

WASHINGTON UNIVERSITY

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Magazine

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FALL 1965



The Weis sisters are still rolling along. For the latest report on these outstanding alumnae, see "Mary and Landy," beginning on Page 2.

WASHINGTON UNIVERSITY *Magazine*

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FALL 1965

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COVER: *Phycodrys rubens*, a species of marine algae, which is one of many being studied by a new Washington University research group. See "Algae," Page 38.

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*These talented Washington University
alumnae sisters continue to roll along
on a two-girl academic crash program*



Mary and Landy

FIVE YEARS AGO, *Look Magazine* ran a picture story about two Washington University students: Mary and Landy Weis. Entitled "The Whiz Sisters," the article described the girls as "top science students on a two-girl academic crash program." Today, the Whiz Sisters are still whizzing. Mary, now 23, is a programmer in the University's computer center and is working toward her doctorate in mathematics; Landy, 21, is a senior in the School of Medicine.

Both girls began their academic crash program by entering school at four, skipping the fifth grade, and finishing high school in three years. Before they entered college, both girls had taken university-level courses at summer sessions. Mary took several science and mathematics courses, including the University's freshman physics course at age 13, while Landy earned the equivalent of a full-year's credits in summer school before enrolling at Washington University.

Mary went first to St. Louis University for two years and then transferred to Washington University, where she took the pre-medical course, with an additional major in mathematics, and earned her B.A. degree at age 19. She then entered medical school at the University of Missouri. After less than one semester, however, she decided that she didn't want to be a doctor after all and came back to Washington University to work on a master's degree in mathematics.

"I found medicine entirely too disorderly and confusing compared to the beautiful order of mathematics," she says.

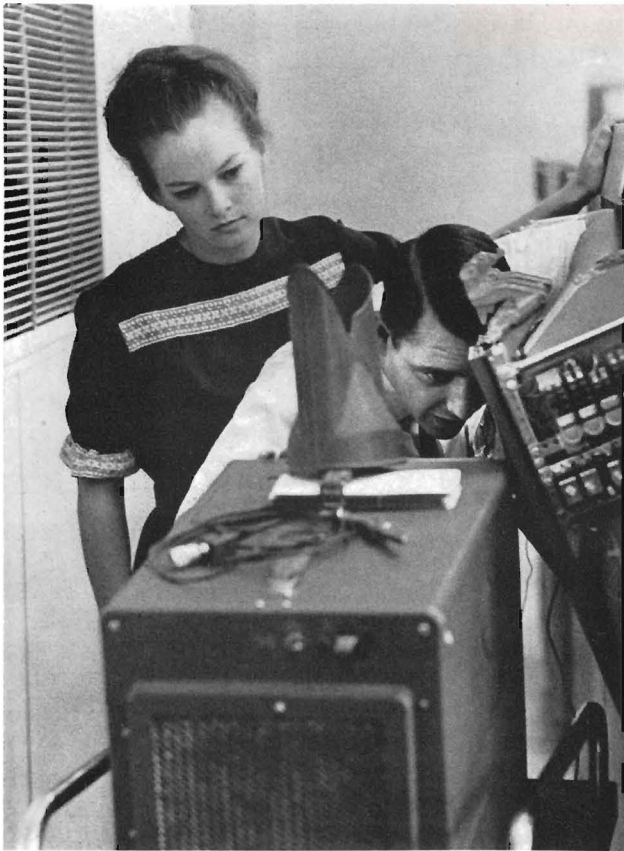
After finishing all the requirements for her M.A. but the thesis, Mary left school to join the computer staff at McDonnell Aircraft Corporation. She spent her next two years as a computer programmer, working on the Gemini program, aircraft design problems, and mathematical computer theory. While she found work at McDonnell fascinating, Mary relates, she decided this fall to come back to school and work toward her doctorate in mathematics. She is continuing part-time work as a computer programmer in the University's computer center.

Landy earned her B.A. in three years at Washington University, taking both the full pre-medical course and enough education courses to qualify for a teaching certificate. While Landy's lifelong ambition centered around medicine, she took the education courses as a bit of insurance.

"After Mary's reaction to medical school I thought I better have something to fall back on in case I felt the same way." However, while Landy didn't find it easy to begin medical school as a girl, and a seventeen-year-old girl at that, she soon found herself committed to a medical career and put her teaching certificate away for good.

Despite their academic crash program, both Landy and Mary have found plenty of time for other interests and activities. Landy was Military Ball Queen in 1961 and Miss Armed Forces of 1962. Both girls like to swim, ride bikes, date and go to parties. When Mary was asked why she and her sister are so bright, she said, "We're not bright, we're just accelerated."

Photos by Herb Weitman



Mary examines the inner workings of a modern computer. As a programmer, she has little contact with actual "hardware," but works primarily on mathematical problems.



In the University's computer center, Mary checks the answers to a complex problem in the rows of figures pouring out of a high-speed printer.



As a programmer, Mary translates problems into computer language by first breaking them down into logical steps and then posing the problem in mathematical formulae the machine can handle.

Mary and Landy

THIS FALL Mary is employed as a programmer in the University's Department of Computer Sciences while she works toward her doctorate in mathematics.

As a programmer, first at McDonnell Aircraft Corporation and now at the University, she uses her mathematical skills and insights to break down complex problems into the kind of simple and logical steps that a computer can handle. In her job, she has little contact with the mechanical workings of the giant machines. Her real job is to translate various complex problems into the logical, mathematical language of the computer.

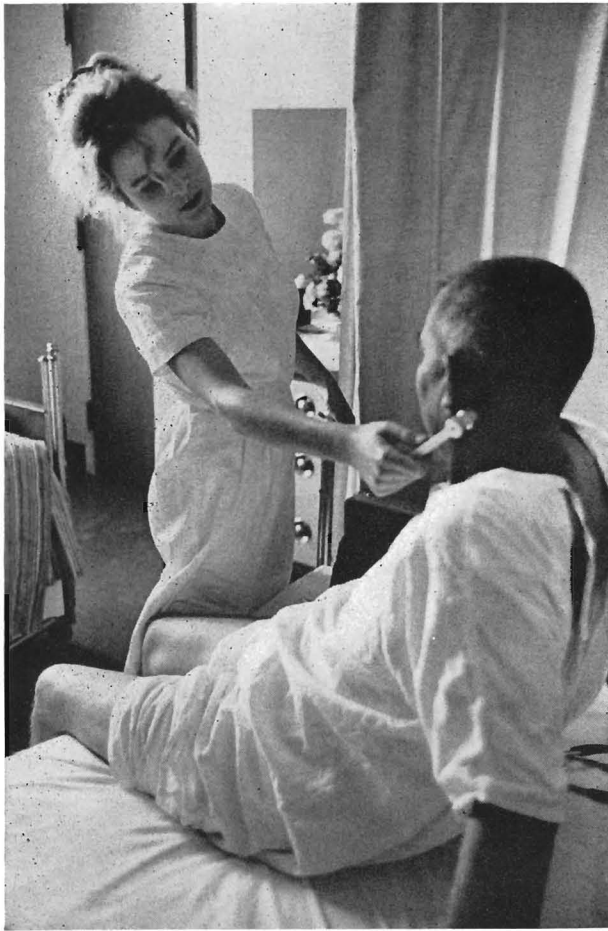
In her studies, Mary is working in the field of new algebras. Whether her future will lie in the area of computer science or as a teacher and researcher in pure mathematics, she isn't certain yet. Either way, she will be following that vision of "beautiful order" she has found in mathematics.



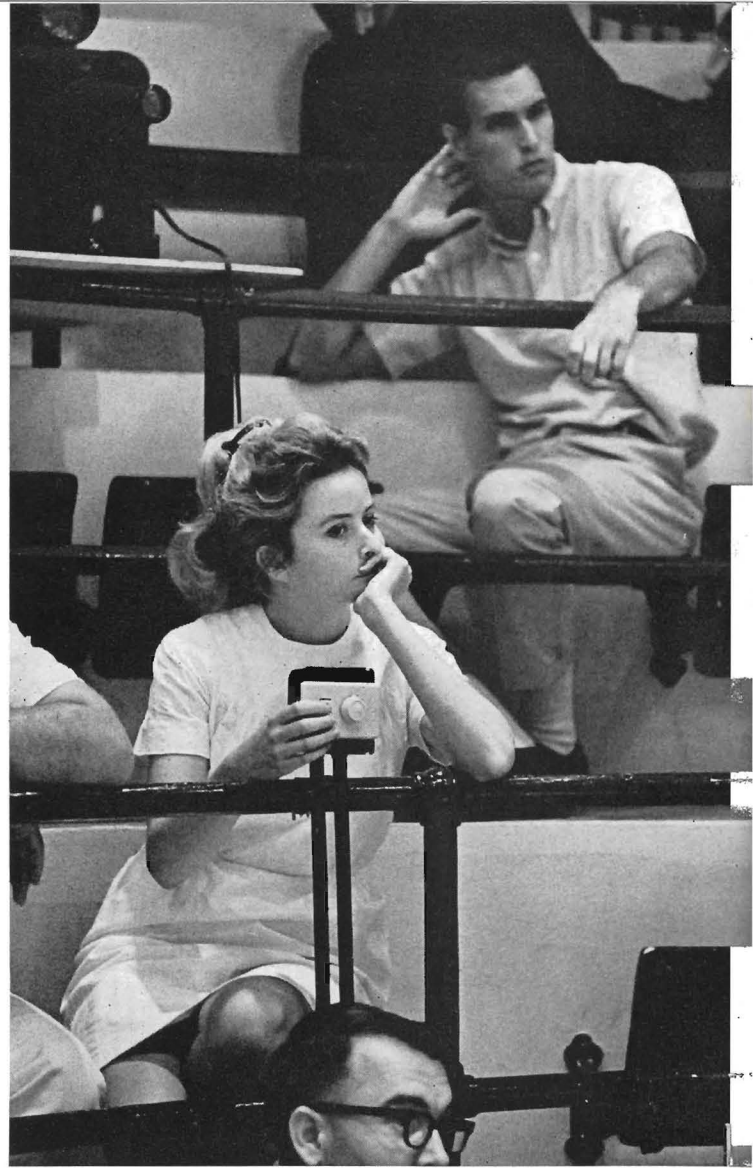
Mary confers with Dr. Leon Cooper, director of the Department of Applied Mathematics and Computer Sciences.



While Mary is working in the computer center she is also studying for her doctorate in mathematics.



As a senior medical student, Landy is increasingly working directly with patients. Here she examines a patient in the neurosurgery department.



Landy operates the lighting effects during a lecture-demonstration on pathology, the specialty in which she hopes to concentrate.



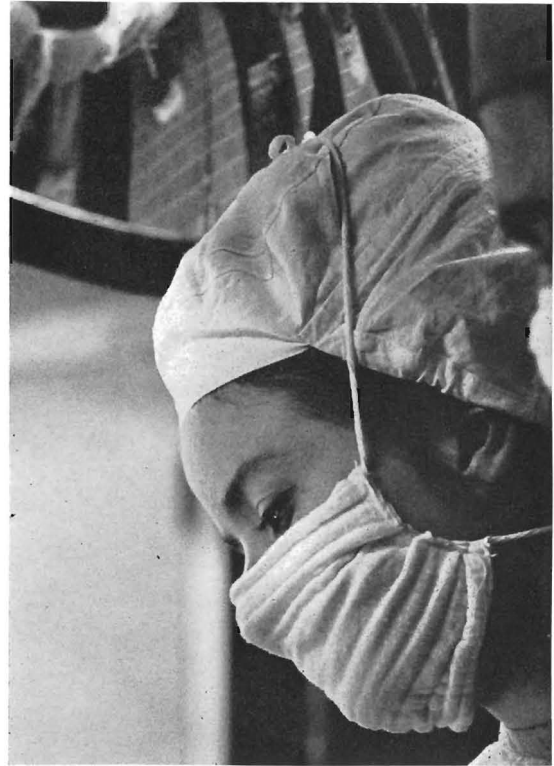
Since the age of four, Landy has been at the books. With a medical career ahead, she looks forward to a lifetime of study.

Mary and Landy

AS A SENIOR IN THE Washington University School of Medicine, Landy is dividing this year among the various medical services. Before she is through she will spend twelve weeks in outpatient clinics and twelve weeks in various surgical specialties, as well as shorter periods in medicine, obstetrics and gynecology, otolaryngology, and ophthalmology.

The pace is a fast one and the pressure is terrific, but Landy finds the life absorbing and is looking forward to her internship and residency. As one of just eight girls in her class, she found the first work with patients rather difficult, but by now she is used to being mistaken for a nurse occasionally. Looking back on her first experiences with patients, Landy says,

"If you're confident about what you're doing and if you really take time with the patients, they forget about your being a woman and have confidence in you."



