricular fi-
Intensive care means constant care. Dr. Wolff confers at regular "changing of the guard," when the staff going off duty briefs the incoming staff on every patient’s current status.

Key to the success of any coronary care unit is a corps of specially trained and highly motivated nurses. From left: Lillie Bush, Gail Grant, Carol Lammert, Dorothy Beewie.
THE ATTACK ON HEART ATTACKS

Floyd Nolle (at computer console), computer scientist of the University’s Biomedical Computer Laboratory, was the project engineer in charge of the design and installation of the computer facilities in the Coronary Care Unit.
Coronary care nurses Carol Lammert and Gail Legner keep a constant eye on their patients at the nurse’s console with its built-in oscilloscope, warning lights, and other electronic equipment.

brillation, erratic, uncoordinated electrical activity which cannot produce an effective heart beat. When the heart fibrillates and goes into the resulting erratic dance, death is swift and almost always certain.

Most coronary deaths are believed to be due to ventricular fibrillation. Yet, medical scientists have proven that fibrillation is reversible; that it can be stopped in time. It is estimated that if a patient who has gone into fibrillation is treated within one minute, his chances of survival are greater than 90 per cent; after three minutes, his chances drop to less than 10 per cent. However, research has shown that while ventricular fibrillation develops abruptly it is preceded by specific abnormalities in the heartbeat. It has also been learned that there are effective counter measures to these premonitory abnormalities, especially the use of lidocaine, a substance similar to the dentist’s novocain. If administered in time, lidocaine can prevent development of the wild fibrillation and restore the heart’s electrical activity to normal. If fibrillation is stopped this way, the patient is usually in as good a condition as one who has not experienced fibrillation. The real test is how far in advance the impending disaster can be detected and how swiftly countermeasures can be taken.

That’s where the computer comes in. No human watchdog could keep track of all the signals being monitored from a patient’s heart, compare them to established norms, and compute just when fibrillation was imminent; a computer can.

At the Coronary Care Unit, the patient’s continuous electrocardiogram record, his heartbeats, and other pertinent data is fed constantly into a computer. The computer has been programmed to look for alarm signals; it has built into its memory banks established norms for each patient. When erratic rhythms or an "arrhythmia" develops, when the first pre-fibrillation signs show up, the computer can see them coming and can warn the staff. With the entire staff geared to swift action, the fatal attack can be headed off in time.

At present, the computer facilities can handle only two patients at a time, although data on all patients in the Unit are fed into the computer and the staff can re-place one patient with another in the computer at any time. Very shortly, the capacity will be expanded to six patients at a time, and Dr. Wolff hopes that eventually all of the patients in the Unit will be on the computer simultaneously.

Electrical malfunction is one of the two major acute disorders of the heart; the other is mechanical pump failure or malfunction. The classic "heart attack" is usually a myocardial infarction—the myocardium or heart muscle is damaged by the interruption of part of its blood supply. If the muscle damage is extensive enough, or if it is located in a critical area of the heart, cardiac output drops and blood flow to the vital organs may be inadequate to save life.

A promising new approach at Washington University as well as at many other research centers to this type of pump failure is known as "balloon pumping." This mechanical circulatory assist is accomplished by the introduction into an artery of a catheter with a small polyethylene balloon at its end. A pump, working in exact coordination with the patient’s electrocardiogram, pumps helium in and out of the balloon. During "diastole,” or relaxation of the heart muscle, the balloon swells and increases the pressure inside the aorta which increases blood flow to vital organs. During "systole,” or heart contraction, the balloon deflates and lowers the pressure the heart works against. The effect is to make room in the aorta for the blood that the heart is ejecting, without requiring the high pressure and work which the heart must normally generate.

What it adds up to is that the strain on the patient’s damaged heart muscle is removed and the injured tissue is given time to heal. The balloon can be inserted at the bedside in a very simple procedure and it causes the patient no discomfort or pain (in fact, it may help to relieve painful symptoms). Kept in place for five or six days, and perhaps for much longer when the technique improves, the balloon enables the patient’s heart to take over its own muscular contraction, and it gets him through a period when the pump failure could quickly trigger electrical failure. At Washington University, the assisted-circulation team is perfecting its technique on
experimental animals and will soon apply balloon pumping to the first human patients.

Dr. Wolff is enthusiastic about the great improvement the Coronary Care Unit has made in saving lives. He feels, however, that the concept must be broadened in two directions: further into the hospital and much further out into the community. Within the hospital, he is working toward integrating the emergency room into the system for coronary cases. At present, when any patient arrives in emergency with possible coronary symptoms, the Coronary Care Unit is alerted and a team, trained in cardiology and armed with the necessary equipment, proceeds immediately to the scene. Its first objective is resuscitation, if necessary; its second to begin monitoring the patient immediately and to get him into intensive coronary care as soon as possible.

He also hopes to establish a special coronary reception area in the emergency ward, with lifesaving and monitoring equipment immediately available, and with coronary care experts ready to man it. On the other end of the chain, he would like to see a unit of several beds, adjoining the Intensive Care center. When a patient is well enough to leave the Coronary Care Unit, Dr. Wolff would like to see him finish his hospital stay in an adjacent recovery area, where he would continue to be monitored, by telemetering his ECG to the main Unit.

In effect it would be a “step-down” system from the Coronary Care Unit to a recovery area where the patient would still be monitored, and finally into the care of his private physician, armed, Dr. Wolff hopes, with the best possible advice on future coronary care.

Dr. Wolff would like to extend the care in the other direction also, in a sort of a “step-up” procedure. The first step, of course, would be the most intensive possible education of both the physician and the public about the danger signals of impending coronary catastrophes and the emergency measures to take when a heart attack strikes. He would then like to see mobile units—specially equipped coronary ambulances manned by trained coronary experts. In addition to complete lifesaving apparatus, the coronary ambulance would have monitoring equipment that would get the patient into the computer safeguard even before he reaches the hospital.

Such mobile coronary units already exist in Europe. Belfast has mobile “flying squads” throughout the city, and in Moscow all you have to do is dial “03” and a special coronary ambulance is dispatched to your door.

Another approach, Dr. Wolff believes, would be the establishment of neighborhood coronary centers. Each center would have resuscitative and monitoring equipment tied into the main coronary care center. The neighborhood center would be staffed by trained coronary care personnel, and would both screen out false alarms and start genuine cases into coronary care.

All of these ideas will help to reduce the dreadful death toll from heart attacks. It is almost equally important, Dr. Wolff feels, to educate all physicians and hospital personnel to proper coronary care, and to inform the public of the latest findings on the causes of heart disease.

Progress is being made and will be made on other fronts. The electronic pacemaker is keeping thousands of patients alive after their natural heart pacemaker failed. Heart transplants are only in their infancy, but advances in the science of immunology may make them commonplace in years to come. Artificial valves and mechanical pacemakers may be succeeded some day by completely artificial replacement hearts. The war against heart disease is proceeding on hundreds of fronts.

“There is a bright future for cardiology,” Dr. Wolff predicts, “because we are dealing mainly with things we can see. Cardiology is an area where engineering, computer science, and technology can be of enormous help. Thousands of lives have already been saved because of new approaches to coronary care. Some day we will knock cardiovascular disease from its No. 1 spot on the list of killers. That day may not be too far distant.”
The author in the jungles of Kedah, Malaya, in 1954, when he served as an observer with loyal British troops pursuing Malayan communist terrorists.

ASIA AND THE UNIVERSITIES

By STANLEY SPECTOR
Professor of Chinese Studies and Director of the East Asian Language and Area Studies

The communications revolution has brought Asia within hailing and fighting distance of America, but except for the small minority of Americans who are called there for business, service, or military reasons, or who have accumulated enough money for a study or holiday tour, most residents of the American continent have little opportunity to see their neighboring continent at first hand. For them Asia and the peoples of Asia must remain a synthetic image compounded of traditional lore and stereotypes, Hollywood ballyhoo, TV probes, political prose, and the fact and fiction which emerge from the swelling literature on the area.

But in the twentieth century, Asia has also come to be an area which raises fundamental problems, provides new opportunities, elevates and dashes hopes, and holds before us a mirror of ourselves. Asia has been a principal field of armed struggle since 1941 and the only area where American troops have engaged in full-scale battle since the end of World War II. Today Asia figures fully as largely as Europe in all American defense planning; indeed our policy orientation seems at times predicated upon the assumption that the major future threats to our security come not from Russia and the West, but from China and the East. If Asia is as yet not on our itineraries, it is certainly already on our minds.

How does our society cope with great distances? Traditionally we have relegated this task to our universities. The university, more than any other institution, has taken on the role of coping with the distant past, studying the evolution of earth and man, pausing over the grandeur and follies of antiquity, reconstructing the society and languages of our ancestors. Few other institutions have had the leisure and resources for such travels into time-gone-by. The university also plunges into time-to-
come, projecting the now into the future, whether on earth or in most distant space. It is therefore appropriate that concern for and over Asia, so distant apparently to most, should be centered largely in the university.

The departments of Oriental studies which existed before World War II owed their genesis largely to church interest and missionary needs, and even major secular institutions found their faculty and clientele largely in the missionary ranks. Asian studies thus were essentially technical and vocational studies, but because they dealt largely with a rich humanistic tradition, they soon invited comparison with our own humanistic tradition, enjoying the prestige and suffering the immobility of museum objects. Even Dewey's victory at Manila Bay, which ushered in the era of America's conscious imperialism in Asia (the roots of this imperialism were laid at least fifty years earlier through American participation in the "unequal treaty system" against China) did little to enliven Asian studies in America or to bring them in line with America's true economic and strategic interest in Asia.

The Japanese attack upon Pearl Harbor, the prospect of the deployment of hundreds of thousands of Americans to Asia in alliance with the Chinese Nationalist-Communist resistance movement, the loss of all the Asian colonies (with the exception of Indo-China) by our European allies, finally made Asian Studies relevant to large American interests. Accordingly the universities opened their museum cases, blew off the dust, and began to assign to Asian Studies importance other than as appendages to classical studies or theology.

World War II resulted in the training of a new generation of Asian scholars. Not only was there a sudden demand for interpreters, intelligence officers, and military analysts, but new dimensions of warfare (psychological, economic, social) meant that Asian scholarship had to be related to the entire spectrum of social studies and the humanities. Finally, planning for victory meant that additional thousands of Americans would have to be trained for the long-range occupation of Asian territories. Asia had become relevant.

But a problem immediately arose. Whereas the study of Latin and Greek and their accompanying cultures had long been recognized as a discipline, usually termed Classics; and the study of French, Spanish, and Italian had been recognized as the authentic discipline of Romance Language and Literature, the situation was different for Asian Studies. War and post-war requirements for Asian expertise meant that students would have to study not only such languages as Chinese and Japanese, but also the history, geography, and cultures of these areas. Unfortunately very few traditional departments of history, geography, or art taught anything more than a smidgen, if that, of Asia in their normal Euro-America-centered courses.

New demands produced new solutions and area studies programs were created. These programs generally involved the establishment of a Department of Asian or Oriental Languages and Literatures, and the additional offering of "area" (non-language literature) courses either through existing departments or through special institutes or multi-department programs.