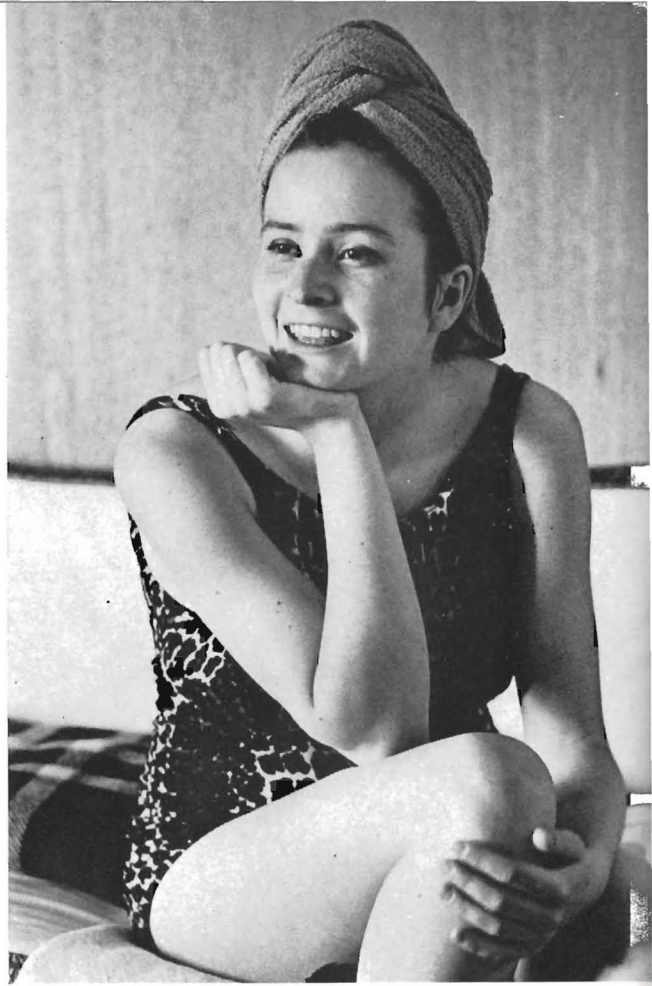
In cap and mask, Landy assists at an operation during her twelve-week tour of duty in various surgical departments.



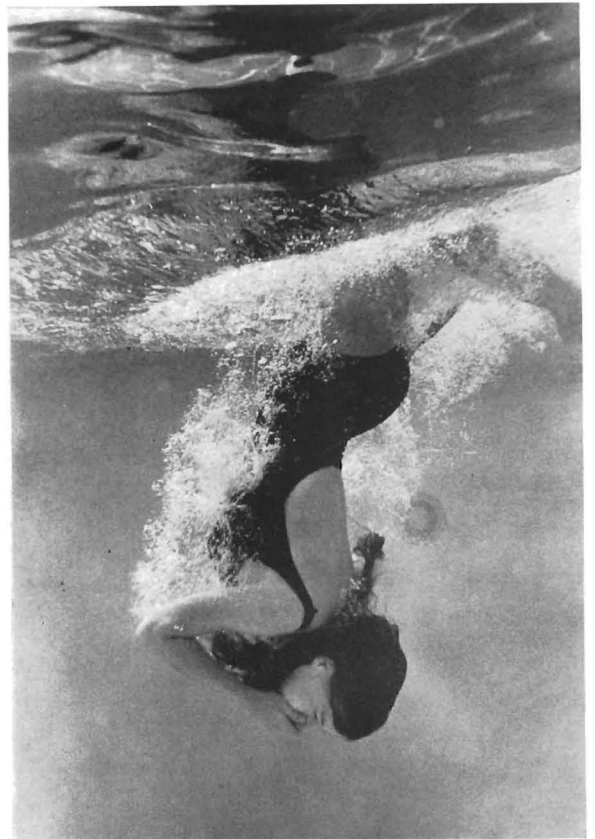
Medical students go through school in groups of threes. Here, Landy and her two colleagues participate in a seminar.



Mary, ready to roll.



Landy on dry ground.



Mary, underwater.

Mary and Landy

THE WEIS GIRLS live with their parents in a small but charming home in the St. Louis suburb of Webster Groves. Their mother is a schoolteacher in the St. Louis school system and their father is a Post Office employee who played outfield for the Chicago Cubs back in the Twenties.

As close friends today as they were back in the days when they were skipping the fifth grade together, Mary and Landy manage to take time out from their rigorous schedules for a little more vigorous activity like swimming, bike-riding, or doing calisthenics together.

The Whiz Sisters are still whizzing.

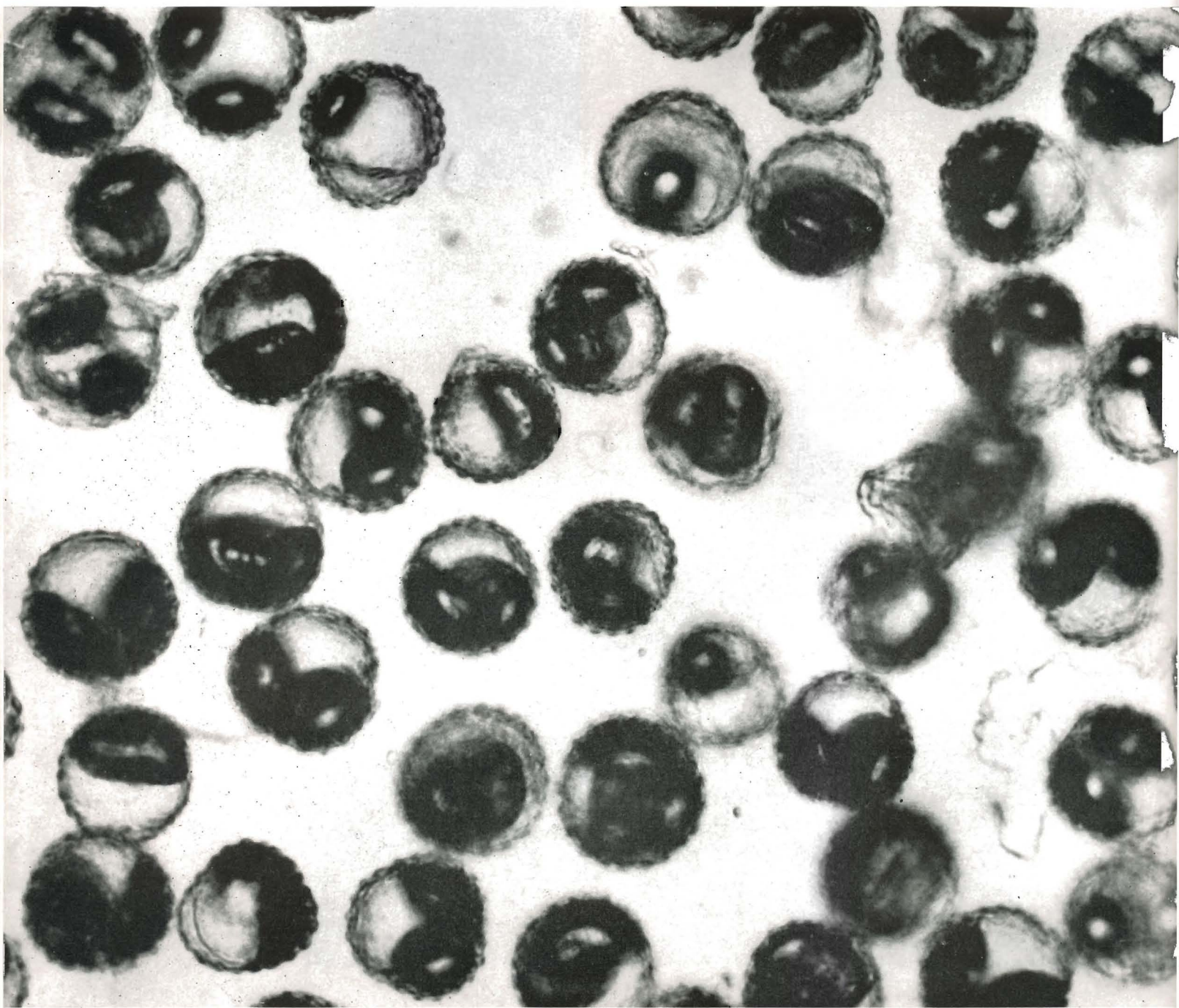


Mary, on the surface.



Landy and Mary, still rolling.

Old wives' tales surround the allergic diseases, which may be second only to colds as this country's most common ailment. The ragweed season just ended, but there are several villains still at large. The mechanism of hay fever, asthma, and hives, and their diagnosis and treatment are discussed by two distinguished allergists of the medical school faculty: Dr. Harry Alexander, professor emeritus of clinical medicine, and Dr. Joseph Noah, assistant professor of clinical medicine.



Photomicrograph of ragweed pollen grains, the culprits which cause most of the hay fever symptoms in August and September, when ragweed pollinates. Mold spores, grass, and tree pollens are other airborne sources of hay fever.

A L L E R G Y

PEOPLE WHO DON'T SUFFER from hay fever traditionally make light of the symptoms of those who do. It's one of those ailments in adults which, like mumps, just doesn't evoke much sympathy.

This may be due to the apparent absurdity that a grown man could be reduced to tears by such ordinary things as ragweed, grass or, eggs. Long ago, I can recall my aunt growing peevish at my uncle while he sneezed throughout the ragweed pollinating season (mid-August to mid-September). "I think it's all in your head!" she blurted out. Uncle Fred was cowed into half-believing her. But there is no purely psychological basis for typical hay fever. Emotions can only intensify the symptoms.

To illustrate further the misunderstandings surrounding hay fever: It has nothing to do with hay and there is no elevation of temperature in the sufferer. In an attempt to clear some of the confusion it was suggested—by a doctor, no doubt—that we use the term "pollinosis." Somehow it hasn't caught on.

One common notion about hay fever that is true is that ragweed is a major source of the trouble in this country. It grows to such an extent in the Midwest, for example, that doctors sometimes feel that hay fever from ragweed is a special disease of the area. In St. Louis, the plant is so abundant that it may put as much pollen into the air in one day as ragweed in Boston does during the entire pollinating season. Trying to inhibit ragweed pollination with herbicides in one isolated community still won't eliminate hay fever from ragweed because the plant grows throughout the countryside and its pollen can be carried many miles. The pollen count has been reduced considerably, however, in some communities with comprehensive programs of spraying. Use of herbicides on such a scale is rather expensive; and extreme caution has to be observed to avoid endangering other plant life.

Ragweed doesn't flourish in Europe and in certain sections of the United States, such as southern Florida and the California coast. But hay fever in these areas can come from trees, grasses, and other weeds. And the pollen season in milder climates may extend through most of the year.

It is appropriate that St. Louis has one of the world's top authorities on allergies, Dr. Harry Alexander, Washington University professor emeritus of clinical medicine. He has written several books on the subject, was a founder of the

*Behold the homely ragweed,
Genus Ambrosia;
Seeketh through the air to breed,
Multos Ahchoosia!*

By ROGER SIGNOR
Office of Information

American Academy of Allergy and edited the first professional journal on allergy. He didn't offer this information about himself ("Please leave me out of your story," he asked), but he talked freely about the field of medicine to which he has devoted nearly 50 years.

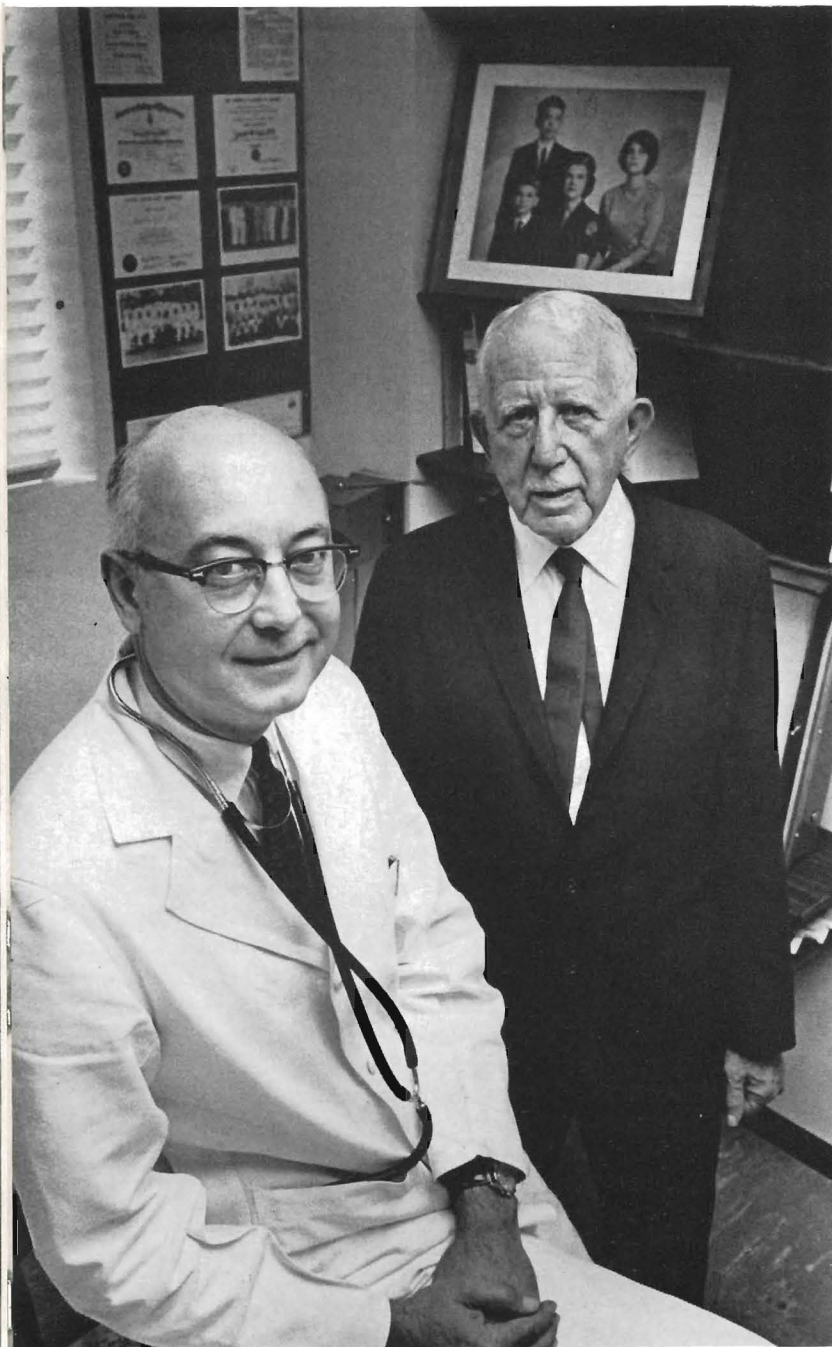
Dr. Alexander said that an estimated nineteen million people, or ten per cent of this country's population, have an allergy of some form, making the disease possibly second only to colds as the nation's most common disorder. Allergy accounts for approximately one-third of all chronic conditions reported for children under 17 years of age. Hay fever, hives, and asthma occur most frequently.

For the common allergies, the patient usually has inherited a non-specific capacity for the disease. While his parents may have been sensitive to ragweed, he may have allergic reactions to certain grass pollens or foods.

Molds, chiefly mildew, are second to ragweed as a major source of hay fever symptoms in the St. Louis area and in other damp, warm climates; and symptoms which continue after the ragweed season frequently have been traced to molds. Other common sources are house dusts, feathers (in pillows), oak pollen, and foods, mainly egg, chocolate, milk, and wheat. Many other substances bring about reactions in a minority of patients. An individual usually is sensitive to more than one thing, typically two or three pollens, and perhaps house dust. Atypically, he may have only one unusual sensitivity, such as to paprika.

WHATEVER A PERSON'S sensitivity, the allergic mechanism in the body that causes the symptoms operates on the same principle. For example, when a person inhales a few ragweed pollen grains, defense cells in his body will form specific antibodies to a protein in the pollen. If he is sensitive to ragweed, subsequent exposure will result in a complex, explosive reaction, Dr. Alexander pointed out.

The antibodies have a strong, specific affinity for the pollen's protein particles which are called antigens. The two combine and bring about the release of a number of potent chemicals, which were harmlessly stored in the cells. One of the chemicals is histamine, which is thought to be an important factor in metabolism. Outside the cells in large quantities, however, histamine enlarges the capillary blood vessels, which then leak fluids; hence, the runny nose. In the case of asthma, histamine may bring about contraction of the bronchial tubes' smooth muscle tissue.



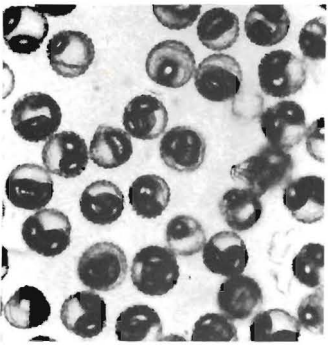
Allergists Dr. Joseph Noah, left, assistant professor of clinical medicine, and Dr. Harry Alexander, professor emeritus of clinical medicine. Dr. Noah is a former student of Dr. Alexander, a founder of the American Academy of Allergy.

In principle, the allergic mechanism falls into the general category of immunological reactions. "But the effects of allergy are quite the opposite," Dr. Alexander said. "If someone receives a smallpox vaccine, for instance, he develops antibodies which neutralize this virus. This is prophylaxis. In allergy, the antibodies bring about tissue changes which, instead of protecting an individual, actually make him sensitive. This is known as anaphylaxis."

On rare occasions anaphylaxis may be so severe as to result in death, such as the fatal shock following bee or wasp stings or shots of penicillin. Approximately four to five thousand deaths are attributed each year to asthma, but the majority of these cases are chronic and frequently complicated by other conditions. Death during an asthmatic paroxysm is rare, and has been even more unusual in recent years with the use of corticosteroid drugs, such as cortisone and hydrocortisone. Although the drugs are very effective in relieving the symptoms of asthma, they also affect body metabolism and must be administered with extreme care.

Patients with mild hay fever symptoms frequently can be relieved by taking one of the so-called antihistamine drugs, which apparently shield the cells that could be damaged by histamine. But many people have such severe and prolonged symptoms that their doctors may recommend desensitization injections. If a patient's sensitivity is to ragweed, for example, he may receive on the average about fifteen to twenty injections of pollen protein extract in gradually increasing doses over a period of approximately three months before the ragweed season. When the body receives graduated doses of the protein, it accumulates protective antibodies in addition to the ones which cause allergic reactions. These antibodies, induced by injection, also have an affinity for the pollen protein fragments, but when they combine with the fragments they do not bring about the release of histamine, but tend to block out most of the harmful reactions caused by their cousins.

DESENSITIZATION INJECTIONS bring various degrees of relief from allergic symptoms in from 75 to 80 per cent of the patients who receive them. The treatment is recommended for chronic sufferers not only because it relieves symptoms, but also in view of the fact that approximately one-third of chronic hay fever patients eventually develop asthma if they go untreated, Dr. Alexander em-



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phasized. (Patients with allergic asthma of course, may never have had hay fever.) Desensitization usually is recommended in the case of allergic asthma, which may be due to substances other than pollen. Asthma, although serious itself, can lead to the irreversible lung condition emphysema, in which the air sacs become overdistended.

EXTRACTS FOR DESENSITIZATION have been prepared from numerous sources of allergy, including a variety of pollens, dusts, lint, molds, animal danders, and insects (such as bees, wasps, moths, and May flies). There has been little success in preparing effective extracts from foods, which, when ingested, may cause hives, asthma, or nasal discharge. Desensitization, however, has been carried out for foods which are inhaled, such as flour. The typical treatment is to eliminate the offending foods from the patient's diet. In some patients—after varying periods of abstinence—the foods can be restored to diet without ill-effects. Sensitivity to poison ivy, called contact dermatitis, has a different underlying allergic mechanism. Desensitization to the plant is sometimes effected through taking the antigen by mouth.

During the past two decades medical scientists established that allergy is part of the broader field of immunology. Dr. Alexander is the associate editor of a recently published work, *Immunological Disease*, which includes the subject of allergy. He pointed out that a new group of diseases is being investigated from the viewpoint of having possible immunological origins. Current theory implicates diseases such as rheumatic fever, nephritis, and rheumatoid arthritis as having "autoimmunological" bases. In these, a person makes antibodies which, under certain conditions, may be related to the cause of his disease.

Considerable basic research on the mechanisms of allergy and immunity is being carried out in the University's School of Medicine in the laboratories of Professors Charles Parker, Herman Eisen, and Richard Krause. Dr. Krause is investigating possible autoimmunity in rheumatic fever. But allergic bases for disease have been established only for the more common ailments such as hay fever and asthma.

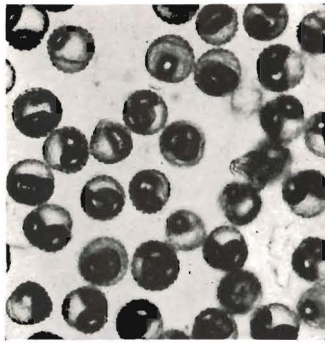
The key diagnostic tool for the common allergies was discovered back in 1873 by an Englishman, Dr. C. H. Blackley, who was sensitive to plant pollens. He found that if he rubbed a small amount of the pollen into

a scratch on his skin, a small wheal (like a hive) developed almost immediately. Basically, the same skin test and a patient's medical history are used for diagnosis by today's allergists. Technically, the skin test measures only the skin's reaction to a substance; but, it is in most instances a reliable indicator of general sensitivity. Sometimes, however, skin tests may not indicate one or more of the patient's sensitivities. Since these "hidden allergies" may not be apparent from the clinical history, the physician must use various, and sometimes tedious, processes of elimination in, for instance, a patient's diet to trace the difficulty, Dr. Alexander said.

Another type of test, still under investigation, has been used on a few patients to detect previously hidden sensitivities. A former student of Dr. Alexander, Dr. Joseph Noah, assistant professor of clinical medicine at Washington University, has gathered the only clinical data for this test so far. Dr. Noah, who is internationally known for his studies of histamine, said that the test someday may become a valuable supplement to the skin test, although more information is needed for full evaluation.

In the test, Dr. Noah explained, samples of blood are taken from the allergic patient. The live blood cells are mixed with antigens and the subsequent levels of histamine are measured to indicate the patient's degree of sensitivity. In early studies using this method, an ounce of blood was required to detect a measurable amount of histamine for each of twelve basic substances tested by Dr. Noah's laboratory. The amount of blood required made the test impractical. Recently, however, researchers at the National Institutes of Health developed a new technique which drastically reduced the amount of blood needed. Histamine content can be measured for all twelve substances with less than an ounce of blood from the patient. This is due to the use of a fluorescent compound which readily combines with histamine, making it more easily detectable.

"Basic research has made the most significant contributions to the field of allergy in the past ten to twelve years," Dr. Noah said. Areas of research which hold the greatest promise for the immediate future include efforts to produce drugs which will act on tissue-damaging chemicals, other than histamine, which are released during the antibody-antigen reaction. One of these compounds, known by the awkward name of Slow Reacting Substance in Anaphylaxis (its precise chemical make-up isn't



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known), is not affected by antihistamine drugs.

For many years, researchers have tried to develop a technique which would preclude the necessity for the long, conventional series of desensitization injections. One method has been to mix large amounts of protein extracts into an oil base that is slowly absorbed by the body. It was hoped that only two or three injections of the oil solution would provide desensitization without running the risk of inducing anaphylaxis.

THE CONSENSUS AMONG many doctors, however, is that the oil injections are not a satisfactory technique. Two negative features have been reported, Dr. Noah said. First, it was observed over a long trial period that people who had never received conventional desensitization injections usually did not benefit at all from the oil injections. Further, in patients who had the highest levels of sensitivity, the oil injections produced a relatively high number of adverse reactions. "It would be a great advance if a safe and effective way were found to reduce the number of injections required for desensitization. But all present attempts in this direction are in a very early experimental stage," Dr. Noah said.

People naturally find the necessity for so many separate trips for injections inconvenient, Dr. Noah continued. But the great majority of patients see the treatment through. "Ordinarily, when a person goes to an allergist, he has had enough trouble so that he is quite willing to undergo time-consuming treatment. He is anxious to have his symptoms prevented rather than merely suppressed."

"I don't advocate that everyone with a runny nose should rush to see an allergist. Many cases can be controlled by the family doctor who may prescribe with success one of several antihistamines. But when a person's symptoms recur and grow more pronounced with each hay fever season, the help of a specialist should be sought. The symptoms can be relieved and frequently serious complications may be avoided."

On occasion, he noted, people resign themselves to an allergy, although they may be quite uncomfortable. A defeatist attitude may be due to some old wives' tale that the trouble "will go away with time" (which it won't) or that "nothing can be done." Sometimes patients can't believe that their trouble is due to a special food which they've enjoyed all their lives. They see their family and

friends eat the food without any reaction, and wonder why they alone should be allergic.

One patient's disbelief in a possible food allergy had serious consequences, Dr. Noah recalled. She had suffered from hives for several years before someone in her family convinced her that she should see an allergist. Tests for common allergic sources were made and a thorough case history was recorded, but no food or pollen could be established as the cause. Then, in further discussions of the woman's eating habits, it was discovered that in her native Italy her mother had used a certain spice for several dishes. The woman still used it in some recipes. A skin test for the spice, an herb extract called anise, was highly positive and the woman was told that she should not use it for several days. If no hives appeared during this time, then undoubtedly the spice was the culprit.

The woman went home intending to follow the doctor's advice. But the next day she wondered how such an insignificant thing could cause so much trouble. While she was preparing a meal she took the spice down from the shelf. Impulsively, she put a few drops of it on her tongue. Although a small amount, it was many times greater than the amount she normally received from foods merely seasoned with it.

Her reaction was immediate and severe—so severe that she could barely get her breath as a result of the swelling in her tongue, mouth and throat. She survived and from then on was a firm believer in her allergy.

SUCH INCIDENTS ARE NOT so incredible when one considers that less than fifty years ago a physician grouped hay fever, asthma and hives in a category he called "atopic diseases." He chose the word atopic, which is derived from the Greek word for strangeness, because the cause of the diseases was different from that of other illnesses. The word also may have implied the prevailing lack of familiarity with allergic mechanisms and manifestations.

"Today the disease is fortunately not so strange that it deserves this classification," Dr. Noah said. "In fact, a great deal is known about allergy, thanks to a number of men like Dr. Alexander who have watched the entire field grow from infancy and have made significant contributions along the way."

By GRAY L. DORSEY

*Nagel Professor of
Jurisprudence and
International Law*

INTERNATIONAL LAW AND SOCIAL CHANGE

SOCIAL CHANGE IS AT the bottom of most current international cooperation. International programs to raise incomes, eliminate stultifying diseases, improve education, raise agricultural productivity, and build power plants are being undertaken on a nation-to-nation basis, through regional agreements such as the Alliance for Progress, and by international agencies such as the World Health Organization.

The success of these programs of international cooperation is threatened by conflicts over social change. International law, in its present state, is grievously inadequate to the task of resolving these conflicts so that social change can proceed peacefully. It is not merely that international law has no enforcement machinery. The trouble goes deeper. With respect to conflicts over social change, international law is unable to perform law's

ordering function—the delineation of principles and rules defining rights and obligations.

Even within states where enforcement machinery exists, the ordering function of law is important. Acceptance of principles and rules as “the law” generates voluntary compliance and makes possible peace-keeping with a limited use of force. In the international community, accepted principles serve as measures for resolving conflicting claims and for legitimating or stigmatizing uses of force. Deprived of full effectiveness by the absence of enforcement machinery, international law plays a modest but perhaps critical role through its ordering function.