Whatever the form, the result was the training of a new breed of scholars with double allegiance, to a discipline and to a geographic or cultural area. Because the scholars and students involved in these programs focussed on common areas, they brought to bear on their research the viewpoints and skills of many disciplines.

The possibilities of multi-disciplinary approaches suggested by Asian area studies soon attracted the attention of foundations, and in the years immediately following World War II, several institutes and projects with area and problem orientation were funded. By then the Cold War had commenced. With China in the throes of civil war and likely to enter the communist camp, with anti-colonial nationalist revolutions (usually supported or dominated by communist or apparently communist elements) stubbornly persisting and growing against our NATO allies, with Japan labor increasingly restive under the MacArthur occupation, with India apparently unwilling to discriminate in her friendships among communist, non-communist, and anti-communist, it became obvious to university and foundation administrators alike that the market futures for Asian Studies were quite bright.

The situation continued to improve at the end of the forties and into the fifties as the communists wrested control of China from Chiang K'i-shek with the apparent support of a majority of the Chinese population. Asian Studies stock went even higher when, under the banner of the United Nations, American forces confronted Chinese across the firing lines of Korea. In Bandung, Indonesia, an Afro-Asian Conference was convened in 1954, at which communists and neutralists smiled blandly at each other and threatened to solve their differences peacefully in order to stand up against the Western (and white) imperialists.

But Asian Studies really took off with the Russian Sputnik. Under President Eisenhower the National Defense Education Act was passed, and it has been reenacted ever since, providing federal support for a broad range of educational activities within universities and colleges, not the least of which is Title VI, which provides for the establishment and funding of National Defense Language and Area Centers.

National Defense Education Act! National Defense
Language and Area Centers! At first sight and sound are these terms not reassuring? At second sight and sound are they not threatening? Reassuring, because they inform us that our government in its wisdom has seen fit to devote some (infinitesimal) part of the national budget to insure that we shall have adequate education to defend ourselves in an age of rampant technology and total hot-and-cold war. Threatening, because they inform us that education is being turned purposively to ulterior ends and for political (not partisan) objectives. In the face of this, who can gainsay the student and faculty radicals when they argue that they are not politicizing the universities, but that the universities have been politicized by government, foundations, industry (in short, by the Establishment).

National Defense Language and Area Centers in this country by and large are committed to goals that vary as their faculty and students vary, and have nothing whatsoever to do with national defense as such. It is true that most of their research findings are in the public domain, and can be used by military agencies and other government agencies. It is also true that our military and other government agencies are eager to gain as much information as possible about foreign areas, and particularly in such developing and unstable areas as Asia, the Middle East, Africa, and Latin America.

There can be no doubt that the C.I.A. will succeed in recruiting some graduates from the Area Centers, that some will take military commissions, and that a majority will attempt to go into government service or into other Centers. The situation is not unlike that in the fields of science and technology, but it would profit us little to protest against the war in Vietnam and to call upon Congress to force the immediate withdrawal of American troops from Southeast Asia.

I confess that as a scholar whose efforts are devoted to the study of Asia, I do feel a special responsibility and do my best to persuade my graduate students to involve themselves in a sympathetic study of contemporary Asia. I strongly argue my points of view with them, hoping to convert them to my views through evidence and reason. I am aware that my authority and prestige as a Center director carry a certain independent weight when I go before my students or the public, but so do those of a successful businessman or clergyman or vice president of a republic. I welcome this weight because it is based at least partially upon a full-time study of Asian problems, wars, cultures, histories, and aspirations. It is based upon years of living in Asia and with Asians, and it is based upon all the resources our National Defense Language and Area Centers make available.

The East Asian Center at Washington University reflects the imagination and conviction of a group of scholars and administrators, especially Professor Stuart Queen and Professor (now Chancellor) Thomas H. Eliot, who dreamt of and saw realized within a midwestern university, a program which would bring to students and the public an awareness of Asia, a knowledge of its rich and varied cultures, an empathy for its peoples, a library which makes available the Asian literary and historical heritage, opportunities for study in Asia, and a chance for careers relating to half the earth's people.

Perhaps half of the faculty and one fourth of the graduate students at the Center are themselves Asians, whose very presence helps close the distance between Asians and Americans. Their viewpoints vary with their national backgrounds and national and individual political orientations. They offer insights denied to most Americans and therefore are perhaps our richest single resource. From them and from other Asian faculty members and students we learn daily of the impact of events and policies upon real people in East Asia, that is, upon their friends, colleagues, and families.

Courses in the Center range from conversational Japanese to Chinese poetry of the Sung Period, from Japanese Buddhism to revolutionary movements in Eastern and Southeast Asia, from American policy in Asia to the history of the Japanese language, from elementary Indonesian to readings in Chinese Communist documents. Materials used extend from maps supplied by the Central Intelligence Agency to the Peoples Daily supplied by Mao Tse-tung's press agency, from reprints of documents written almost three thousand years ago to pamphlets published in Hanoi three months ago, from color slides of the Palace Museum art collection in Taiwan to recordings of "the East is Red" sung by school children in Peking. Our faculty-produced research is as varied as studies of particles in the Japanese language, the development of the Chinese military-industrial "complex" in the nineteenth century, Japanese short stories, Korean music, the rise of the Chinese Communist Party, and even of how American school children learn Japanese.

What effect does all this have on our students? Whatever their academic orientations, a significant number of them come to share a special responsibility as Americans,
as students, and as young scholars of Asia, to act upon their learning, insights, and growing convictions. Washington University students of the Center played a leading role in organizing the Committee of Concerned Asian Scholars more than two years ago at the Philadelphia meeting of the Association for Asian Studies. The Committee constitutes a "rump" group which has prodded the Association to concern itself with contemporary issues, especially Vietnam, to take stands on political questions, to reassess past scholarship, and to re-evaluate the role of scholars of Asia in today's changing society.

I would judge that a majority of both the faculty and students of our East Asian Center are firmly ranged against most aspects of U.S. policy and involvement in Asia. The Harvard editor of the Journal of Concerned Asian Scholars, the most radical publication in the field, did his early graduate work at our Center, as did the only graduate student invited to speak at the national convention of Asian Scholars to End the War. Several of the leading campus militants are our students. On the other hand, the Center has also trained U.S. Marine officers, one former C.I.A. intern (possibly others, but they are not easy to identify), a local commandant of police, and a commanding officer of the R.O.T.C.

Emphasis upon the special competence of universities to lead public opinion on Asia does not mean that Asian scholars and students have either a monopoly of knowledge or wisdom. Their audience is extremely limited and they compete at a disadvantage with politicians, generally well informed foreign correspondents and news analysts, and even with the less conscientious lobby groups and press. Only in the wake of the massive student protest movement is anything said within the university really being heard. American society has trained specialists, called for their existence and services, and then, by and large, through its political leadership, ignored them.

Small wonder, then, that it is only rare bodies like the Senate Committee on Foreign Relations, and young bodies, like students, who get the message. When it comes to Asia, the students, in comparison with the general public, are far better informed, for in addition to sharing the public media, they are constantly exposed to the deepest and best scholarship on Asia available in this country. When it comes to Asia, the students are not far out—they are merely far ahead.

Contrary to what critics of modern students assert, my experience informs me that they are extremely willing to go beyond the contemporary scene and to reach far back into history for insights. They thirst to venture out to Asia, to study and observe at close quarter the peoples and societies met for the first time in their college classrooms. But the impatience of youth with the discipline required for language study and the rigidity and formality of the university structure combine to make Asian Studies a frustrating, costly, and difficult undertaking. The miracle is, however, that despite all these disadvantages, we are producing more graduates and post-graduates with Asian language skills than any other non-Asian country in the world.

In the classroom we put more than tools at our students' disposal. We try to involve them in our own Asian experiences. Area studies must by their nature have a heavy descriptive component since we are dealing with distinct and largely unknown (to Americans) parts of the world. Within the field there is room for many approaches, but for beginning students few approaches can be more engrossing than to share true experiences. Such experience sharing, however, can become mere storytelling or travelogues in the exotic, therefore the experiences must themselves be illustrative of concepts, informative in terms of later generalizations, and have a moral message which will awaken the mind and conscience of youth. It is the task of the teacher to meet such criteria through purposeful accumulation of experience gained from library and field research and through reflection upon his own observations.

My own background serves as an example and perhaps also an explanation. When I first came to Washington University some fourteen years ago, I was assigned to teach the History of Asia (China, Japan, Korea, India), Peoples and Institutions of Southeast Asia (Indonesia, Singapore, Malaya, Burma, Indo-China), Peoples and Institutions of Japan and Korea, Peoples and Institutions of China, as well as some courses on Chinese and Japanese Literature in Translation. I had come to St. Louis fresh from two years in Singapore and Malaya, armed with a degree in Chinese history which qualified me to do research on the development of the military-industrial complex of nineteenth-century China, to teach modern European and American history, and to offer seminars on some medieval Chinese dynasties. Within a year I discovered that students were as reluctant to sit through as I was reluctant to offer lectures on India, Japan, and Korea.

My classes on China went pleasantly enough, but it was in my course on Southeast Asia (a field in which I had no formal training whatsoever) that excitement developed on both sides of the lectern. The reason was not hard to discover. I had spent weeks in the jungles of Kedah, as an observer, in pursuit of the C.T.'s (Malayan "Communist Terrorists"), had spent hours with (later) Prime Minister Abdul Rahmann, I had watched the British suppress a Communist-nationalistic uprising through a masterful combination of brutal military and subtle political tactics. I bore witness to the profound racial antagonisms existing between Chinese and Ma-
lays and could bring to my students what I had learned living in Malay attap huts and frequenting the "Millionaires" Tanjong Rhu Club of the Chinese tycoons in Singapore. Student eyes widened when I compared the panty-raids at McMillan Hall with the Chinese student strikes in Singapore in 1954. To my class on Chinese history I brought documents of the "100 Flowers" Movement then shaking Communist China.

Small wonder that within six months students approached me asking me to teach them Chinese. It was a handful of such students who inaugurated, without credit or formality, a Chinese course in 1956. Those students were the true founders of our East Asian Center.

Each instructional and research activity in America has provided me with new insights to bring out to Asia, and each period in Asia has opened my eyes a little wider to America. Part of this growing receptiveness can be attributed to the fact that in Asia, no matter what one's principal activity may be, there is no choice but to answer questions about America.

Over the past three years our Center has conducted summer seminars for high school and college teachers in Singapore, Malaysia, and Indonesia. We may go to study tensions between Chinese and Malays, but we end up having to explain tensions between white and black Americans. We may go to investigate the problems of development in Indonesia but eventually we must try to tell the Indonesians why our rivers are polluted and our air is foul. We may go to study the persistence of traditional religions and values in Singapore, but suddenly we find we must be equipped to explain a headline in the Singapore Straits Times, "Detroit Like Berlin Following Racial Riots."

All of this enters into the experience which must be organized and presented to students at home. But there are other experiences. May, 1954: I see haggard troops of the French Foreign Legion from Indo-China, the defeated remnants of a disillusioned colonial army, wandering listlessly along the quayside in Singapore; I hear a right-wing Chinese businessman go to defeat of the foreigners. May, 1955: I attend the funeral of Gene Symonds, AP representative in Singapore, poet, dreamer, friend of youth and labor, beaten to death by youth and labor who saw only his skin and not his heart; I hear American foreign service officers complain about remaining French influences in Saigon and confide how "effete," our collective courage returns.