In power diplomacy the legal validity of a state's claim may be one of the factors that other states will consider in deciding whether to support or oppose the claim by pressure or war. In the parliamentary diplomacy of the United Nations, with its appeal to world public opinion, states are at great pains to establish legal justification for their actions. The degree to which this need to justify influences national policies is problematical, but the hope of extending the rule of law in the world lies in making that influence substantial.

Existing principles of international law applied to conflicts over social change produce results that offend com-

Professor Dorsey is a journalism graduate of the University of Kansas and has earned both the LLB and JSD degrees from Yale University. He has served as a visiting professor at the National Taiwan University, Soochow University, and the University of Hawaii, and lectures regularly at the Air War College and at the State Department's Foreign Service Institute.



INTERNATIONAL LAW
AND
SOCIAL CHANGE

mon sense. A revolutionary group, subject to the discipline of leaders trained in Moscow or Peking, uses lies, assassination, riots, terror, and guerrilla warfare to paralyze the established order of a society so that it can impose a dictated new order responsive not to the expressed needs of the people but to a crude and rigid orthodoxy.

From Czechoslovakia to Viet Nam such a revolutionary movement claims the cloak of a purely internal matter of self-determination. Persons of good conscience are led to accept the claim and to denounce as immoral any international action to defeat the communists in what they call a "war of liberation." International law lends plausibility. The aggression against which the charter of the United Nations envisages measures of collective security, or of individual or collective self defense, is the movement of armed forces across territorial boundaries. Therefore, the reasoning goes, the communist "war of liberation" is not aggression, and since it is not aggression, it must be self-determination. Yet this result is patently silly in the light of Peking's announcement that by "people's" wars of liberation it will encircle and ultimately bring down imperialist-capitalist United States.

LET US SUPPOSE THE CASE of a country in which 90 per cent of the arable land is held by two per cent of the population, land rent is 50 to 70 per cent of the annual crop, credit is not available for seed or fertilizer, only 10 per cent of the children between six and sixteen are in school, and annual per capita income is \$112; a group genuinely responsive to the needs of the people demands rent reduction, land reform, rural credit, new schools, and agricultural support programs; the government, controlled by the land-owning two per cent, orders the army to disperse public protest meetings, the army fires into crowds of unarmed persons killing many, the secret police arrest, torture, and execute leaders of the movement without trial. Under existing principles of national sovereignty, recognition of governments, and intervention, it would be unlawful for another state to give economic, political, or military assistance to the democratic reform movement. On the other hand, it would be legal for another state, on invitation, to assist the government in repressing the reform group.

For a third situation, let us combine aspects of the first two, so that we have a country badly in need of social and economic reforms with a government suppressing demands for the needed reforms. The country, aided by another state, is opposing a communist "war of liberation."

This is the situation in South Viet Nam. Suppose the United States coerces the South Viet Nameese government to make genuinely needed social and economic reforms. Under existing principles of international law this would be an unlawful intervention in the internal affairs of another state. Yet, how could the United States reasonably be said not to have a legitimate interest in reforming the social order of South Viet Nam, when reorganization of that social order is the very object of the communist movement which the United States is helping the South Viet Nameese government to defeat?

Clearly existing international law is not responsive to the realities of conflict over social change. Why not? Because international law was not intended to order the relations between states with respect to social change. And what can be done about it? Develop new ordering principles for social change.

At the formative period of international law, states were expected to protect life and property. They accomplished this internally by maintaining law and order and externally by preventing invasion. The modern nation-state had emerged as the dominant form of political organization, in large measure, because it more effectively protected life and property than did feudal or ecclesiastical forms of social organization. To govern was to perform this function of protection.

Naturally, states came into conflict with each other with respect to the function they performed. Peaceful, or at least ordered, relations between such states required a basis for resolution of the question: Who has the right to govern where? The answer to that question, adopted in the Treaty of Westphalia of 1648, ending the Thirty Years War, was the principle of territorial sovereignty, which says that a state has the right to govern where it is able to exercise physical control. This principle of distributing governing authority was the root principle of traditional international law. It meant that title to territory, and the right to independent political existence, rested ultimately upon the effective use of force to take and hold territory. Necessarily, war was accepted as a legitimate instrument of national policy.

The present dominant political entities are still called "states," but they are expected to serve a purpose that was not expected of nation-states 300 years ago. The Industrial Revolution, for the first time in human history, made possible sufficient production to provide a decent standard of living for the masses. As this possibility has seeped into the consciousness of the masses around the

world, they have increasingly demanded its realization. The result in technologically backward countries has been to create tremendous pressure for all the social changes necessary to increase production radically and to raise the living standard of the masses. The communist world revolutionary movement rejects the principle of territorial sovereignty for distributing authority over the required reorganization of society.

COMMUNIST DOCTRINE is that it is wrong for the territorial state to control production relations because the coercion of law is used to enforce a set of relations that serve only the selfish interests of private owners of the means of production; it is right for the communists to destroy the "bourgeois" state, to break the old social order, and to impose a new socialist organization of society to serve the interests of the liberated workers by means of a "dictatorship of the proletariat." Since in the communist view the proletariat is guided by the Communist party, and the Communist party is guided by a correct understanding of dialectical materialism, authority to make decisions about production and distribution rests on correct ideology.

This ideological basis of distributing political authority is reflected in communist doctrine with respect to non-communist states and shows in the organization of communist states. An international meeting of communist political entities is a meeting of communist *parties*, not of states or governments of states. This reflects the dual nature of the Communist party with respect to a state where it holds power. The party has the obligation to rule within a territorial state where it has come to power. In addition, it has an obligation to the "world socialist movement" to assist in the overthrow of all non-communist governments and to help establish communist regimes which will reorganize the societies in those states. The communist doctrine of coexistence says that the armed forces of a communist state will not be used to overthrow the government in non-communist states by defeating their armed forces in the field.

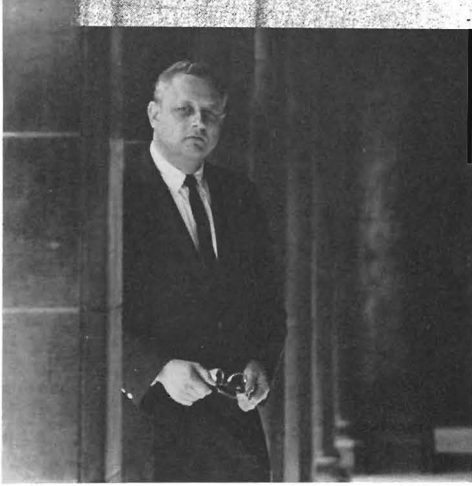
The other aspect of the doctrine is that the resources of a communist state will be used to instigate revolution in non-communist states; to train, equip, and supply revolutionary cadres; to support diplomatically "wars of liberation"; and if necessary, to use the armed forces of the communist state to prevent defeat of communist revolutions by the armed forces of non-communist states.

In all of this it is implicit that correct ideology is the communist basis for recognizing authority over organization of society for production and distribution. It is becoming increasingly clear, however, that among communist states a territorial basis of authority is being reasserted. This has not resulted from pure theoretical interpretation. When Yugoslavia asserted the right to take an independent communist course, the Soviet Union denied the right and attempted to impose the leadership of the Soviet Union Communist Party, based on its superior understanding of ideology.

In 1961, this position was abandoned at the Twenty-Second Congress of the Communist party of the Soviet Union in response to two hard realities. One was the growing claim of the Chinese Communist party for leadership of the world socialist movement. The other was the failure of the Communist party of the Soviet Union to achieve unified or even coordinated economic management and control throughout the territories of the Eastern European countries. This latter fact is an ironic result of the communist theory and practice that the only possible way production and distribution for the benefit of the masses can be achieved is by nationalizing ownership of the means of production.

The result was to tie the economy of each state so completely to the political interests of the Communist party ruling in that state that economic integration across state boundaries could not be based solely on considerations of economic efficiency, but had to be subordinated to inter-party and inter-state political rivalry.

In economically developed states the communist challenge to the territorial state is largely irrelevant, as the Yugoslavian Communist Milovan Djilas has pointed out. The communist program is one way to accumulate initial capital for industrialization. It is not an effective way to manage production, as the Soviet Union itself is having to admit. To keep production decisions in the hands of the ideologically anointed, Lenin organized the combat-type political party with democratic-centralist control. This form of organization is excellent for revolution and repression, but it does not sufficiently encourage the voluntary initiative and cooperation necessary to an efficient, expanding economy. In an increasing number of areas the Soviet Union is substituting the profit stimulus of a market system for the directive of an ideologically oriented planning official.



INTERNATIONAL LAW AND SOCIAL CHANGE

Does this mean that territorial sovereignty is proving an adequate principle for distribution of authority over production relations in the economically developed non-communist countries? The answer is no. The central meaning of the European Economic Community is that management of production and distribution needs to be at a level not possible within the territory of each of the countries of Western Europe. Even the United States, the largest internal market in the world, is participating in the creation of the European Economic Community—not politically, but economically, by private investment.

Is either the ideological basis or the territorial basis of authority over production being accepted in the underdeveloped countries? In the countries of Africa, the new leadership groups, which often leaned toward communist methods of economic organization, have learned to disassociate themselves from the “world socialist movement” and to reject a rigid, orthodox ideological basis for organization of their economies.

The new African nations have been quick to assert complete independence and to resent any outside attempts to direct their economic development. This is understandable, because the traditional political and symbolic implications of territorial sovereignty have defined the prize of independence so lately won from colonial masters. The countries of Latin America have a strong attachment to the territorial basis of authority because of a long history of United States intervention in support of American private investors.

When the weight of these factors has been given its due, however, it must be recognized that the efforts toward economic progress in the underdeveloped countries are by no means purely national efforts. Planning and management skills which are not available within a nation are made available through regional development authorities or through specialized agencies of the United Nations. Investment capital is made available through bilateral grants or loans, through regional organizations, or through international banks and development funds.

THUS WE COME BACK to international cooperation for social and economic progress. Sharing in the newly possible economic abundance is a central concern of our time, as protection of life and property was at the formative time of the territorial state. There are indications that international cooperation is more effective than separate

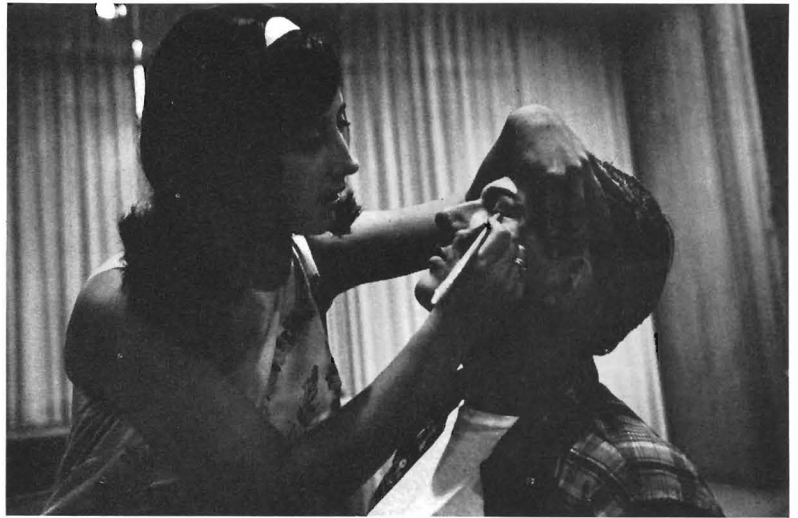
national efforts to organize production and distribution. At the same time, international alliances for military defense are falling apart and the function of protection is likely to remain with the nation. In this circumstance we can expect territorial states to continue to exist, rather than merging completely into broader political entities, but we can also expect more efficient institutions of international, social, and economic cooperation to evolve.

What ordering principle will be accepted for distributing authority over the organization of production and distribution between the new international institutions and between them and territorial states? This can probably be determined only in full awareness of the impact of accepting territorial sovereignty, or ideological sovereignty, or some other as yet unformulated principle. Therefore it is likely that the new ordering principle for resolving conflicts over social change will emerge little by little in the settlements of conflicts over social change that states are willing to accept.

A new advanced course in international law was started in the School of Law this fall to study recent and current conflict situations to see what ordering principle is embedded in the positions of the parties and whether any consensus is emerging.

We have been talking of only one area of international law. There are other areas, such as diplomatic and consular law, where existing principles and rules are adequate and failure of a state to comply with its obligations is rare. There are areas, such as the law of international organizations, where new principles and rules that are adequate and effective have been developed in the postwar period. Conflicts currently arise over issues other than social change, such as the recent India-Pakistan war over territorial claims to Kashmir. Even in the law of social change, generally characterized by gloomy confusion, there is one bright spot. Escalation of social-change conflicts into world-wide war of massed armies and, possibly, nuclear weapons, while not impossible, is unlikely because of the nature of the issue involved.

In the last great war Hitler wanted to subjugate, and he sent massed armies across territorial borders. To that kind of aggression massive force and weapons of mass destruction are appropriate responses. The communist claim to reorganize the societies of the world is best served by decentralized, limited force, and limited force is the appropriate response.



Carole Stotts, liberal arts senior and publicity director of Kadadiz, also served as one of the producers of "The Fantasticks." Producing meant both planning and organizing the production and such odd jobs as makeup, in this case with Robert Pieske, an alumnus who performed the Narrator role.



"The Fantasticks," shown here in a late stage of rehearsal, attracted near capacity audiences totaling about 1,600 persons to its seven July performances in the Wohl Center cafeteria in the Forsyth Residence Hall area.

K A D A D I Z

TWO OF THE MOST VITAL traditions at Washington University for decades were Quad Show, an annual spring musical that was a showcase for the campus' finest creative and performing talent, and later contributed some of that talent to Broadway and Hollywood, and Bearskin Follies, a competitive production of original skits that displayed a wide cross-section of the university.

Alumni, students, and many faculty thus watched in dismay in recent years as first Quad Show, and then Bearskin Follies lurched to their deaths because of rising costs, declining student interest, and a general failure to redefine the purpose and objectives of the productions. For too long Bearskin Follies and Quad Show had become merely cherished campus institutions, and the artificial enthusiasm that had kept life in the old bodies finally ran out.

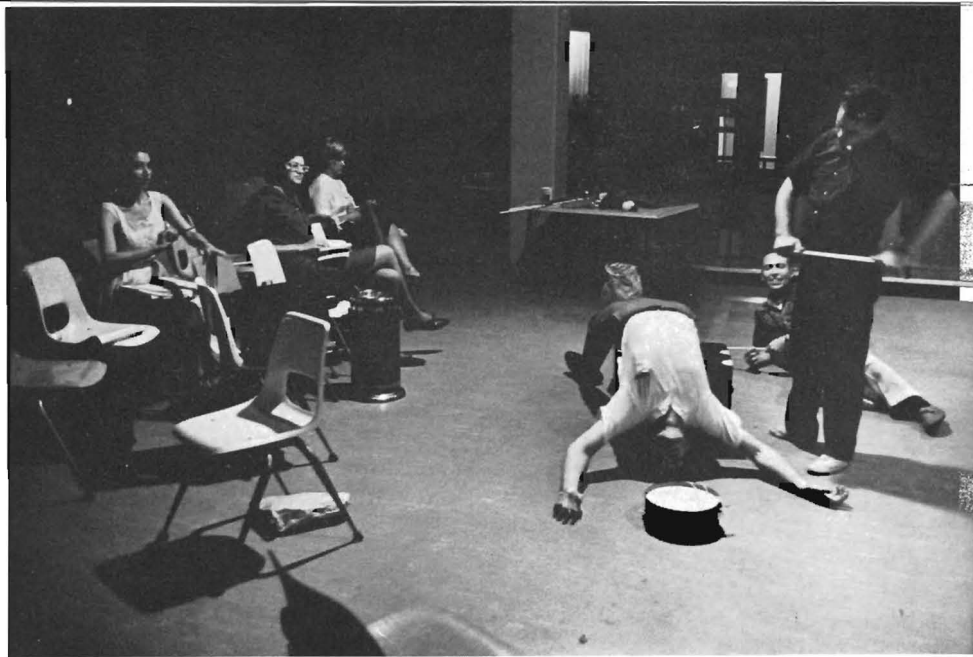
Last spring, a small group of students began to prove with their energy, talent, and zeal the falsity of the recurrent charges that students on the Hilltop are apathetic, lazy, and passive. With fewer than a dozen members, the group asked for and was given responsibility for all WU musical shows, under the organizational name of Kadadiz. (The meaning and origin of the name are lost in the mists of pre-history, according to the publicity director of the group, but—depending on whom you ask—it may be derived from the ancient Persian word for “greatness,” or the Babylonian phrase meaning “in doing is all joy,” or some other bit of esoterica.)

Fearing neither the tentacles of University red tape nor the summer's enervating doldrums, Kadadiz's angels immediately set about their self-appointed task of filling the campus air with song by producing the off-Broadway musical hit “The Fantasticks” for the summer school in July. Plans are now well advanced for a revival of Bearskin Follies, in late November or early December, and Quad Show will definitely present a full-scale Broadway musical in April.

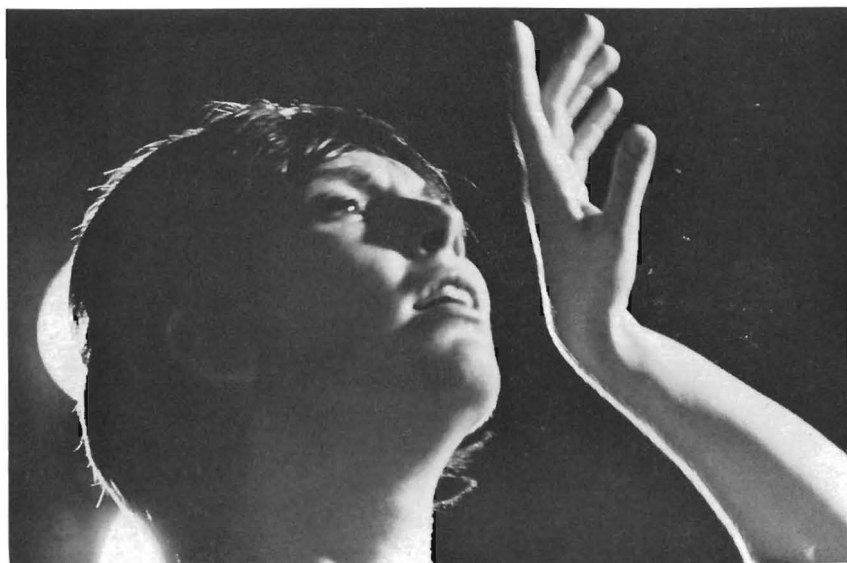
Kadadiz has accomplished much more than merely resuscitating expiring institutions. It has placed the emphasis on its activities on two keystones: quality and student participation. Its officers—whose titles reflect the jobs they perform rather than authoritarian positions—believe strongly that students at WU desperately need outlets for their talents as writers, composers, singers, dancers, actors, and musical performers; and that the campus is entitled to first-quality productions of musical shows. There is a new spirit of commitment in the air at the University this fall, and Kadadiz has done much to bring it about.



Nancy Stice Boyd, a WU graduate student in the Department of Music, was the only girl in the cast of “The Fantasticks,” an unusual musical play that has run for nearly six years in New York’s Greenwich Village and had been seen only twice before in the St. Louis area.



Word of the success of the summer performances of "The Fantasticks" spread so quickly that Kadadiz was asked to give five additional performances in September.



"The Fantasticks" cast was carefully selected by the producers, Carole Stotts and Janet Phillips. Nancy Boyd is shown above in song from the first act.

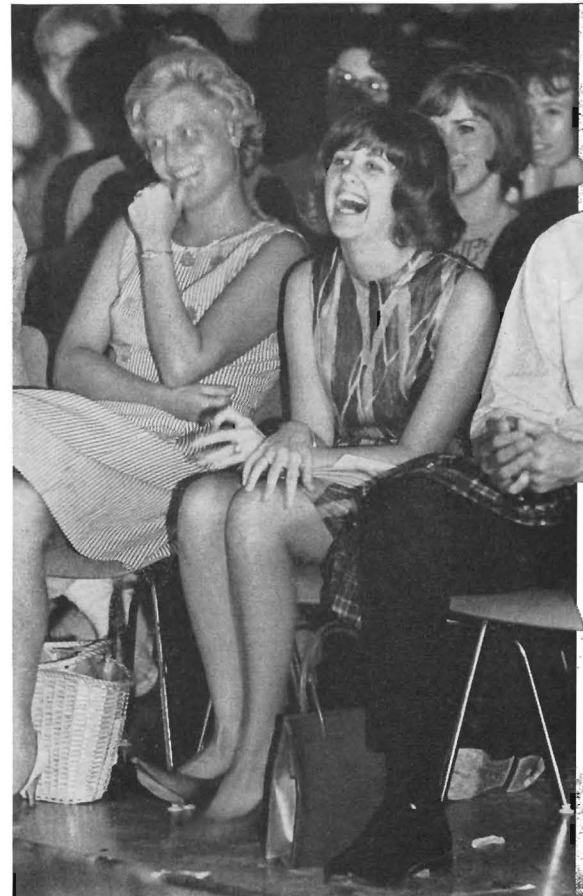


Another scene from the first act of "The Fantasticks," with Nancy Boyd as Luisa and Jim Flynn as Matt. Students were also completely in charge of lighting and technical aspects of the production.

KADADIZ



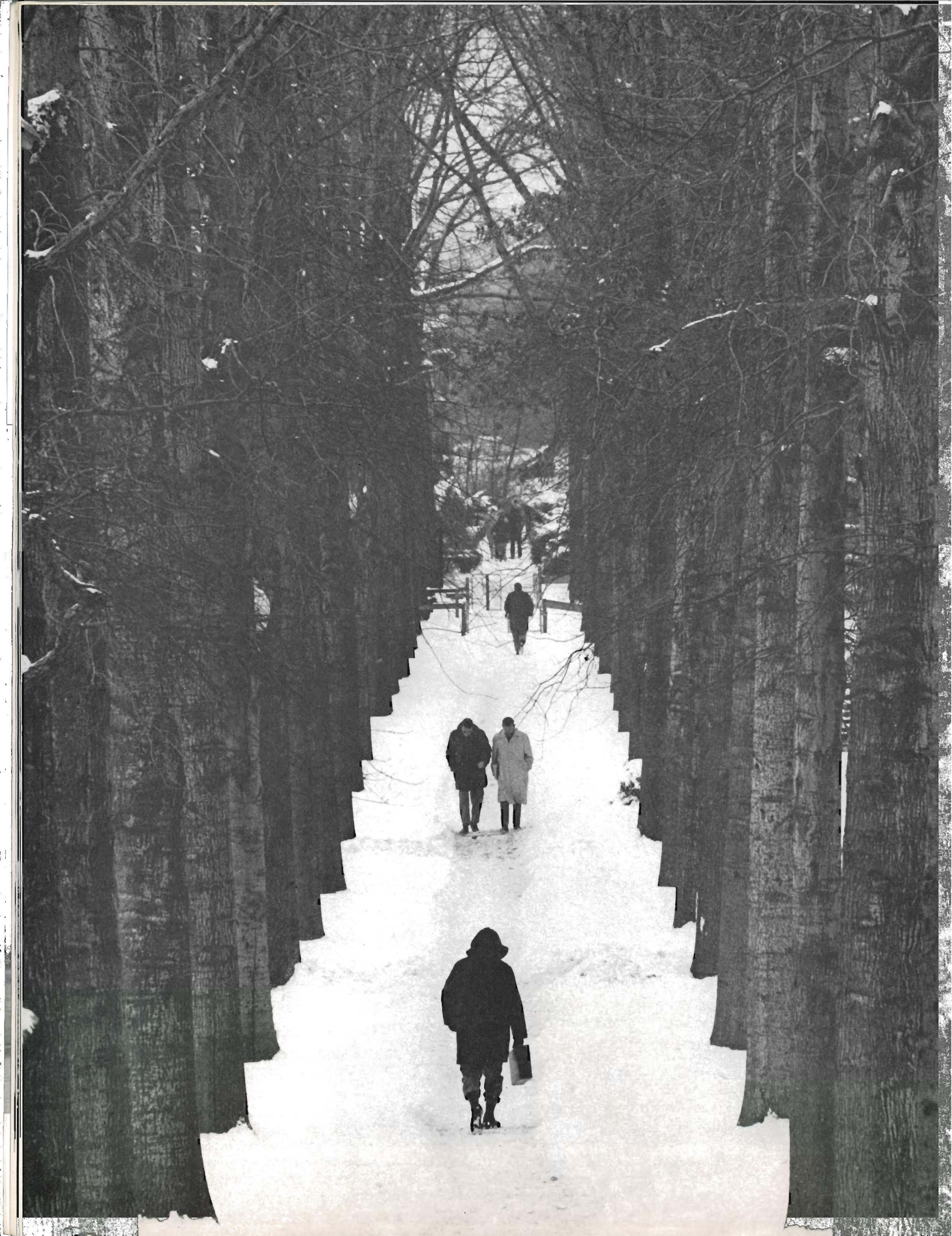
Michael McKenzie (above), a fine arts junior, played the role of Henry, an old Shakespearean actor. Harry Fisher was Mortimer, the man who dies; and Phil Culbertson, a liberal arts senior, was the Mute. Rosa Abraham, professional director and graduate of the Old Vic School in England, staged "The Fantasticks."



Should students participate in extra-curricular activities? Are the benefits they receive from participation equal to the many hours they must devote to a production like "The Fantasticks?" All such questions seem to be answered by the audience's reaction.



Mike Dalton (left), as the Girl's Father, and Jerry Zeffren, as the Boy's Father, are both alumni who were active in Bearskin Follies and Thyrsus productions in their undergraduate days. Pete Thompson, another alumnus, was musical director and pianist for "The Fantasticks."



When the Washington University hilltop campus was first conceived more than seventy years ago, it was planned as a series of quadrangles linked by avenues of trees. The building plans incorporated in the Seventy by 'Seventy Capital Program call for a return to this conception.

ARCHITECTURAL IMAGE OF THE UNIVERSITY

By **ROBERT VICKERY**
Assistant Professor of Architecture and
Director of Campus Planning

The architectural image of a University is the feeling one remembers after walking through and living with all the places that constitute the campus.

It is no accident that Brookings towers are a symbolic gate, the Quadrangle an outdoor lecture room, and the oak alley a pedestrian cathedral. Each of these places, formed by trees, walks, walls, and roofs, contributes to the mental picture of what the University is.

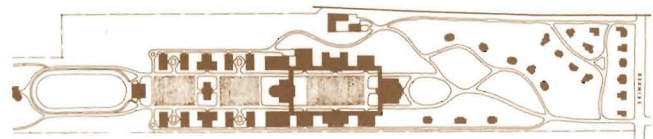
Architect Louis Kahn expresses this poetically when he says that his real work is deciding "what the building wants to be," and that if he is successful, the image created will reflect this. In the University's case, the image reflected should be an idea about education. The campus will "want to be" a place of learning—for students and for faculty.