In Songkla, Thailand, in 1959, I meet American military advisers. One is happy, for he is black and to the local Thai girls "black is beautiful," years before the phrase was invented. I hear the voice of Richard Nixon, Vice President, telling us to arm the Asians and let them fight each other. I puzzle over the SEATO Treaty, which we protest from Southeast Asia as an ineffective fraud which most Southeast Asian nations boycott.

In June, 1968, I am at the Tokyo airport and I watch planeloads of American boys in soldier suits enter a blocked-off lounge. They sit at tables and drink milk. Some do not yet shave. Most look bewildered...they are Vietnam-bound. My hatred for soldier boys departs and I feel tears rushing to my eyes. The next day my plane crashed in Hong Kong Bay, and some miracle saved my wife and myself. But that night I still saw those soldier-boys and the French troops from Indo-China.

When you consider how many American scholars have such experiences in Asia, you can see that the new attitudes of our students are in part a response to receiving broader and more shocking experience than many generations have encountered, even though it may have been transmitted second-hand. I am the first to admit that television's influence is far greater in shaping images than professional utterances, but systematic research and analysis, sustained over many years, and fired by personal experience and involvement make the deepest and most valid impression.

Recent cutbacks in funding programs have had the beneficial effect of shaking the security of academicians. Like our nonacademic counterparts, and like our students, we have perhaps been unconsciously selling a little of our conscience at the altar of prosperity. In the bitter contest for fiscal survival, in an era of super-grantsmanship, we have been trying to tread the narrow path between integrity and practicality. Now that the path leads only to divisiveness and uncertainty, our options take on new clarity. Now that Vice President Agnew has smeared us all with a thick red brush, and branded us as "effete," our collective courage returns.

The terror unleashed against Asian specialists in the late forties and early fifties, which depleted our State Department of competence for over a decade, sent distinguished scholars into exile, and stifled those who remained at home, succeeded because then students were indifferent, and because then university administrations were reluctant to subject themselves to criticism.

Having learned from experience the price of submission and compromise and having learned even from occasionally misguided students the meaning of moral duty and courage, Asian scholars throughout the nation have joined the protest movement in massive numbers. They offer their witness and their knowledge to the public, directly, through political channels, and through their students. Asian Studies at the university are the means through which generations of Americans can be trained to share the arts of peace and promise of life with the peoples of Asia.
Lab Theatre . . . Off-Off Broadway—almost a thousand miles off—in the unpretentious Academy Building directly across from the main campus—is a theatre whose founder, Dr. Sidney Friedman, calls "the best-kept secret in St. Louis."

Even in a town which mounts melodrama on a showboat and occasional serious drama in a second story walkup, this ugly duckling of a theatre has to be the most unlikely place for thespians in the city. Listed officially in the Washington University catalogue as "The Laboratory Theatre," this "Lab Theatre," as it is always called, is housed in a starkly barren room about eighteen feet across and sixty feet long bereft of dressing rooms, a telephone or even a "john."

This storefront theatre has no ventilation and not always adequate heating. Fuses blow frequently. The audience, ranging from about thirty to sixty, depending on whether productions are presented with a makeshift proscenium or in an arena set-up, sits on stacked, utilitarian platforms which can also double as a stage.

"It would be a rationalization to pretend that it is an advantage to do without so much," Dr. Friedman, assistant professor in the Performing Arts Area, says candidly. Yet he admits that the Lab Theatre with all its hang-ups has certain things going for it. "This is a great place to work in terms of its isolation," he said. "When you are working and working productively, there are no interruptions—you can really swing. Audiences agree."

Last semester twelve student directors produced plays there ranging from dramas by Sartre, and such American contemporaries as Leonard Melfi, Jean-Claude van Itallie, and Michael Smith, to original one-acters by University undergraduates.

In hot weather, the Lab Theatre's doorway is draped with a gingham cloth to permit the gentlest breeze to waft indoors and cool the place, which often feels like an inferno.
Student director Jane Johnson (left) coaches Janet Crow at a rehearsal. Plays are done on mini-budgets at the Lab Theatre and students learn to make do with few props.

Last season at the Lab Theatre, plays written by three students, Ted Bank, Frank Ford, and Dan Veaner, were produced. Here, the cast does a scene from "Friends" by Bank.
F. Scott Fitzgerald

(Sketch by Ron Adair, BFA70, from Bettman Archive photo.)
Dr. Goodwin is a psychiatrist whose research has centered on alcoholism and marijuana use. An English major as an undergraduate, he did graduate work in English at Columbia University and wrote syndicated newspaper columns for four years before entering medical school. This perceptive study of Fitzgerald appeared first as the lead article in the annual book number of The Journal of the American Medical Association, and is reprinted here with the kind permission of that publication.

By DONALD W. GOODWIN, M.D.
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THE ALCOHOLISM
OF F. SCOTT FITZGERALD

"Of course, you're a rummy . . . but no more than most good writers."

—Letter from Hemingway to Fitzgerald

Alcoholism is unevenly distributed among groups. More men than women are alcoholics, more Irishmen than Jews, more bartenders than bishops. The group, however, with possibly a higher rate of alcoholism than any other consists of famous American writers.

Whether, as Hemingway said, most good writers are alcoholic is uncertain, but apparently a large number are. Of the seven Americans who were awarded the Nobel Prize for literature, four, according to their biographers, were alcoholics and a fifth drank heavily. If we compile a list of well-known American writers of the past century, quite possibly one-third to one-half could be considered alcoholic.

How to explain the high rate of alcoholism among authors? Is the association purely chance? Do writers drink because of the nature of their work or the life they lead? Do bad or obscure writers become alcoholic as often as famous writers? (Perhaps fame itself leads to alcoholism.) Do writing ability and alcoholism perhaps have common roots? Is there some characteristic of a good writer—something innate—that predisposes a person to alcoholism?

F. Scott Fitzgerald was an author of distinction and an alcoholic par excellence. He was born in 1896 in St. Paul, where he spent most of his boyhood. His father was a business failure, but the family lived comfortably on an inheritance from Scott's maternal grandfather. Scott attended a Catholic boarding school and then went to Princeton, but dropped out of college in his junior year because of illness and poor grades. The following year he re-entered Princeton, but after two months joined the Army as a second lieutenant. During this period he began working on his first novel, This Side of Paradise, finishing a draft at Princeton and a second draft at Fort Leavenworth, where he took officer training. He wanted to go overseas—it was 1918—but instead was stationed near Montgomery, Alabama. There he met his future wife, Zelda Sayre, at a country club dance.

After the war, Fitzgerald worked for a time in New York for an advertising agency, then returned to St. Paul, where he finished his novel. It was published by Charles Scribner's Sons and became a best seller. A celebrity at twenty-four, Fitzgerald married Zelda and began writing a second novel, The Beautiful and Damned, as well as stories for The Saturday Evening Post.

The Fitzgeralds spent much of the 1920's in Europe, living in Paris and on the French Riviera. His third novel, The Great Gatsby, was published in 1925. It sold rather poorly, but Fitzgerald made a good income from short stories and he and Zelda lived on a lavish scale. Fitzgerald was well-regarded by other writers—especially after The Great Gatsby—and he remained a celebrity during the 1920's.

As the 1920's faded, so did Fitzgerald. During the 1930's he published one more novel, Tender Is the Night, and a number of stories, but his literary production fell off and with it his income and fame. His wife became psychotic—August Forel in Switzerland diagnosed her condition as schizophrenic—and she was hospitalized for much of the rest of her life. She died in 1947.

Fitzgerald lived for a time near Baltimore while Zelda was being treated by Adolph Meyer; then, in 1937, moved to Hollywood to write for the movies. There he met the columnist, Sheilah Graham, who, years later, wrote a book about being his mistress. He disliked writing for the movies and had little success at it (he received only one screen credit). He was working on a
When did Fitzgerald become alcoholic? There are suggestions that drunkenness had a special attraction for him long before he took his first drink. As a boy, he enjoyed pretending to be drunk. According to one biographer, he made such a plausible drunk that girls told their mothers he had been drinking and he "revealed in his reputation as routée." Fitzgerald had his first drink at sixteen. He shocked a friend by tossing down several Bronx cocktails and then, to amuse passersby, pretended he was the friend's father. From the beginning, exhibitionism and drinking were inseparable for Fitzgerald.

At Princeton he acquired a reputation for being unable to hold his liquor, even though he generally drank in moderation. He may have had little choice. "It was still an era when parents promised their sons gold watches if they abstained till they were twenty-one," wrote Andrew Turnbull. "Alcohol in any form was forbidden on campus, and conspicuous drunks were frowned upon, so Fitzgerald, like most of his contemporaries, confined himself to beer in the saloons along Nassau Street."

How much Fitzgerald really drank at Princeton is uncertain, because he bragged so much about whatever drinking he did do. "Pardon me if my hand is shaky," he wrote his girl friend, "but I just had a quart of sauterne and 3 Bronxes." Roasting about drinking became habitual, so that years later he would introduce himself as "F. Scott Fitzgerald, the well-known alcoholic." In college he liked to appear more drunk than he was—after one beer his knees sagged and he went into his drunk act—and this, too, persisted into later life. In Paris, Hemingway used to be greatly irritated when Fitzgerald pretended to pass out after a few drinks.

Allowing, however, for his histrionics, there seems no question that by the time Fitzgerald was discharged from the Army at the age of twenty-three and went to work in New York, he was getting drunk regularly and in earnest. He disliked writing slogans for the advertising agency, Zelda refused to marry him because he had too little money, and so he drank. "As I hovered ghost-like in the Plaza Red Room of a Saturday afternoon," he later recalled, "or went to lush and liquid parties in the East Sixties or tippled with Princetonians in the Biltmore Bar, I was haunted always by my other life—my drab room in the Bronx, my square foot on the subway..."
Quitting his job, he went on a three-week bender—his first. Its description in This Side of Paradise is one of literature's most vivid descriptions of a binge. It ended on July 1, 1919, the day Prohibition began. Fitzgerald sobered up to finish his first novel, but now success, rather than disappointment and poverty, was the occasion for drinking. He became an extravagant, as well as histrionic drunk, leaving lavish tips and stuffing fifty-dollar bills in his coat and vest pockets for all to see. He and Zelda made frequent spectacles of themselves—clowning at parties, leaping fully clothed into the Plaza fountain, rolling champagne bottles down Fifth Avenue at dawn. All of this received a great deal of publicity and the Fitzgerald legend had begun.

And so had the problems—the social, domestic, professional, and finally medical problems that, coming singly or in flurries, characterize the natural history of alcoholism. Fitzgerald began losing friends ("Here come the Fitzgeralids," people would groan.). He was suspended from his college club for misbehavior at house parties. He got in brawls and was jailed. And as he and Zelda drank more, they fought more. Friends warned they were headed for catastrophe. One acquaintance recorded in his diary:

In the evening Zelda—drunk—decided to leave Fitz and having nearly been killed walking down RR tracks, blew in. Fitz came shortly after. He had caught the same train with no money or ticket. They threatened to put him off but finally let him stay on—Zelda refusing to give him any money. They continued their fight...

Zelda complained about Fitzgerald's drinking, once telling a friend, "Don't let drinking get you in the position it's gotten Scott if you want your marriage to be any good," but Hemingway and others believed she encouraged him to drink because it kept him from his work, of which she, having literary aspirations herself, was said to be jealous. Sometimes, though, she defended her husband, such as the time she told her father that Fitzgerald was the sweetest person in the world when sober, to which her father replied, "He's never sober."

By his mid-twenties, there was no question about Fitzgerald's alcoholism—he recognized it and so did his friends. "I couldn't get sober enough to be able to tolerate being sober," he wrote after one interminable party, and his benders became more frequent. "The year after their marriage," Turnbull writes, "their drinking around New York had been a gay, irresponsible, left-over-from-college affair, but now their fun was turning destructive. Fitzgerald vanished into the city on two- and three-day benders, after which neighbors would find him asleep on his front lawn. At dinner parties he crawled around under the table, or hacked off his tie with a kitchen knife, or tried to eat soup with a fork." Once he drove his car into a pond because it seemed fun.

By his late twenties, the fun was gone. "His drinking," Turnbull said, "was something he went off and did by himself, like taking a pill. It had no connection with anyone else." His work suffered and he felt guilty. When twenty-eight years old he wrote his editor about how he had "deteriorated" over the previous three years.

I produced exactly one play, half a dozen short stories and three or four articles—an average of about one hundred words a day. If I'd spent the time... staying healthy it'd be different, but I spent it uselessly... drinking and raising hell.

At this time he still wrote only when sober, but in his early thirties Fitzgerald began deliberately mixing liquor with his work. He was usually sorry afterwards. Once he apologized to his editor for drinking so much when writing Tender Is the Night. "A short story," he explained, "can be written on a bottle, but for a novel you need the mental speed that enables you to keep the whole pattern in your head."

Fitzgerald's attempts to control his drinking were reminiscent of other alcoholics. He often went on the wagon—toward the end of his life, with Sheila Graham's help, he stayed dry for six months—but inevitably fell off. He tried eating candy. He kept a schedule of his drinks and tried rationing himself. For a time he limited himself to beer. Nothing worked, so in the end, as alcoholics will, he rationalized. Alcohol was the "writer's vice." It heightened feeling. Once, surveying the debris from a party, he commented, "Just think—it's like this now all over the country."

Then his health gave way. He first became hypochondriacal and developed insomnia. The doctors told him he should take more exercise and not drink. He took barbiturates and chloral hydrate to help him sleep, increasing the dosage through the years but never apparently to the point of addiction. In his mid-thirties Fitzgerald had episodes of spitting blood and twitching legs and was hospitalized. As a college student he had had a mild case of tuberculosis—so mild it may have been subclinical—and it is unclear whether the blood was gastric or pulmonary in origin. Fitzgerald worried about his health and had a collection of photographs, obtained from a temperament worker, showing the ill effects of alcohol on the kidneys and other organs. These pictures he mulled over and made jokes about. He hired nurses to help him stop drinking, but sneaked drinks when they were not looking.

Fitzgerald's benders in his last years are vividly described by Sheila Graham, and by Budd Schulberg in his novel, The Disenchanted. His personality had always undergone marked change when he drank, but now the change was spectacular. Fitzgerald, sober, was gentle, considerate, charming. On alcohol he became belligerent and maudlin. What passed for drunken clowning in his younger days was now pathetic and grotesque. Fitzgerald knew this, but felt powerless to change.

Zelda's psychiatrists, Adolph Meyer and Thomas Rennie, urged him to obtain psychiatric treatment, but he refused on the grounds that it might destroy his effectiveness as a writer and he cited several writers who he felt had suffered this fate. Fitzgerald was fatalistic about the outcome of his drinking. "All drunks," he said, "die between thirty-eight and forty-eight." At forty-four he had two heart attacks and died of the second.

Here end the facts, to the extent they are determinable, and the speculation begins. What kind of person
THE ALCOHOLISM OF F. SCOTT FITZGERALD

was Fitzgerald? How did he become that person? What made him a good writer? What made him an alcoholic? In what way, if any, were his writing ability and alcoholism related?

Fitzgerald, everyone agrees, was complicated. J. B. Priestley detected in his "richly confused character" two opposing strains. There was the starry-eyed, romantic Fitzgerald, the perennial adolescent, spellbound by glamour and the glitter of life. Contrasting with this "hot, messy" Fitzgerald was the tough-minded Fitzgerald: cool, detached, ruthlessly honest about himself and the world he recorded. Malcolm Cowley noted the same "double vision"—the way Fitzgerald took part in the "ritual orgies" of his time but remained detached, standing "outside the ballroom, a little Midwestern boy with his nose to the glass, wondering how much the tickets cost and who paid for the music."

Fitzgerald viewed himself as not one man, or two, but many. "There never was a good biography of a good novelist," he wrote. "There couldn't be. He's too many people if he's any good." Being many people could be unpleasant. "Life is much more successfully looked at from a single window," concludes a Fitzgerald character. Sometimes, Fitzgerald admitted, he had trouble deciding whether he was real or a character from one of his novels. Nevertheless he was proud of his complexity. "The test of a first-rate intelligence," he wrote, "is the ability to hold two opposed ideas in the mind at one time and still retain the ability to function."

Fitzgerald's personality consisted not of one set of contradictions but many. He had a very high opinion of himself—and a very low one. He was dreamy and gregarious. He adored the rich and despised them. He was a sensualist and a puritan. He loved fame but never the working classes' " was a chore he rarely did well. Part of his attraction to the rich, apparently, was his conviction that the rich never sweat. Despite his reputation for hedonism, his attitudes toward sex were chaste and Victorian. His novels were romantic but ostentatiously unsexy—the opposite of today's fiction.

With this squeamishness was a feminine strain which Fitzgerald himself remarked on. "I'm half feminine—at least my mind is." Women told him that he understood women and he conceded that this was true. Most of his truly memorable characters were women, as was the narrator of his last novel. Fitzgerald was not effeminate, however, and, so far as the record shows, was normally sexed.

What was the origin of these traits? To some extent his mother may have been responsible for his vanity and high expectations of himself. Her other two children died shortly before Scott was born, and she spoiled him inordinately. She dressed him in Eton caps and collars and urged him to excel in whatever he did. He was ashamed of her—she was homely and eccentric—and resented the way she coddled him. If his feeling of self-importance came from his mother, so, to a degree, did his sense of inferiority.

The latter also was a product of the family's financial circumstances. There was money, but not a lot; enough for dancing classes and prep school and Princeton, where Scott could meet the really wealthy and learn the social graces; but not enough to compete with the wealthy or banish the fear of poverty. When Fitzgerald was a boy and his father lost his job, Fitzgerald prayed, "Dear God, please don't let us go to the poorhouse," and never, even during the 1920's when he was prosperous, was the poorhouse far from his mind. Fitzgerald more than anything wanted to be rich, for to be rich was to be loved and se-
illness also runs in families. Fitzgerald's enthusiasms at heavy drinking both obliterates and mimics other syn-

"drank." How much they drank or whether they had frankly manic. He was often momentarily depressed, and in meeting point in another disorder which appears to have a genetic aspect: manic depressive disease. This somehow related, they may possibly have a common problem from drinking is not stated.

Alcoholism also may involve heredity in that it seems to run in families, and it cannot be attributed to purely environmental factors in every instance. Fitzgerald's biographers report that his father and two maternal uncles "drank." How much they drank or whether they had problems from drinking is not stated.

If writing talent and alcoholism are partly innate and somehow related, they may possibly have a common meeting point in another disorder which appears to have a genetic aspect: manic depressive disease. This illness also runs in families. Fitzgerald's enthusiasm at times bordered on hypomania but were never, it appears, frankly manic. He was often momentarily depressed, and in The Crack-Up, a series of articles written for Esquire in 1936, he describes three episodes of depression (one at Princeton, the other after the War, and the third current) that were prolonged and qualitatively different from anything he had known. The symptoms were classical, their description incomparable. "In the real dark night of the soul it is always three o'clock in the morning." Even their termination was typical of manic-depressive depression: "unless madness or drugs or drink come into it," he wrote, "the depression eventually comes to a 'deadlend' and is succeeded by a 'vacu­ons quiet.'"

However, drink almost always came into it. In alcoholics it is often difficult to diagnose other disorders; heavy drinking both obliterates and mimics other syndromes. Fitzgerald was no exception.

To understand the association of alcoholism and writ-
ing talent, it might be helpful to examine the pharmaco-
logical effect of alcohol on people and specifically on writers. This requires making assumptions about writing and alcohol that are speculative and may miss the mark in individual cases. Here, nevertheless, are some points where writing and alcohol may interact or serve common ends.

Writing is a form of exhibitionism; alcohol lowers inhibitions and brings out exhibitionism in many people. Writing requires an interest in people; alcohol increases sociability and makes people more interesting. Writing involves fantasy; alcohol promotes fantasy. Writing requires self-confidence; alcohol bolsters confidence. Writing is lonely work; alcohol assuages loneliness. Writing requires intense concentration; alcohol relaxes.

This, of course, may explain why writers (and many other people) drink, but does not explain alcoholism. Fitzgerald knew why he drank; it brought him closer to people and relieved his tortured sensitivity. People meant more to Fitzgerald than anything. He yearned to be close to them, intimate, involved. His shyness prevented it and so did his fear of rejection, of having his inadequacy exposed and his sense of importance shattered. Alcohol was a bridge. "I found," says an alcoholic in one of his stories, "that with a few drinks I got expansive and somehow had the ability to please people. . . . Then I began to take a whole lot of drinks to keep going and have everybody think I was wonderful."

A LCOHOL ALSO REDUCES the "sensory overload" that writers are prone to. As a writer, Fitzgerald felt he had to register everything—all the emanations and nuances of the world around him, the "inexhaustible variety of life." Like many writers, he had difficulty turning off alcoholism is as inscrutable as the mystery of his writing talent.
PROJECT SURVIVAL

PROJECT SURVIVAL," Washington University's response to the nationwide explosion of interest in the ecological crisis, survived a five-day teach-in centered around national Earth Day and is alive and kicking.

When plans for a national teach-in on the environment were announced last fall, educational communities across the country responded to the idea with enthusiasm. At Washington University, a small group of students, long concerned about ecological destruction, began planning a program. The result was Project Survival, a title which served both the whole ecological movement on campus and the teach-in staged in late April.

A nucleus of some fifteen highly active student volunteers staffed the various committees. Mrs. Susan Allen, whose husband is Garland Allen, assistant professor of biology and a man long and deeply concerned about the environment, took on what amounted to the full-time job of coordinating all of the teach-in activities. With the aid of other volunteers, Mrs. Allen and the student leaders spent many frequently harried hours setting up an impressive list of speakers, discussion panels, displays, and workshops. When asked how much time had been spent on the teach-in, one student replied, "Take the number of hours in the week and subtract eating and sleeping."