More than 70 years have elapsed since our present image was first molded, yet the story of this beginning remains an amazing one. In the 1890's the campus at Washington Avenue and Seventeenth Street was inadequate, crowded, and surrounded by the noise and smoke of the city. Realizing the impossibility of expansion and guided by unusual vision, the Board of Directors, in a surprising move, exchanged the entire city campus property for a tract of grazing meadows and farm land at the western edge of Forest Park.

Today, the daring of this move is seldom recognized. One of the University's early architects, James P. Jamieson, has written:

"When weather prospects were bad, and the certainty of losing one's rubbers and the possibility of being stuck in the Skinker Road clay were obvious, the long street car journey . . . took one to the north edge of the property . . . Here were grassy slopes and groups of beautiful oak trees, making all seem idyllic."

The Board's next step was equally wise. They hired the noted landscape architects, Olmstead, Olmstead and Eliot (a name that keeps reappearing) to make a site analysis and prepare a preliminary scheme. Their study was the genesis of today's image.



1895 sketch plan for Washington University

The key feature of the scheme is its combination of courtyard and mall to form secluded study areas. Generally, the classroom buildings are arranged along the edge of the mall, and common facilities (administration, library, athletics) are placed centrally within. The whole is then placed on a slight hill rise, set well back from Skinker Road. Delighted with a scheme that created the very image they were seeking—a place of quiet study with sun and air—the Board directed Olmstead, Olmstead and Eliot to prepare a competition program immediately.

For by this time there was talk of a great fair: a fair where each car on the Ferris wheel would hold 60 people, and where 500-pound bears would be made out of butter. And again inspiration had struck the Board: If the first University buildings were completed in time, they could be rented to the fair and the profits then used to enlarge the campus.

First a significant site change was made. Messrs. Olmstead and Eliot suggested that additional property be purchased along the southern edge so that the entire composition could be shifted south and placed on an axis with Park Avenue (now Lindell). The hilltop campus would then have the imposing entrance deemed necessary for a great university. This accomplished, the competition program was issued.

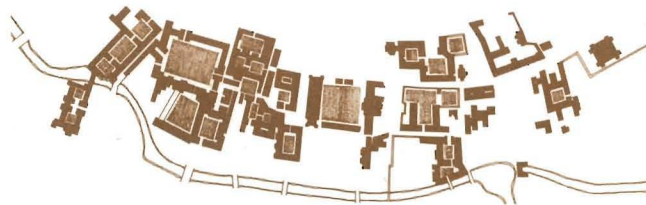
Architectural Image of the University

From a planning viewpoint the most important statement in the competition document was one line added after the program was finished and printed—"The Board prefers to have the buildings grouped around quadrangles." Every possible encouragement was thus given to the creation of outdoor teaching rooms.

Six distinguished American architects were invited to compete, and their entries formed a spectrum of the 1899 American architectural fashions: Colonial Georgian, Classical Renaissance, and English Tudor. English Tudor won, not because of its style, but because the authors of the scheme, Philadelphia architects Walter Cope and John Stewardson, presented a brilliant plan solution. In every way their plan (shown on the next page) improves the image intended in the original Olmstead scheme. First, rather than having a simple mall broken into regular quadrangles, Cope and Stewardson arranged the quadrangles in an informal pattern with a variety of sizes. In their submission they state:

"It is worthwhile to plan for many quadrangles, for each will develop a character of its own. These are the out-door rooms, with the sky for the ceiling, which, when the sides are once completed, can never be disfigured by later additions."

Second, the buildings themselves are linked into a continuous form, completely enclosing the courtyards and creating a unified composition. The architects were obviously influenced by Oxford and Cambridge Universities in England.



1886 sketch plan of Cambridge, England

But where Cambridge has the loose, accidental growth pattern of a medieval village, the Washington University scheme is a planned pattern organized along a series of axes. These axes, formed by long walkways lined with trees, emphasized the east-west direction of the campus and defined the central pedestrian core. The power of Cope and Stewardson's plan is that it completely integrates the outside with the inside—landscape with architecture—to form a total campus treated as one building. This architectural image of a university is virtually unique in American education. That the architects understood this may be seen by quoting further from their submission:

On the buildings: . . . "to so unite these that they may form one whole and avoid the danger of discordant contrasts."

On enclosing the quadrangles: "A courtyard with many openings misses most of its possible charm. It does not express the repose and finish that it should, but rather an unwelcome rivalry between separate architectural units. . . ."

And finally, *on the choice of a style:* "Classic Architecture expresses completion, finality, perfection; Gothic Architecture expresses aspiration, growth, development. To the beholder the Classic says: This is the sum—Here is perfection—Do not aspire farther. The Gothic says to him: Reach higher—Spread outward and upward—There are no limitations.

"Now, when we consider what a university is, can there be any doubt which of these two styles best answers to its idea? . . . the Gothic has always, and will always, appeal to us as distinctly the style for a university, which like a tree, must either grow or die."

Today, the important point is *not* the argument against classicism, but rather the argument *for an educational image.*

In summary, three steps had led to this image: first a daring choice of site by the University Board; second, a wisely programmed competition by the landscape architects, Olmstead, Olmstead and Elliot, and finally, a superb winning solution by the architects Cope and Stewardson.

And now, building began. Confident of its future, the University completed the Quadrangle and leased it to the World's Fair for \$700,000. Brookings became a "Hiring Hall," and Ridgley was used for the West Point Military Ball, the entire academy coming by special train.

Further west, Graham Chapel was built (in the style of King's Chapel at Cambridge), while pedestrian oak alleys led to Francis Field and Gymnasium, where the 1904 Olympics were held. On the tract that is now the Forsyth residence hall area, Pygmy huts surrounded a lagoon (and the chieftain caused a minor crisis by demanding a telephone). The new campus was beginning with an exciting heritage.

There were, of course, the usual problems. The architects felt that a single material should be used throughout (for the campus itself was to be one building) and that Missouri red-granite was the ideal choice for permanency, texture, and color. A young architect, James Jamieson, was sent to supervise the work, and he records:

"There was a general feeling of irritation prevalent amongst the men when it was found that a 'white collar' young man was telling these masons how to lay stones . . . Some took it pleasantly, others could not stand the criticism, threw down their tools, and quit in a huff. . . . A set of guiding rules, which by chance numbered ten, was printed on cards and given to each workman . . . These rules were, of course, soon known as the 'Ten Commandments.' They were quite as frequently broken as the Biblical originals . . ."

Despite delays, the stone university rose rapidly. Brookings, Ridgley, Busch, Cupples I and II, Graham Chapel, Lee (now Umrath), Liggett (now Prince), McMillan, and

Francis Gymnasium were all finished by 1907, along lines suggested by the Cope and Stewardson plan.

It was an enormous task, and it exhausted its builders. When the heady era of the World's Fair had ended (taking with it the Pygmies), St. Louisans settled down under their elms and oaks to enjoy life. Not until 1922, when Duncker and January Halls were started, did construction begin again, and these were the last buildings to follow the 1899 scheme. Slowly, through time, the old image was never fulfilled. No new quadrangles were completed, for linking onto existing buildings proved to be a difficult architectural task, and more importantly there was always room, it seemed, to go west on the site. When a donor contributed money, an isolated land parcel was set aside for an isolated building, and in this manner the careful integration of buildings and landscape was abandoned.

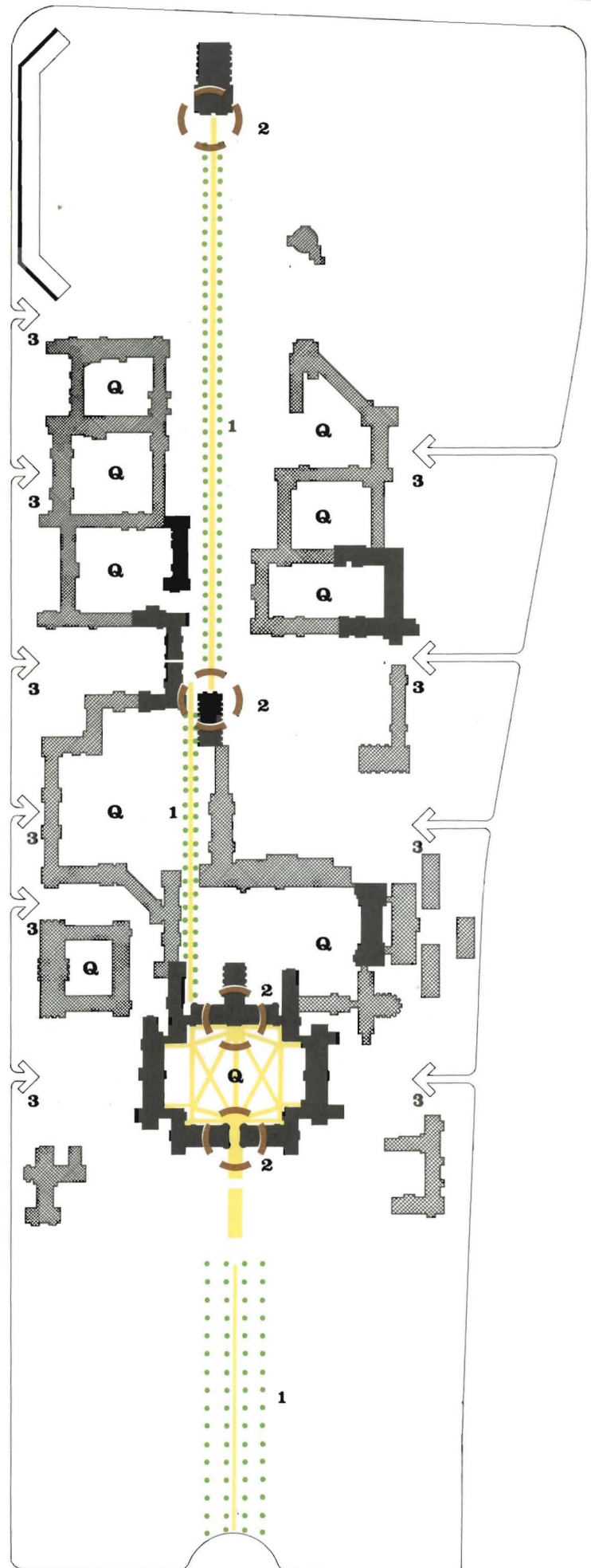
Still, the power of the original plan had provided such strong east-west guidelines that the inherent loss of the earlier image was not noticed, and as the early oak trees reached their maturity, the campus actually attained a baroque splendor. A graduate of the 40's writes:

"I remember gold circles under the ginkgo trees after a fall rain . . . and frosty walks down the oak row, trying to memorize notes all the way . . . eating brown-bag sandwiches and arguing with other students as we sat under the elms on the Quad grass . . ."

Today we are faced with the bitter knowledge that when this heritage of trees dies we have no reserve to take their place. (Remember the elms in the Quadrangle?) Our open land is gone. Cars have invaded the green campus interior and parking spaces are jammed among the buildings. Either we must abandon our campus to aesthetic chaos, or we must perform the creative act—forcefully restating the image of 1899 and forging new images where needed.

Fortunately, there is an opportunity. The rapid growth of graduate education; the urgent need for laboratory, classroom, and library expansion, and the dramatic transformation of the University in recent years from a "streetcar college" to a residential campus have created a demand for nine new buildings. Providing the funds for these new buildings is a major part of the recently announced Seventy by 'Seventy Capital Program to raise \$70,000,000 by 1970 to

Diagram of winning competition plan for the main campus: This scheme emphasized linked buildings to form a series of quadrangles (Q); tree alleys (1) to define east-west axes; major buildings (2) to establish focal points; and periphery roads to keep services (3) outside the central pedestrian green. Only buildings shown in solid black were actually constructed.





complete the emergence of Washington University as a major national center of higher learning.

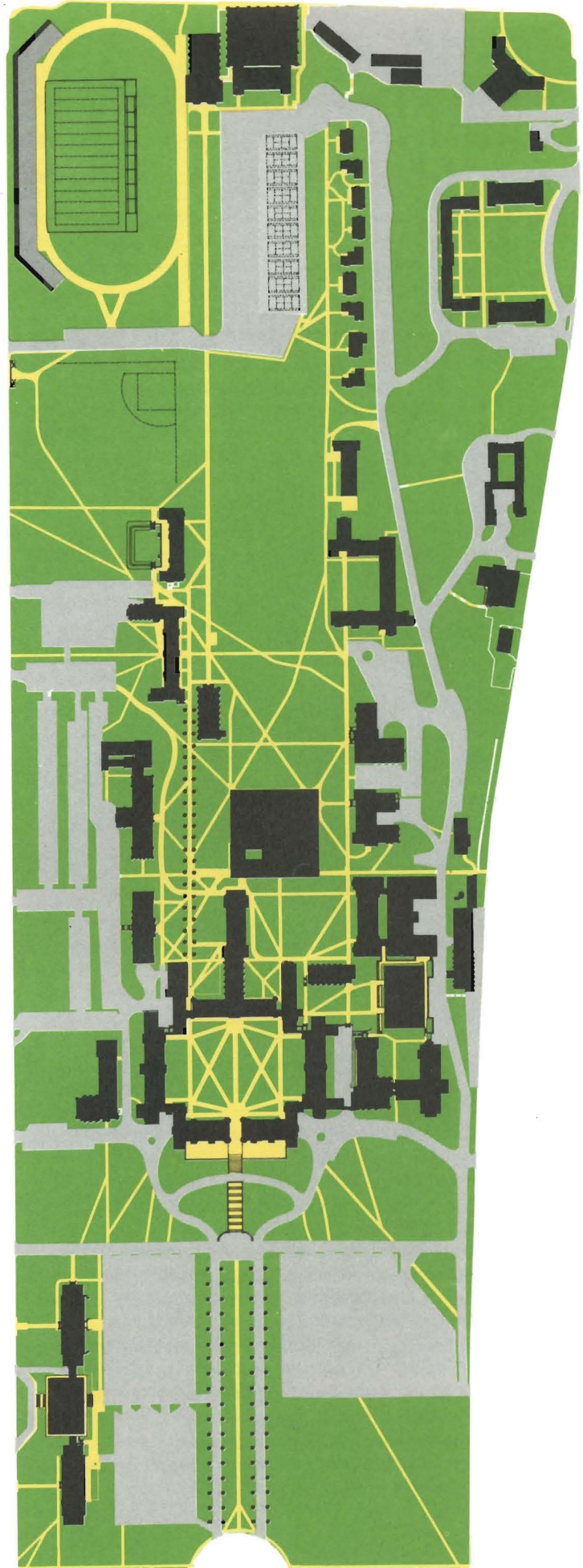
These nine buildings can bring to fulfillment the original image through four simple steps:

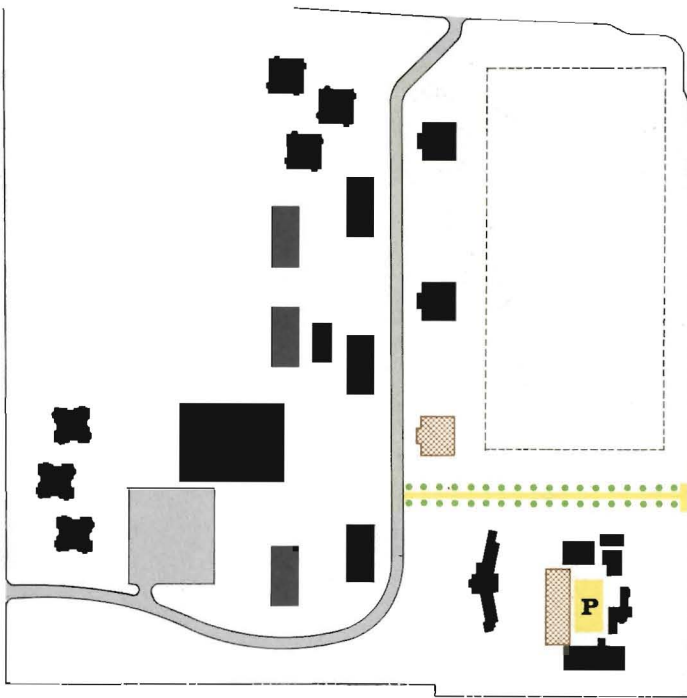
1. Using the new construction to fill in the open spaces and thus again linking all the buildings into one form.
2. Building a series of small activity plazas (rather than formal quadrangles), each of which will have its own character but will be related to the inner pedestrian greenway.
3. Planting new tree alleys to re-emphasize the east-west axis.
4. Defining again the campus edges, and removing cars from the green interior.

Action has already been started to accomplish these steps. A guide plan for 1970 has been prepared, the Compton physics laboratory is almost completed, and the Monsanto Life Sciences laboratory is under construction. Architects are being hired for the new chemistry and engineering laboratories; drawings on the new University Center are in preparation; and programming has been started on the botany, music, and fine arts additions. Along the north edge of the campus, cars soon will be removed from the green interior, the north service road straightened, and new terrace parking provided for 200 cars.

But the University's most ambitious architectural plans are now underway just west of McMillan Hall

Existing campus plan: As the University expanded westward, the 1899 scheme, which treated the campus as a single building form, was abandoned. Today's image is a mixture of quadrangle and green mall, with the finest portions of the campus being those constructed under the original scheme.



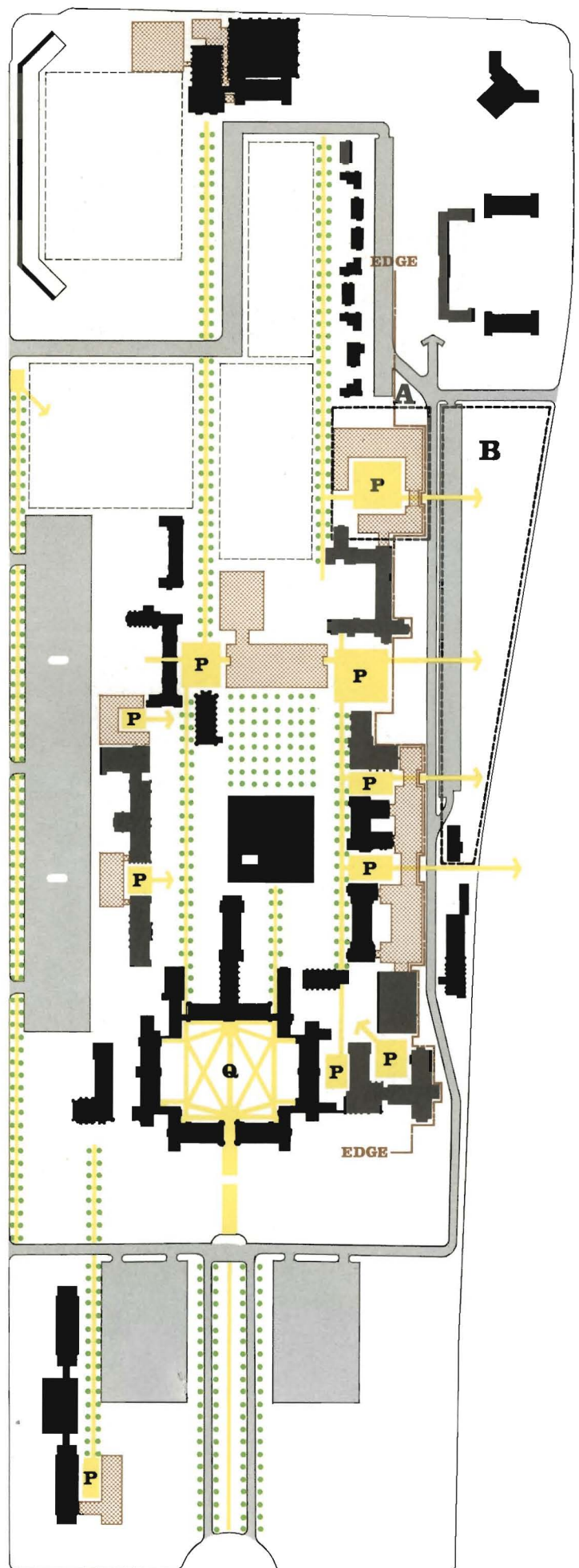


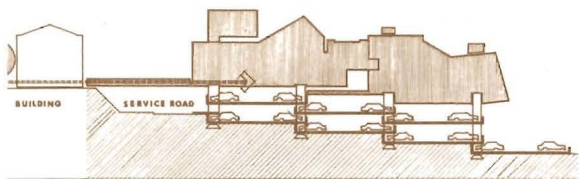
and along Millbrook Boulevard. For in these two areas, the University is currently holding an open competition to select an architect for new Law School and Social Science buildings. More than 400 architectural teams from throughout the country have registered for the \$3,500,000 competition, St. Louis' most important national architectural event since the Saarinen arch design on the riverfront. The first stage of the competition ends on November 1 with the selection of four finalists, each of whom will receive \$6,000 to prepare finished drawings by February, when the winner will be selected. The jury for both stages is composed of two prominent architects, Harry Weese of Chicago and G. Holmes Perkins of Philadelphia, and Chancellor Thomas H. Eliot.

In the competition two separate creative tasks are outlined for the architects. In site A (see drawing) competitors are asked to arrange the new Law School and Social Science buildings around an activity plaza which is integrated with the campus green interior. In this site the best solution will establish guidelines for the final completion of the still valid 1899 image as the hilltop growth is slowly finished.

In site B a new image is called for. Here competitors are asked to design a schematic building system which allows for the eventual construction of 300,000 square feet of laboratories above a parking structure holding at least 600 cars. The sketch at right shows how such a system might be built and still be tied directly to the campus green by utilizing pedestrian bridges over the service road.

Plans call for construction of new buildings in areas shaded brown, creating a series of activity plazas (p). Tree alleys will re-emphasize pedestrian axes; parking areas will be redefined and the hill slope along the north side of the campus will be used as a building edge. Competition sites A and B are marked.





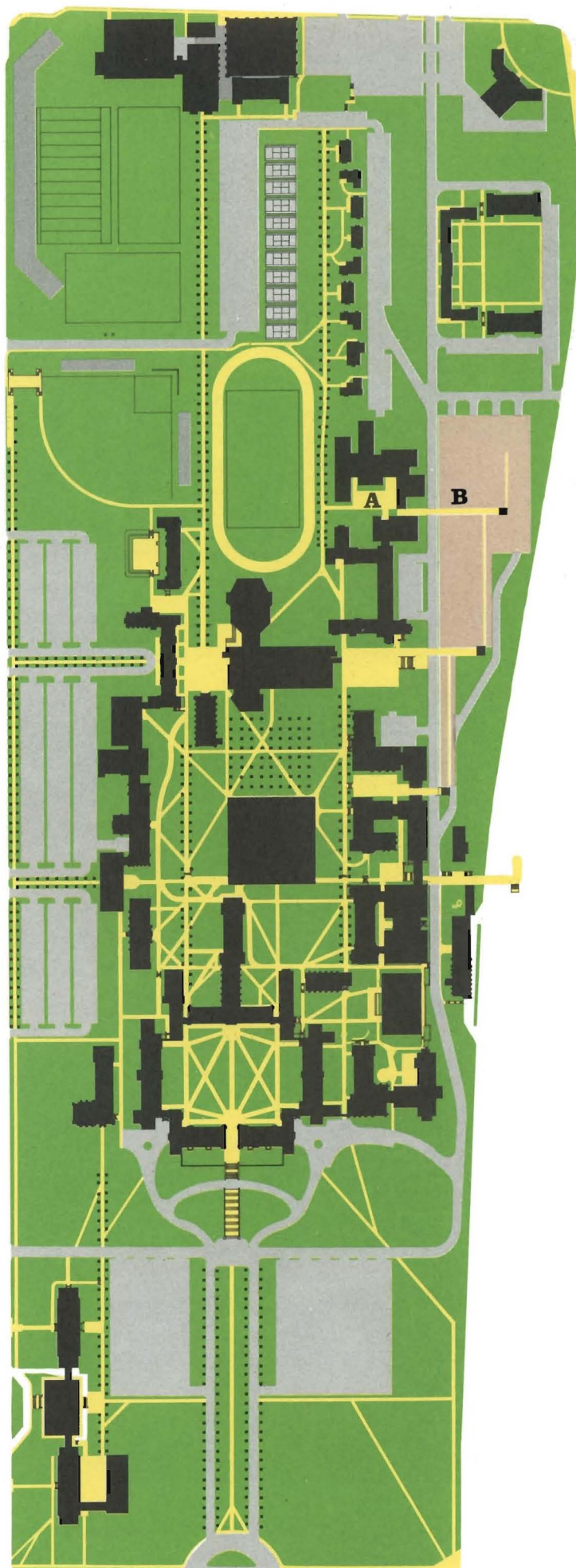
Section diagram of new north service road

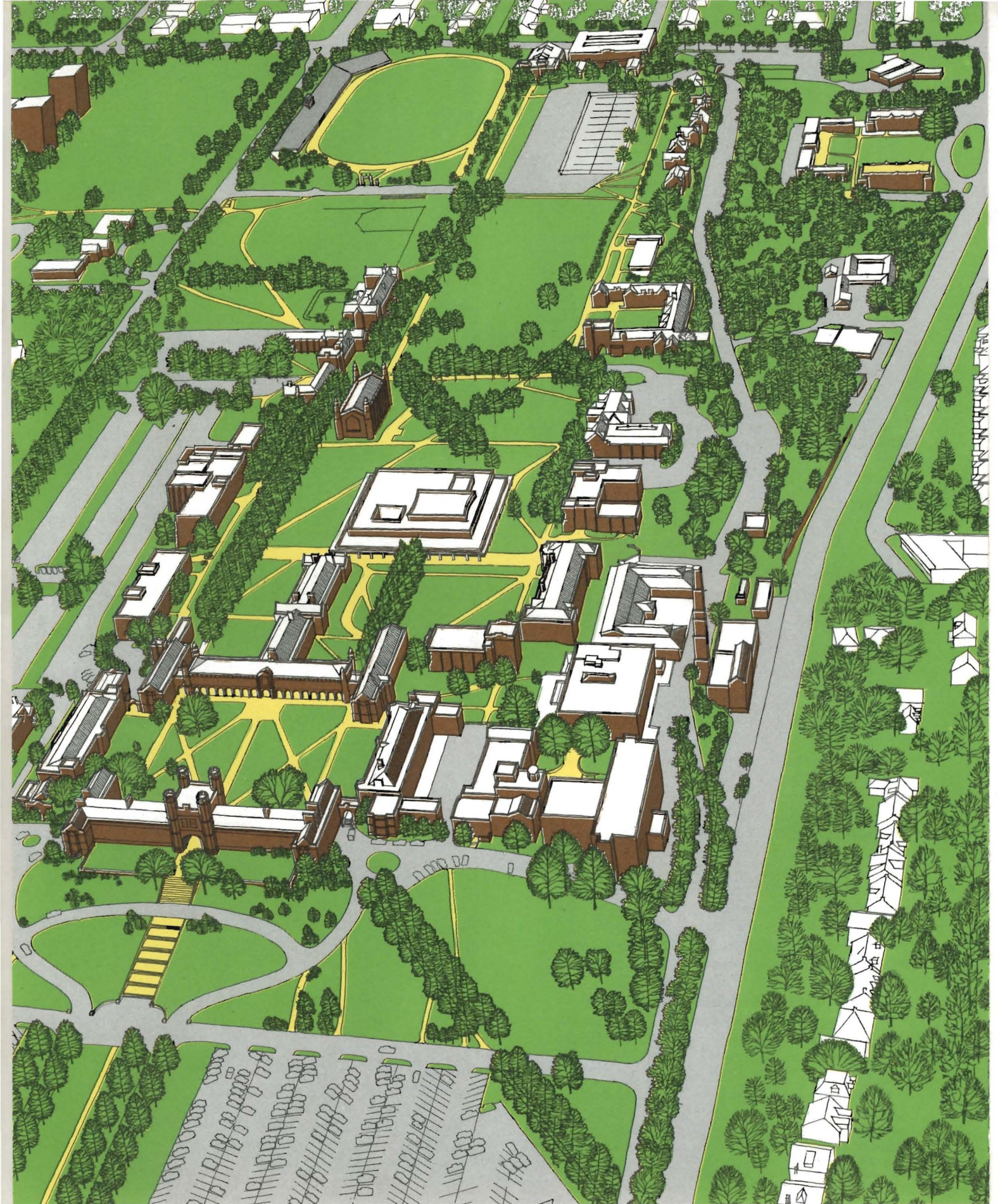
In this manner a strong and dense beehive of laboratories can be built over a large parking area below. The best solution will establish in site B an image for the future—an image which to the fleeting traffic on Millbrook shows the University as a busy research center, yet an image which within itself will reflect back to the older central core of green.