Acting on the belief that the ecological movement can unite persons of all ages and political opinions, the organizers decided to avoid a politically radical contest for the teach-in and instead to concentrate on a program which would educate the University community and the community-at-large.

After several months of planning and hard work, the first day of the teach-in might have seemed antclimactic if the keynote speaker's plane hadn't been delayed in New York, touching down at the St. Louis airport just about the time he was due to speak at Graham Chapel. Fortunately, one hectic car ride and dash across campus later, Dr. Lawrence Slobodkin, professor of biology at the State University of New York at Stony Brook, arrived to a full house that had waited patiently to hear him speak on social justice and environmental crisis.

"There are social issues which could alleviate the environmental crisis if they were activated," he said, "but they are being shunted aside."

Expanding on this theme, Dr. Slobodkin cited population increase both as a real and as a potential source of immediate ecological disaster, whose solution involves social justice as well as the more obvious answer of birth control. He then listed three examples of the kind of social reform he believes necessary for halting population increase and destruction of the environment.

These reforms are a strong social security system, so that people do not feel the need for several children as a form of security; equality of education and professional opportunity, combined with legal assurance of equal pay for equal work for women; and public-supported day care centers with competent personnel. The latter two reforms, he believes, would help give women more alternatives to baby-raising as a career.

"If the environmental teach-in is more than a flash in the pan," he concluded, "keep in mind that social reform of a very tangible kind is part and parcel of the fight for the environment and for population control."

Also on April 22, or Earth Day, as it had been dubbed by national teach-in leaders, was a litter walk from Brookings to an entrance on the east side of Forest Park. About twenty students participated in the walk, which had been organized by William Harris, an Arts and Sciences sophomore. The students collected more than thirty bags of trash, which were subsequently picked up by the city.

THE DAY'S ACTIVITIES ended with a panel discussion on the environment by Sen. Thomas Eagleton, St. Louis County Supervisor Lawrence K. Roos, and St. Louis Board of Aldermen President Joseph Badaracco. Planned at Washington University, the event was co-sponsored and held at St. Louis University.

Sen. Eagleton stressed that the environmental problem cannot be dealt with in isolation and that its solution must involve a re-ordering of national priorities. Acknowledging that Earth Day activities were important in dramatizing environmental problems, Supervisor Roos noted that each stratum of society—federal, state, and county governments as well as individual citizens—must be involved in any workable solution. Aldermen President Badaracco added that it is "impossible to deal with the environmental problem exclusively." Moderated by Sheldon Novick, editor of Environment magazine, the panelists then responded to audience questions.

The scene on the day after Earth Day, shifted to January Hall where an all-day forum on environmental law
It was a happening about a happening created by all of us. In April, a few more than a dozen dedicated students involved thousands of other students and St. Louis residents in a five-day teach-in on the ecological crisis of our society.
had been arranged by a group of law students. Activities began with a talk by San Francisco lawyer David E. Pesonen. He described his work as a young Sierra Club staff member in heading the citizen's organization that prevented construction of a nuclear-powered electric plant at Bodega Bay, California. Pesonen noted that the controversy there illustrates the way political institutions are geared into technological progress.

Later in the day, Walter Nowotny, a special assistant to the Missouri attorney general in the environmental division, described the legal theories of air and water pollution control. He called for a revision of the state law on air contaminants and also a new approach in which all pollution sources could be dealt with on a state-wide basis. He also predicted that next year several bills related to the environment will be introduced in the state legislature—one of the results of teach-in week.

Other features of the law school forum were an address by Missouri Attorney General John C. Danforth on the state's role in pollution control, and two student workshops, one discussing public nuisance actions in environment-related cases and the other on private access and pressure on public administrative bodies.

**PROJECT SURVIVAL** activities moved out of the classroom on Friday of teach-in week and into six shopping centers, where students passed out leaflets containing pollution statistics and a description of simple actions that consumers can take to conserve the environment.

That evening, an Ecology Film Festival was held in Steinberg Hall. It featured a twenty-minute documentary, "Dead Earth," produced by the Urban Research and Design Center of the School of Architecture and by Filmmakers, a student organization on campus.

Aesthetic pollution, biocides, environment and health, and industrial air pollution were a few of the seventeen topics covered in thirty-five workshops held on the University campus on Saturday of teach-in week. Sponsored by Project Survival and the School of Continuing Education, the workshops proved a popular source of environmental information and discussion for the community as well as students. Estimates on the number attending went as high as one thousand. Two of the more popular workshops were those on food additives and the ecological household, with interested listeners overflowing the rooms and even sitting in doorways.

The only teach-in sponsored event that had an admission charge was a Saturday evening rock concert. Profits went to Project Survival to help defray the costs.
East of the workshop and rock scene, other Project Survival-related programs began Saturday on Government Hill in Forest Park. There several University architecture students were inflating a polyethylene structure that was to cover the exhibit booths for the following day’s Eco-Fair, co-sponsored by the Coalition for the Environment and the St. Louis University teach-in committee. A sort of truncated tunnel, the “bubble,” as such structures have come to be called, was about 300 feet long by 30 feet wide. Each end consisted of black sections about 100 feet long so that films and slides could be shown. The exhibition structure’s interior was designed by Lawrence Ponsford, assistant professor of architecture.

Symbolically, perhaps, the environment triumphed over technology. The combination of too much wind and rain-soaked ground overcame the best laid plans of the student architects. The wind simply pulled the stakes out of the soggy earth and the bubble collapsed.

Not to be outdone, even if undone, the students took a black section of the polyethylene, constructed a movie theatre, and showed films the rest of the afternoon. With the remaining material, they made a “play environment” described by one student as “a long tube with a bubble at one end.” Younger fair-goers seemed to enjoy this.

Brooks Bond and Jay Steinhour, two architecture students who worked on the fair’s bubble, also constructed an environmental exhibit for Olin Library. The result was a snarl of tube-shaped polyethylene, from one to two feet in diameter, which twisted along all five levels of the library staircase. At intervals along this plastic tangle were various books, documents, and other library materials on ecological topics, illustrating that the library has pertinent information on environmental pollution problems. At one area along the staircase, for example, was a jar brimming with fruit flies surrounded by material on the population explosion. Stuart Leiderman, a graduate student in biology, selected the display’s books.

“We were trying to present the ecology problem in the exhibit, so we wanted to create a powerful environment, primarily a synthetic environment,” Bond said. The image of the tubes, he explained, was that of a technology machine that got out of hand. “We’re personally fascinated with the duality of technology—it’s beautiful and does great things, but it is threatening.”

Teach-in activities on campus were concluded Sunday evening, April 26, with talks by Eddie Albert, film and television entertainer, and Dr. Barry Commoner, director of the University’s Center for the Biology of Natural Systems, to about 600 persons.

Albert noted that he had been a conservationist all his life. After discussing the ecological problems caused by phosphates in detergents, he added that he had stopped making commercials for one of the laundry day miracle cleaners.

In his speech, Dr. Commoner expanded on the theme that environmental pollution is a sign that something is fundamentally wrong with modern technology. Our technology, he said, is designed to produce salable goods, but fails in that its system of productivity is an assault on the environmental system essential for that productivity.

The description of official teach-in events, however, doesn’t really take in all the activities either initiated or inspired by Project Survival. One of the first projects undertaken was a postcard campaign asking citizens to identify individual sources of pollution in the St. Louis area. More than 150 replies were received. Housewives, homeowners, girl scouts, a priest, and a seventh grade social studies class, among others, wrote to complain about air, water, noise, and rubbish pollution, in or from a variety of sources. Locations were approximated on an area map, which was then displayed in Holmes Lounge. Student volunteers contacted those card senders who signed their names and followed through on cards identifying specific pollution sources by calling the individual company regarding the complaint.

Selected postcards were also printed in Dirt, the Project Survival publication edited by Danny Aiken, a liberal arts sophomore.

In addition to publicizing the teach-in, Dirt represented a real effort at educating its readers on such current ecological topics as mass transit, solid waste disposal, and the oil crisis in Alaska.

Although the teach-in is over, the Project Survival group wants to continue as a viable part of the University scene. Presently under discussion are plans to set up a major in environmental studies and some form of work-study program in which students could get credit for environment-related work in the community, such as student work in a pollution control agency.

“The possibilities are enormous,” an organizer concluded, “for the University to contribute technical skills actually to solve some environmental problems through government and industry.”
"Wear work clothes and gloves," said the notice on campus bulletin boards announcing the neighborhood clean up. It didn't say anything about a rain check, so despite almost steady drizzle students showed up and worked hard to clean every inch of public property in a half-mile square area northeast of the University.

Students and children from neighborhood made short work of much-littered railroad right-of-way, scrambling up and down embankments for blocks. Students workers took rest and refuge from rain in residents' basements for lunch breaks.
Not many people think of Washington University as a neighbor, but Kitty Madeson does. And on April 18, she and some of 125 Washington University students acted neighborly. They pitched in to help residents in west St. Louis near the campus clean up litter and junk.

The weather was awful. The physical work was hard and foreign to most students. But the troops had a camaraderie and spirits were high. They stormed down streets and alleys with the gusto of Mary Poppins chimney sweeps. The neighbors were out helping or directing the cleanup and the youngsters of the neighborhood caught the spirit immediately.

Donated buses driven by drivers who gave their services began shuttling students to the Skinker-DeBaliviere area at 8:45 a.m. As workers collected junk it was piled into University- or city-owned trucks and carted off to the city dump. Students and residents kept the five trucks on constant round-trips during the morning. By the time the afternoon shift of students arrived there wasn't a whole lot left to do, but they joined in and everyone went home early.

The effort, in conjunction with the University ecology program, was organized by Mrs. Madeson, director of off-campus housing; Ray Taylor, president of the Washington Heights Neighborhood Association; and Norbert Budde, president of the Rosedale-Skinker Association.
Trash is shoveled out of alley by a small worker who was one of dozens of children who joined the students.

Destination for truck-loads of litter was city's dump on South St. Louis riverfront. Five trucks made constant round-trips.

Residents of Skinker-DeBaliviere area were alerted to the Saturday campaign by neighborhood associations. Owner of this garage was waiting eagerly to throw open double doors to reveal mountain of debris which had collected there for years. Reaction of Lisa Sturt, a junior in liberal arts, to door opening is obvious.
By the time clean-up drive was over almost everyone was feeling muscles they'd forgotten they had. Rugs, lamps, chairs, sofas, even old stoves were hoisted up and hauled away.

One resident was so impressed by the "kids next door" she rushed to call newspapers and television stations to take pictures, bawling them all out at the same time for always picturing students as demonstrators and giving everybody the wrong impression. The news media did cover the event and captured the hard work as well as the holiday atmosphere.
MAN FOR ALL SEASONS

By Dorothy Brockhoff
Office of Information

ONE DAY this spring, the Washington University Choir and Madrigal Singers rolled into the capital on two buses to keep a singing engagement at the Watergate Terrace. After the concert, most of the students partyed, but one among their number, Joseph Madison, disappeared. Sometime afterward, just about when the sun was beginning to rise along the Potomac, a solitary figure in sweat pants and a jersey was seen running up and down the downtown streets within sight of the White House.

It was Joe Madison, and had President Nixon bumped into him on that early April morning, he could have saved himself that impromptu trip to Lincoln Memorial a month later, for young Mr. Madison could have easily filled him in on a number of subjects, including especially what college students are thinking about these days.

Joe Madison would have done it, too, because he happens to be a twenty-one-year-old Washington University senior with a tremendous amount of self-confidence and the conviction that "you can do anything you set your mind to as long as you make sure that you're well prepared."

He is, as an admirer put it, a "man for all seasons." In the winter Joe is a hard-hitting running back on the Battling Bears football team; in spring he's a bass vocalist with the University Choir; during the summer he works as a public relations man for Frigidaire in Dayton, Ohio, his hometown; and in winter as well as throughout the entire school year, he studies hard, for Joe is what his professors call "a good student—a really motivated one."

Between times, Joe works as a disk jockey at KFRH, the campus radio station; serves as an unofficial advisor for a group of sociology students who tutor children in Kinloch, a black municipality in northern St. Louis County; and holds down a part-time job as a statistician for the football Cardinals.

Inevitably, with such a schedule, conflicts arise—particularly in April, when Joe finds himself trying to sandwich in both spring football and choir, sometimes on the same afternoons. Thanks to the understanding of his coaches and of Dr. Orland Johnson, professor of music and director of the Choir, whom Joe characterizes as "the man he admires most at Washington University," he has been able to juggle both activities.

But it takes determination. That's a quality that two of Joe's special friends on the football Cardinals, Jamie Rivers and Sid Edwards, remind him is absolutely essential if he's ever to graduate from the Bears to a pro team—one of Joe's dreams. "You really have to be dedicated to the sport," Joe remarked. "I think it was this realization which inspired me to get up every morning while the Choir was on tour and run for two miles. Sid Edwards told me that no matter where I was if I really wanted to play football I should keep myself in shape."

ON THE MORNING of the Washington University choir concert at Lincoln Center's Alice Tully Hall, Joe found himself in a dentist's chair in midtown Manhattan having a bothersome tooth pulled. The extraction took place at 9 a.m.; a half hour later Joe reported for rehearsal and that night went on like a veteran trooper to solo in a beautiful spiritual called "My God Is a Rock."

In Washington, a critic singled Joe out for special praise, but in New York, the Times reviewer left after the first half of the program, presumably to make a deadline, and missed the young singer's performance. Joe accepted the disappointment good naturedly, but it was a blow and squelched any thought he might have had about becoming a professional musician. "I figured when that critic walked out," he remarked, "that the breaks weren't going to come easy and if you don't get a break in the music business you just can't make it."

Joe also believes that he lacks the proper background for a musical career because he's had only a limited amount of voice training. Inclined to disparage his ability, Joe says of his music reading skill, "I know when the notes go up and down," and then chuckles. Poking good-natured fun at himself is a Joe Madison trait and a characteristic which helps him keep his balance.

That he will not enter the music field when he graduates is just about the only possibility that Joe has ruled out definitely. In addition to aspiring to a professional football career, Joe is seriously considering going on to
MAN FOR ALL SEASONS

graduate school to get a master’s degree in urban affairs. He thinks this would be good background for public relations work, which interests him greatly. He even speculates that eventually he and his steady girl friend, Donella Crawford, a journalism-advertising major at Northwestern, might form their own firm. It was Donella, he emphasizes, who really inspired him to go to college. “I knew,” he said with a smile, “that if I wanted to be associated with this young lady for a long time I had better get on the ball.”

Two high school coaches, Richard Marquardt and Jim Caldwell, also encouraged Joe to continue his education. “They made me see that I had a future in football and that my ability to play could lead to some really great things like a college education,” Joe declared.

On the strength of his outstanding high school record, Joe won a football scholarship to Wisconsin State University in Whitewater, where he spent about two years. Eventually he decided to transfer, tried Morehouse briefly, and then went back to Dayton, discouraged with his experience there. Once again his football coaches took a hand, and tried to get him a scholarship to Indiana State. This plan didn’t materialize, but the coach at Indiana State recommended Washington University.

At Washington University, Joe has an academic instead of a football scholarship and also a student loan, but still he has to manage his pursestrings carefully. Maybe that’s why Joe doesn’t take anything for granted, including some help from his grandparents who raised him back in Dayton. “When they send me $100 to help out with incidentals, it’s a real sacrifice,” Joe says with pride and affection.

It also would appear to be the best investment they could make, for Joe Madison is ambitious with a driving desire to make good and do something for his race. Joe has a determination to do something for what he calls “my people.” “My biggest hangup,” he says candidly, “is to see the black people get more representation in Dayton city politics. I’d like to see black people have an equal share and responsibility and power in running the city. This is what makes true integration. True equality is the sharing of power and responsibility.”

Such a goal will not be easy to attain. Nobody, however, needs to tell Joe Madison that. “It’s hard for a black person anywhere,” he said. But Joe does not believe that overthrowing the Establishment is the solution. He does believe, however, that there is urgent need for reform of our society, and he’s convinced that through politics he can effect needed change.
Standard Methods for the Mediocre Science Manager

By M. B. ETTINGER, BSChE 33, MSChE 34

Reproduced here are a few choice excerpts from a most unusual handbook published recently by a Washington University Engineering alumnus, M. B. Ettinger. Drawing on his long experience in the government, the military, and in industry, Mr. Ettinger's little book offers a practical guide to the manager seeking happiness through successful mediocrity. Realizing that Mr. Ettinger's "standard methods" have application far beyond the field of science management, the publishers are planning to omit the word "Science" from the title in the next edition. In that way, managers in all fields can profit from Mr. Ettinger's observations on such subjects as "How to Prepare an Extemporaneous Talk," or "The Practical Application of an Unproductive Committee." The book is published by Ann Arbor-Humphrey Science Publishers, Ann Arbor, Michigan.

From "Quirks and Personalities for the Executive"

To be accepted as an executive you need an executive image, particularly if you have marginal amounts of executive ability. Of course, you're not important enough to make Fortune or Forbes, but you have to show the people who work for you enough individuality to convince them you are more than a name in an organizational box.

This means that you have to make gals feel a little bit more feminine and desirable, and with your bevy of lumpy babes this takes a lot of creative talent. A touch of the benign father, a dash of young Lochinvar, a trace of the dependent child, and an occasional remark suitable for quoting will help. And you've got to insert your family enough so that they sense you are a warm man, but you can't emerge as a henpecked thing or the co-creator of a group of tiresome children that you quote incessantly.

Your guys, if well chosen, clearly would be better producers without you to hold them back. However, somebody has to keep them from kicking their energies away bickering among themselves or chasing technical butterflies. So you let them bicker with you individually.

Further, you keep them worried enough so that they do not get too complacent and inert.

There are many stock postures to avoid. For instance, staff meetings with large groups are fine for getting the group acquainted. However, nothing very productive ever transpires at a large staff meeting at which two-thirds of the group drowse and daydream. The group that sleeps together has reduced amounts of time for working together. Of course, if you're a bureaucrat or coporocrat, staff meetings consume slack time and keep your outfit looking busy.

Illustrations by Ronald J. Weber
Cannibalism preceded by a meat kill is a perfectly moral act if you're a member of certain tribes in the protein-short areas of the world.

From "Mortality for the Mediocre Manager"

Every couple of months there is a searching new novel which portrays the soul-scalding trials that some cat went through while winning (stealing, snatching) himself a place in the fiscal sun high on the organizational peck order. As a mediocre manager who made it without any significant amount of talent, you know it's not true. It isn't true that you wouldn't sell your soul if you got a good offer. However, it is almost impossible to locate a soul buyer prepared to make an attractive proposition. So let's start off by assuming that you are planning to be a very moral man unless you develop a good alternative, in which case you might wish to carefully study the alternative.

Before we start to brood about the pragmatism of morality, we might as well agree on a definition of morality. Let's join Mr. Webster's dynasty and accept "conduct conforming to customs or accepted standards of a particular culture or group." When we analyze this bit it is immediately apparent that cannibalism preceded by a meat kill is a perfectly moral act if you are a member of certain tribes in the protein-short areas of the world.

So we had better crimp the scope of "morality" and agree to limit ourselves to morality as practiced by corporate and political bodies in contemporary American society. On this basis, every corporation is a very moral institution since it seeks to abide by its own temporal standards of conduct.

There are four basic codes of conduct you can recognize:
1. Hooray for me and to hell with you.
2. Hooray for me.
3. Hooray for us.
4. Hooray for you.

The first code is impractical—you can't get much done after the word gets around that you stab the other guy just to keep in practice or because you like to watch him bleed.

Your personality and your morality have to be oriented on the basis of some mixture of Hooray for me and Hooray for us. That makes you reliable, predictable, and productive as part of a business cadre.

If you veer too far to the left and become a pernicious do-gooder, you'll wind up harming everyone you seek to help. So you had better concentrate on being a self-serving, egocentric cat. Optionally, you can try to promote the well being of your associates.

Let's summarize morality for managers:
1. Make a contribution so that you can survive along with those who depend on the success of the enterprise.
2. Be legal and ethical when this is a feasible survival technique.
3. Try to be indispensable if you're exceptionally expendable.

To succeed as a manager, you have to be a heroic live coward. You display a convincing veneer of intent to define and face the issue. Your real purpose is to sharply focus the issue so that you can skillfully evade it.

Frequently you pattern your tactics after those of the matador. You march courageously into the ring with appropriate fanfare. When the big bad issue enters, you glare directly at it while radiating confidence and poise. You flutter your red manager's cape until the issue plunges at you. You stand your ground until the last microsecond and then you swish gracefully aside.
You'd be an awful chump to enter yourself in a claiming race.

From "Instant Scholarship for the Technical Manager"

For you leaders in the business of technical management, there are times when it would be handy to convince people you're still a brilliant scholar in your special area. Of course, nothing could be farther from the truth, since you aren't even a has-been. Your mission is to deal with fragile people and elusive money rather than the more orderly stuff which is modern engineering and science. You're a judge, trainer, and manager of horses, not a horse, and you'd be an awful chump to enter yourself in a claiming race. Still, you'll get an awful lot of extra respect from your horses if you convince them that the old man can still outrun them.

You keep your people so busy with planning documents, reports, and justifications that only the most rugged, the most dedicated, and the most egocentric manage to smuggle some constructive effort into their day. These guys are the willful leaders of tomorrow. You know damned well that they're great because they have managed to get something done in spite of your leadership.

So we come to the bit of giving the technical paisanos the impression that you are basically a scholar who has exchanged the rapture of scientific insight for a few lousy bucks to make your wife happy and your children intolerable. The fact is that you were kicked or shoved upstairs by a succession of managers who found your efforts at scientific productivity ludicrous. But you were too nice a guy to send anywhere but up.

The buck stopped before it got here.

From "Artifacts for Decision Fabrication"

There are four systems of evaluation which permit mediocre men to consistently arrive at sound decisions even though they do not understand the rationale of the discussion or the niceties and nuances involved:

1. Be lucky.
2. Parasitize first-rate brains.
3. Collect a bunch of earnest boobs and oppose their collective judgment.
4. Delegate the decisions effectively.

A camel is a cow designed by an eminent committee.

From "The Practical Application of the Unproductive Committee"

An improbable series of unfortunate accidents occasionally allows a committee to get something done. Naturally, no one, including the members of the committee, is pleased with the product of the committee ... it is sound and approved management procedure to assign impossible jobs to a committee, particularly when a visible, sincere, and unsuccessful effort is needed.

The committee with a staff advisory capacity is an elegant instrument for postponing difficult decisions until the right decision is so apparent even you can't miss it.
**From "How to Discuss Sewage With Women"**

Sewage is an example of a difficult and unlikely subject for a man to discuss with women. You may ask, "Why in the hell should anyone want to discuss sewage with women?" However, if you're promoting sewage treatment to improve the health and well-being of the citizen, you require the ardent support of women.

The girls control more than half of the money and they do more than half of the voting. And, once a cause entitled to general female support can be developed into a public issue, the aroused girls analyze the issue and decide it.

The high class dame insists that you consider her a thinking animal rather than a dandy clothes horse with ancillary possibilities. She's willing to think about almost any problem, but thinking about sewage is not something that comes naturally. There are other facets of this fascinating thing, but they are not useful in getting her interested in our campaign to treat sewage.

We must appeal to the mother in her and let her know that it is not neat or nice to foul the waters with sewage. We can appeal to the decency in her and let her know it isn't very neighborly to flush your toilet into somebody else's water supply.

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**From "How to Prepare an Extemporaneous Talk"**

In the technical world, there is an inordinate premium on the ability to present a forceful and plausible talk. The substantial senior citizen is pressed to speak more times than he has anything he wants to say. He is so involved in conferences, staff meetings, and briefing sessions that he cannot find time to prepare talks or even to read.

One thing you must remember in preparing the extemporaneous talk is to avoid overloading it with facts. You can't seem spontaneous if you casually mention that there are 42,612 people in your area who prefer to use pit privies...

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**From "How to Plan an Inconsequential Research Project"**

As a person long associated with sanitary engineering research, I feel it is now time to point with pride to an outstanding record of earnest research effort without embarrassing accomplishment. This may have been attained through serendipity, although I believe that certain taboos and rules, informal and uncodified but very generally respected, have been the basis for our success in evading accomplishment.

Among the most successful techniques for achieving diligent impotence is... the Platinum Bridge.

The "Platinum Bridge" is an easy idea to grasp. A platinum bridge would have many desirable properties such as freedom from corrosion, attractive appearance, and the ability to attract tourists. We, therefore, plunge into a study of platinum fabrication and structural properties and finally develop a dandy design for a platinum bridge. To our dismay some unprogressive clod does not admire our triumph. He mutters something surly about the price of platinum and even suggests that the cost of guarding a platinum bridge would make such a structure a source of embarrassment rather than utility.

Perhaps the platinum bridge is a little extreme, but the equivalent project is all around us in the form of studies that would wind up silly even if completely successful. Usually we do not have any prompt demise of an absurd project; it takes years before we realize that the objective of the noble effort was ridiculous because of economic considerations.
In its weekend edition of May 9-10, the St. Louis Globe-Democrat published an article by Dr. K. Ross Toole, professor of history at the University of Montana. Entitled "It's Time to Stop Apologizing to Youth," the article apparently hit a responsive chord with Globe readers, for the request for reprints was the greatest for any article ever published in the newspaper. In his article, Dr. Toole declared, "It's time to call a halt; time to live in an adult world where we belong and time to put these young people in their places. . . . We have the power; we do not have the will. We have the right; we do not exercise it." A group of students who are working for Canvass for Peace at Washington University saw the article, felt that it did not give a true picture of the views of the majority of students on college campuses today and wrote an open letter of reply to Dr. Toole which was given full feature treatment in the May 23-24 St. Louis Globe-Democrat. On the facing page are excerpts from Dr. Toole's article; on the following pages is the text of the letter.
"IT'S TIME TO START
COMMUNICATING
WITH EACH OTHER"

From "It's Time to Stop Apologizing to Youth," by Dr. K. Ross Toole.

I AM 49 YEARS OLD. It took me many years and considerable anguish to get where I am—which isn't much of any place except exurbia. I was nurtured in a depression; I lost four years to war; I am invested with sweat; I have had one coronary; I am a "liberal," square, and I am a professor. I am sick of the "younger generation," hippies, Yippies, militants, and nonsense. ... I am sick of the total irrationality of the campus "Rebel," whose bearded visage, dirty hair, body odor, and "tactics" are childish but brutal, naive but dangerous, and the essence of arrogant tyranny—the tyranny of spoiled brats.

It's time to call a halt; time to live in an adult world where we belong and time to put these people in their places. We owe the "younger generation" what all "older generations" have owed younger generations—love, protection to a point, and respect when they deserve it. We do not owe them our souls, our privacy, our whole lives, and above all, we do not owe them immunity from our mistakes or their own.

Every generation makes mistakes, always has and always will. We have made our share. But my generation has made America the most affluent country on earth; it has tackled head-on a racial problem which no nation on earth in the history of mankind has dared to do. It has publically declared war on poverty and it has gone to the moon; it has desegregated schools and abolished polio; it has presided over what is probably the greatest social and economic revolution in man's history.

It has begun these things, not finished them. It has declared itself, and committed itself, and taxed itself, and damn near run itself into the ground in the cause of social justice and reform.

Its mistakes are fewer than my father's generation—or his father's, or his. Its greatest mistake is not Vietnam; it is the abdication of its first responsibility; its pusillanimous capitulation to its youth and its sick preoccupation with the problems, the mind, the psyche, the raison d'être of the young.

THE BEST PLACE to start is at home. But the most practical and effective place, right now, is our campuses. This does not mean a flood of angry edicts, a sudden clamp-down, a "new" policy. It simply means that faculties should stop playing chicken, that demonstrators should be met not with police but with expulsions.

This is a country full of decent, worried people like myself. It is also a country full of people fed up with nonsense. We need (those of us over 30)—tax-ridden, harried, confused, weary, and beat-up—to reassert our hard-won prerogatives. It is our country, too. We have fought for it, bled for it, dreamed for it, and we love it. It is time to reclaim it.
Dear Dr. Toole:

In your letter you raised a number of issues to which we would like to reply. The main point which we want to stress is that your generation and ours are not as radically opposed to each other as your letter implies. There are a great many points on which we can agree, and we feel that these points should be recognized.

First of all, we recognize the many accomplishments of your generation. We are pleased that you have tackled the racial problem in America, that your intelligence and ability have developed the technology to land men on the moon and enabled polio to become a disease of the past.

In examining our country today, however, we also recognize that all of our problems have not yet been solved. The racial problem is still in a state of confusion and upheaval and is far from over. Technology is needed to improve conditions in our polluted environment and to cure cancer and other diseases. Therefore, we are now saying, let us join together through our common concern for our country. Let us build on your accomplishments so that we can continue to solve our nation's problems.

We also contend that because of the progress that you have made in this country, because of the increased technology of the past several decades, because of the education which you have offered us, we are also capable of understanding the problems of our nation and have the willingness and ability to help solve them. Sure we're idealistic. But why not let our idealism work with you toward the common goal which we hold, international peace?

However, the commonality of our goals has often been obscured by our lack of communication with each other. Part of this communication problem has been the result of the many stereotypes which your generation has about ours and vice versa. You refer to irrational campus "rebels" who are bearded, dirty and smelly in their appearance and childish and naive in their actions. You describe youth as an enemy defined by the style of their dress and the length of their hair, and you assume that all youth who fit this description are involved with acts of violence. However, we insist that individuals must be judged according to their own merits, not by how they look or by what others do, but only by what they do themselves.

You could listen to a French peasant or an Indian national in native dress more readily, it seems, than to the youth of your own country. Only when Americans avoid stereotypes of each other and start communicating can we honestly work together to solve problems in our nation.

In your letter, you stated, "We (the older generation) do not owe them (the younger generation) our souls, our privacy, our whole lives, and above all, we do not owe them immunity from our mistakes, or their own." We could not agree more! Your generation owes ours nothing more than that which all human beings owe one another—respect for human dignity and the right of free expression. Our generation is now attempting to exercise its constitutional right to expression by speaking out against a war in Indochina and other problems in this country.

The entire philosophy which underlies our American government is that of participatory democracy. Does your notion of a participatory democracy include keeping our "generation in its place" and the idea that we must be put "back there when (we get) out of it?" We think that our place is in that world which you would deny us. We feel a burden of responsibility as citizens who are concerned about the state of our country and we feel a responsibility to express this concern and to act upon it.

Our means of expression have been those which are sanctioned by the Constitution of the United States and the tradition of democratic process. We are not naive enough to believe that all of our generation uses such means. However, we know that we speak for the vast majority of our colleagues. We recognize the value and importance of the basic American rights of petition, assembly, and free speech. Furthermore, we think that it is imperative for us to use these rights in our efforts to
communicate our concerns to our Congressmen, whom we have democratically elected to be our spokesmen in formulating the policies of this country.

You say, Dr. Toole, that "society . . . is not a foreign thing we seek to impose on the young. We know it is far from perfect. We did not make it; we have only sought to change it." We concur with and endorse this point of view and are utilizing constitutional methods to bring about the very change that you call for.

We too are frightened by the number of students who are turning to violent methods in their attempt to be heard. This says to us, and we hope that it says to you, that there is a great need for more communication among the people of this country. Generally, people who turn to violence do so out of frustration.

In fact, our country was born as a result of brave and outspoken men who became frustrated with King George's refusal to listen to their ideas and demands for equal rights. We do not feel that these patriots were being "arrogant slobs," nor do we feel that we are being arrogant slobs in our efforts to exercise our constitutional rights which were insured for us by these men. Don't be like King George, Dr. Toole, please listen!

AGAIN, we must agree with you when you say, "To the extent that we now rely on the police, mace, the National Guard, tear gas, steel fences and a wringing of hands, we will fail." Such methods only serve the violent ends which we are attempting at all costs to avoid. Your generation, Dr. Toole, uses these methods out of fear that the younger generation is threatening the American system of government by voicing ideas which are contrary to the policies of the current administration. At the same time, young people use these methods out of fear that they are not being listened to by the older generation.

Violence is always spawned by fear; when the fear can be dispelled, the violence will end. Ultimately, this dispelling of fear will break down the communication barrier which has been erected by violent methods and bring our generations closer together.

But fear has given birth to something worse than violence, which is the repression that both our generations inflict on each other. In offering solutions to the problems which you see in student participation on campuses, Dr. Toole, you advocate the indiscriminant application of rigid rules which are intended to repress the very freedom of speech which you contend the United States is fighting to preserve in Indochina.

To you the name of the game is "Authority and Repression." To us, it's "Democracy and Communication." Should students be denied the right to express their opinions and to participate in the activities of our government simply because they are students? This is what you seem to be advocating. You say, "The first obligation of the administration (of a university) is to lay down the rules early, clearly and positively, and to attach to this statement the penalty for violation." However, it is not necessary for these rules to be repressive. They should be flexible enough to allow students the freedom to participate in the activities of their government even while they are engaged in the process of being educated at a university. To deny this is to deny students their constitutional rights.

YOU STATE, Dr. Toole, that your generation's greatest mistake is not Vietnam. This is a gross evasion of the issues, since your article was inspired by student concern about the war in Vietnam. Other people express themselves more articulately. They write letters and leaflets, talk to people in their communities, and hand out leaflets expressing their view. Others, their anger even more bitter, express their defiance and rage by demonstrating, sometimes peacefully, sometimes violently. But we challenge anyone who is disgusted and outraged by a burned ROTC building to try and imagine the extent and degree of horrifying destruction which we have wrought in Vietnam. What is your reaction to a bombed-out town, totally destroyed, in Vietnam or Cambodia or Laos? What is your reaction to 7,000 square miles of land defoliated in Vietnam? Don't Americans have any imagination? Please, Dr. Toole, now let's discuss the issues!

—Francine Turkern,
Linda Ray, Sharon Dressler, Jay Judson, Philip Shreffler.
THE OUTSPoken QUAKER

FEW PEOPLE will forget the tragic photographs carried in publications across the nation after the student deaths at Kent State and Jackson State colleges. For several days in May the press focused on these tragedies and on the intense unrest they helped trigger on hundreds of campuses.

A hopeful trend that emerged from those events was a renewed desire among most students to communicate. That campus trend received little national publicity. One exception involved a Washington University co-ed. This was a now famous St. Louis Post-Dispatch photograph of an engineering student trying her best to communicate with fellow students. It was featured in newspapers throughout the country, from the New York News to the Los Angeles Times, from the Fall River Herald-News, to the Dubuque Telegraph-Herald.

Taken by Post-Dispatch photographer Nicholas Sapieha, the picture caught a brief moment during which the Washington University student’s conversation and eyes flared in response to a comment by another student. Most newspapers carried only a brief caption, which didn’t indicate the context of the debate. Many of the headlines implied that the engineering student was simply being belligerent. This was particularly upsetting to the 20-year-old subject of the photograph, Emily Jane Thursby, who is quite outspoken, but far from violent. She is a Quaker who takes her religious views seriously.

On the day the picture was taken, Miss Thursby was on her way to a two o’clock class in Bryan Hall and walked by Sever Institute to drop off a program she had prepared as part of her final in computer science.

“There were a bunch of boys and girls—typical students, dressed just like me—picketing the front door of Sever. I decided to talk to them to find out what they hoped to accomplish. They told me they wanted to reach the engineering students,” Miss Thursby said.

“You'll only alienate the students, this way,” I said,
and one of them answered, 'Well, what do you think we should do?'

'I said, 'Talk to the students! You're not reaching anybody this way.' Then one of the girls said something that got me very upset, and just when I reacted, the photographer made the picture. This girl had said that engineering was just used for evil and when we graduated we would all get jobs making napalm to burn babies.

'I really was astounded and I said that I would never personally make napalm. I asked her if she had any idea that engineering was used for so many good things in life. It isn't simply used for weapons, I said, and I guess I was really shouting at this point in order to be heard. I don't remember exactly what I said, but I rattled off a long list of engineering uses, such as fighting pollution, solving urban problems, and doing medical engineering to save lives. The students didn't seem to know about these things. They just stood there and said 'Oh?'

'After awhile, one of the students got up and spoke to the group. He said that maybe picketing wasn't the right approach and that they should come back the next day and discuss what they felt was wrong with technology. Then, the group dispersed.'

Miss Thursby went on to her Operations Research class feeling that she had communicated something to the students. 'I told several people in the hallway what had happened and they showed very little interest. That was really disappointing.'

The next day, the Post-Dispatch ran the picture of Miss Thursby's debate on the front page. "The caption quoted me as saying 'I pay $4,000 a year for an education and I'm going to get it,'" she continued. 'That sounds like something I might say, but I didn't bring up money that day with the students at Sever. What bothered me about the caption was that it said I was reacting violently to the students, and, of course, being a Quaker, I'm against any violence. Personally, I don't feel that I should join a crowd even to watch a demonstration such as took place at the ROTC building. By doing that you might, in effect, encourage something violent, and I couldn't live with that feeling.'

In the next few days, a picture was sent to newspapers throughout the country by the Associated Press and letters began pouring into the campus post office. Most of them praised Miss Thursby for "standing up for her rights," which, ironically, she has never felt in danger of losing. One of the longest and most carefully thought-out letters was from a soldier, one of many letters from Vietnam. A Chicago newspaper ran a story with the picture, explaining that Miss Thursby is a Quaker and a Chicago minister wrote her praising her "for her stand against all war." 'He was the only one who wrote that he knew I was a non-violent person,' she said.

Many clippings of the photograph were mailed to other students on campus. 'I would be walking to class and students would come up to me and ask if I was the girl in the picture that their parents had sent them,' Miss Thursby continued. 'The students told me that their parents had written, 'Why can't you be like this girl?' One mother even wrote her son, advising him to find out who

I was and to ask me to marry him! It was all rather embarrassing, when you consider that no one really could know much about me just from the picture.

'I think that most people who wrote are frightened by the student protests around the country. They really think that these are revolutionary activities and that they might get hurt. Some are confused about the war and don't know whom to believe. What they don't know is that the great majority of students are non-violent and as confused as they are.

'A few days after the picture was published, a man, who said he was an alumnus, stopped me in front of the Business School, where I have a part-time job. He wanted to discuss the campus situation and I was glad to talk to him. After talking awhile, he got rather upset and said, 'What this country needs is an Adolph Hitler!' I was flabbergasted. But, I'm sure he isn't typical.'

Another critical issue is poor communication and attitudes between parents and students. "While my parents don't agree with me on many subjects," Miss Thursby said, "they always want to hear what I have to say and learn what's going on. I know that I can say more to them than most kids I know can say to their parents."

Miss Thursby became a Quaker nine years ago. Although her parents are not Quakers, they gave their warm approval. The Thursbys live on the outskirts of Baltimore, where Emily Jane attended a school run by Quakers. Since then she has been a volunteer worker in various projects in the Baltimore ghettos and has taught in a hospital for the mentally retarded.

After graduation from high school, she was accepted by several top engineering schools in the East. She chose Washington University "because the school had a good reputation and the engineering professors I talked to didn't make a big thing over the fact that you were going to be a 'girl engineer.' Some of the schools made you feel like a freak, and I liked the sensible attitude here."

At the University, Miss Thursby's volunteer activities have been limited because of the rigorous engineering curriculum. She has managed, however, to get involved in projects such as the ecology teach-in and, because of her love of music, various campus productions, including Bearskin Follies. She also works as a part-time clerk for the American Association of Collegiate Schools of Business, which has headquarters in the Business School.

During the past academic year, Miss Thursby, a junior, took six engineering courses and one humanities course. 'With only one humanities course, I'm not learning all I could. I'm not saying that I shouldn't take the necessary engineering courses, but I think all students should have a broader education. This is a changing campus, and more give-and-take between students and faculty is developing. Now, we have an academic committee in the Engineering School that evaluates courses and hears student grievances. Whether there is to be more of this kind of interaction is one of the major issues on all campuses. Too many students are apathetic. For instance, the students have elected a good, non-violent slate of student officers this semester, but they should back them up with active and vocal support."
The Danforth Foundation's gift of $15,000,000 to Washington University is a tremendous tribute to the University and to the high national stature it has attained in recent years. It is a resounding vote of confidence in the present administration and a tangible proof of the Foundation's faith in the University's future.

It is more than that: it is also a vigorous reaffirmation of the Danforth Foundation's conviction that the private university is essential to the healthy survival of higher education in this country. The Danforth grant is a tribute not only to Washington University, but by implication to all private universities. It is a recognition of the sober fact that most private universities are facing severe financial problems and will survive only if they receive massive support from government and private donors.

Since its founding in 1927, the Danforth Foundation has been dedicated to "philanthropy concerned primarily with people and values." It has concentrated its efforts on education and on the improvement of the quality of life in our cities. Through the years, Washington University has been the beneficiary, like many other colleges and universities, of Danforth support. This latest and most munificent grant is the capstone of many years of the Foundation's support of Washington University.

The Danforth gift marks the second time during the eight-year administration of Chancellor Thomas H. Eliot that Washington University has received a grant of $15,000,000. Just five years ago, the Ford Foundation made a $15,000,000 challenge grant to Washington University—a challenge that was met through the generosity of thousands of individual contributors: foundations, corporations, alumni, and friends. The Ford Challenge Grant was met as part of the successful completion of the University's "Seventy by Seventy" fund campaign, which exceeded its goal more than a year ahead of schedule.

The Danforth grant also represents a major challenge. In Chancellor Eliot's words, "To achieve its purpose, to maintain the strength and quality of the University, it must be more than matched from private sources."

Like virtually all other private universities, Washington University is faced with the necessity of maintaining high quality education in a time of ever-rising costs. Every effort must be made to keep tuition charges at a reasonable level, the percentage of the annual budget that can be met by earnings from endowment shrinks every year, and, in recent years, government support is declining. The only possible answer is strong support from private donors.

Every effort has been made and is being made at Washington University to operate the institution economically and efficiently. Operating budgets have been pared, stringent economies have been put into effect all along the line, and the most modern and efficient business management principles are observed. Yet, there will be an unavoidable gap between the funds that can be raised from endowment, tuition, and government support and inescapable cost increases. Exclusive of the School of Medicine, which also faces difficulties in meeting its budget in an area of reduced government support of medicine, the University must receive at least $5,000,000 annually in unrestricted support from private donors.

The generous Danforth grant will help enormously, but it will not solve the University's financial problems for the next five years. Rather, it is a challenge to other foundations, to corporations, to alumni and friends, to see that the gap is closed. Hopefully, it will be the catalyst that produces the support the University must have in the years ahead if it is to continue to maintain its position among the leading private universities of the nation.

The 109th Commencement of Washington University this June was a happy occasion despite the pouring rain that forced the transfer of the ceremonies from the Quadrangle to the snug confines of the Field House. It was a ceremony that saw 2,006 degrees conferred, including record-breaking numbers of Ph.D. and master's degrees. All told there were 103 Ph.D.'s awarded, and 637 master's degrees, including 306 in arts and sciences, 84 in engineering and engineering administration, 29 in architecture and architecture and urban design, 90 in business administration, 97 in social work, 13 in law, 15 in health administration, and six in dentistry.

In addition to the 103 Ph.D.'s, 88 M.D.'s were conferred and 48 D.D.S.'s, as well as 62 doctors of law, 32 doctors of science in engineering, six doctors of business administration, and six doctors of social work.

Of special significance at every Commencement is the graduation of those who have earned their degrees through long years of night school study in the School of Continuing Education, which this year conferred 290 B.S. degrees, including the first Bachelor of Technology degree.

It took the combined efforts of everyone associated with the University to produce these more than 2000 new degree holders. The students themselves invested years of study and hard work and their success was made possible by the contributions of the faculty, the administration, the trustees, and all of the people who support the University financially. Finally, it took the support and encouragement of the people behind the graduates who helped see their children and wives and husbands through the long years of study.

Washington University's 1970 Commencement was an historic one in a year when unhappily some schools were forced to omit commencement entirely or to close their doors long before commencement. It was a happy and important occasion, for commencement is a ceremony marking the true purpose of the University—the business of education.

—FO'B