Clearly, the competition winner must be a creative architect in the deepest sense. For above all he must create guidelines for an image which can grow in meaning: an image which can accommodate both the laboratory of the chemist, and the quiet skylight studio of the painter, and an image which never forgets that its reason for being is education, uniting the chemist and the artist in a setting where each may find his own philosophy.

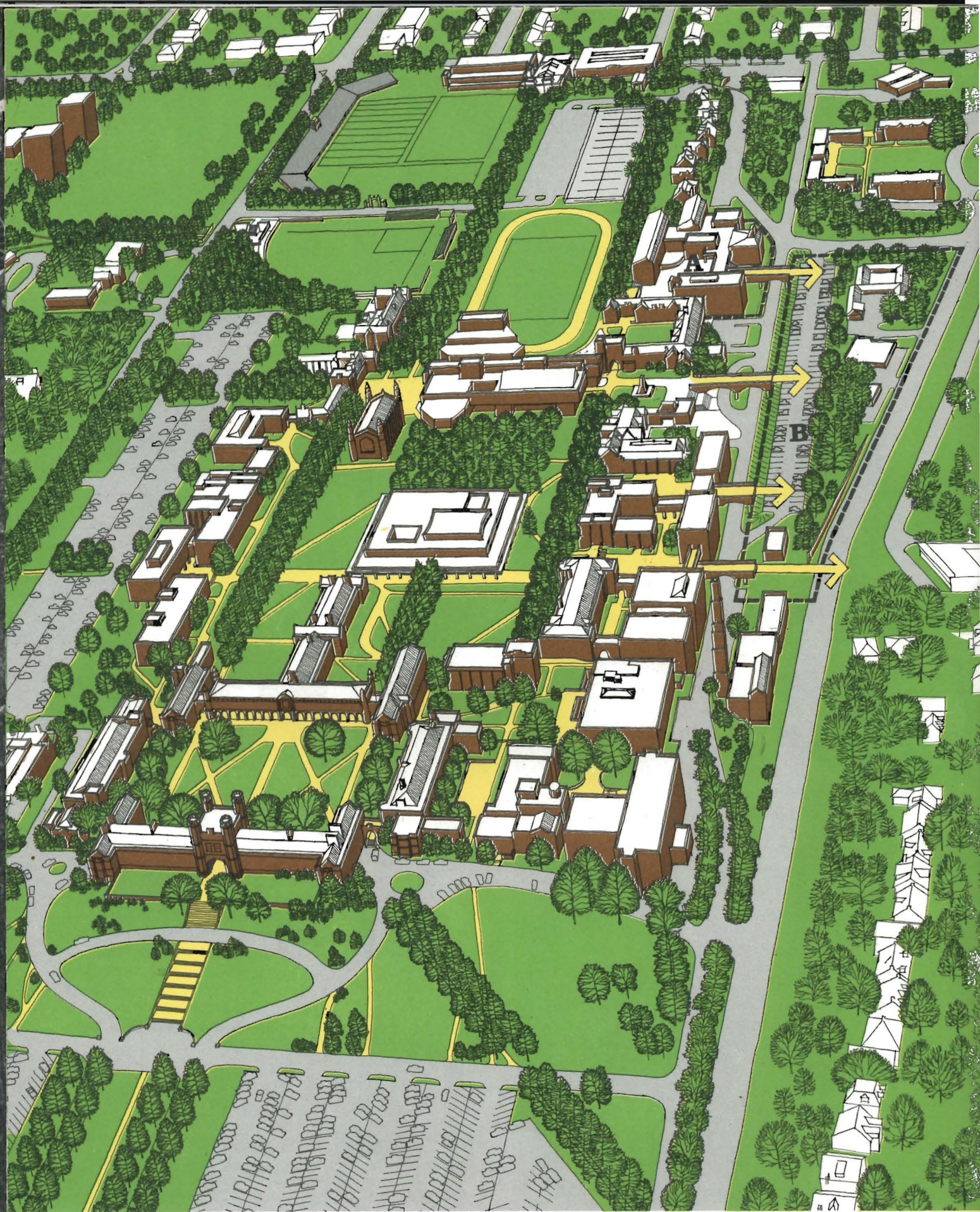
Our earlier architects have issued the challenge—and it is a challenge we must accept. Our University (and its architectural image) must, like a tree, either grow or die.

Possible plan for the campus of 1980: The diagram of 1970 is carried to completion, following the guidelines set down in the past. The future laboratory buildings in competition site B could tie directly to the main campus by a series of pedestrian bridges crossing over the north service road.





Perspective of main campus, 1965. Not shown are the architecture and fine arts complex in southeast corner, and the major portion of the Forsyth residence area.



Perspective of main campus, 1980. Artist's conception of how new building being planned will fit into present campus if present guidelines are followed in future.

Peter Riesenbergr, associate professor of history, lived and studied in Florence last year on a Guggenheim grant. A medievalist, he spent his sabbatical in the midst of the Renaissance, working on the idea of citizenship as conceived and practiced in fourteenth-century Italy. The following letter is in answer to the editor's query as to the nature of Professor Riesenbergr's life and work while on leave.

Letter from Florence

Dear Frank:

You asked me to write a piece about my year in Florence, and immediately I began to think of all the categories into which I might arrange my thoughts and reactions. What you really want, I expect, is some statement about the meaning and value of a sabbatical. I wonder what to add to all that's been written about the importance of international contacts and of enriching foreign travel. And shall I answer as human being responding to the beauty of Italy over the year, as father happy to see his children react intelligently to Giotto and Leonardo, as member of the American intelligentsia (sic!) called upon to explain his country's foreign policies, or as medieval historian with reading to do and a book to write?

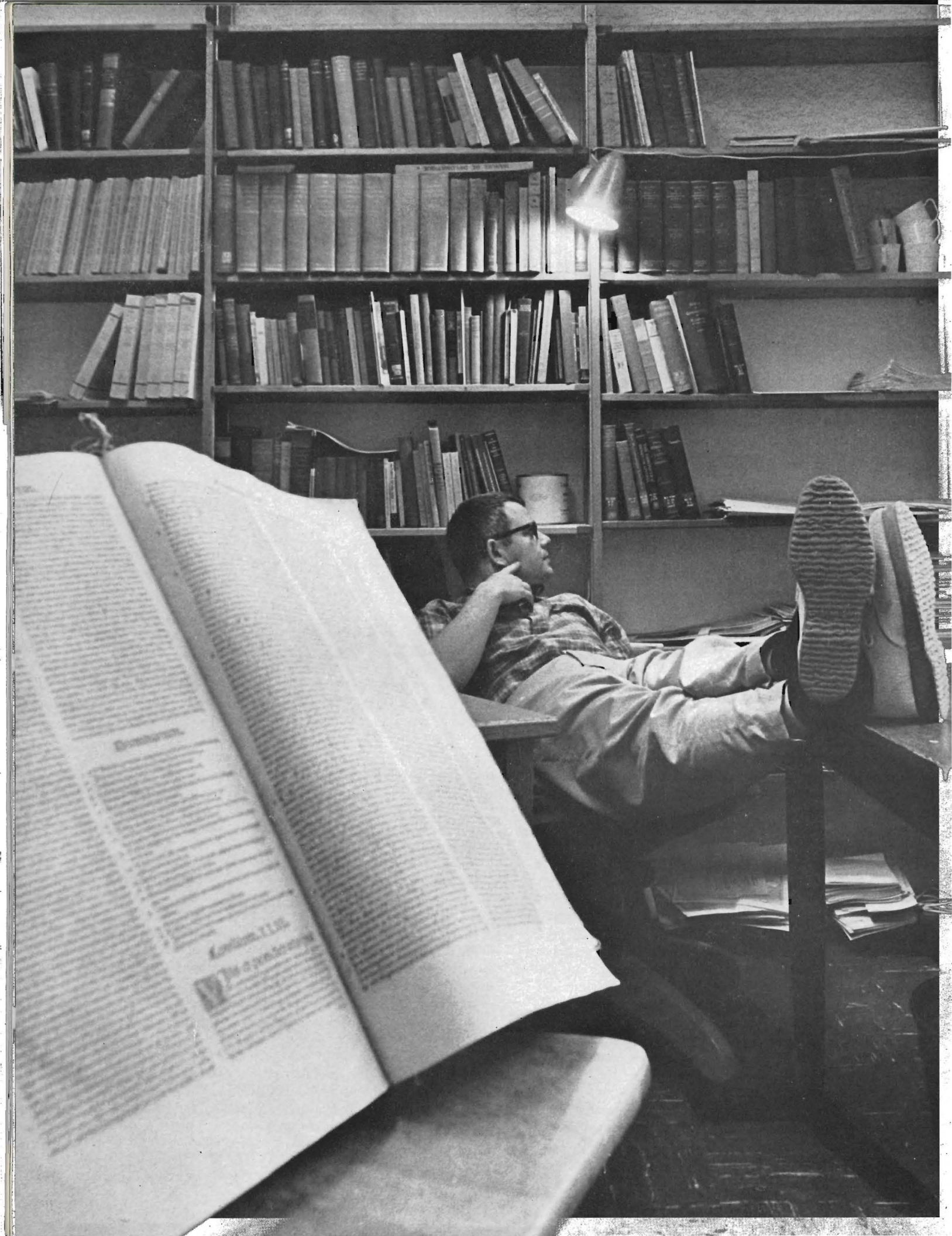
If change is good, then what I must stress first is how different life is in Florence. In shopping and buying stamps, of course, but also in ways that affect the very nature of one's existence. In St. Louis a hundred different styles are thrown together to make a suburb or neighborhood; wood, brick, stucco mix as materials to produce no overwhelming impression. Here in Florence, all buildings are controlled by the past (and by those government bureaus organized to control the past so as to preserve aesthetic and touristic values); stone everywhere in the historic center: flat, massive, elegant, and beautiful, and over all buildings the red tile roofs that give the city its rich unity.

What a pleasure it is to park in the open space before the Pitti Palace and then walk to work . . . down the Via

Guicciardini, lined with old palaces, across the Ponte Vecchio, and then along the Arno to the Uffizi, beneath whose famous gallery Florence's city archive is housed.

In this uniquely beautiful setting I led an unfamiliar, in a word, solitary, life. No committees, department meetings, lectures, student conferences; no corporate life, the essence of which is talk with friends about issues of common concern. Instead, I was at the books and manuscripts I had come to read, and I took my *espresso* breaks with Italians or Americans with whom my contacts, if scholarly and interesting, were nonetheless casual. So the nature of daily life was very different, with different pleasures and different defeats.

The exultation I felt discovering new material in a manuscript volume of 1400 was not too different from the satisfaction of knowing that a lecture has gone across. Differences to be sure, but the essential state is pleasure over a job well done. But failure in the library is quite different from failure in the lecture hall. The lecture subject can be extended into the next hour, obscure points clarified, the damage repaired. Besides, one has the comforting thought that he's been clear and effective in the past and will be so again. A scholarly defeat, however, can be final, total, and damning. The truth hidden in the wriggling indecipherability of the Florentine notary's scrawl is lost . . . and absolutely, if even the more expert paleographers in the reading room also are foiled. And while the student audience may eventually forgive, the learned profession that judges one's work will never cease



to demand comprehension of that scrawl and its eventual interpretation.

But if they have sometimes brought pain, Florence's libraries have more often brought joy. There are many of them: the Nazionale, with several million volumes and thousands of manuscripts, is the largest; the Laurenziana, founded by Lorenzo de' Medici, and in part designed by Michelangelo, is surely the most famous. Apart from the libraries, there is the Archivio di Stato, housed as I said, in the Uffizi, and possessing what must be *the* great collection of early tax records, municipal ordinances, diplomatic correspondence, reports of legislative deliberations, etc. No one has ever weighed the remains, but I imagine that more records survive for the city of Florence before 1500 than for the kingdom of England. A little bridge spans the street that separates the Palazzo Vecchio, still the town hall, and the record vaults of Uffizi. Across it the papers still pour as they have for hundreds of years—a Florentine Bridge of Sighs for municipal file clerks and local historians.

What one appreciates most is the power of a great library or a full archive. A book in the reading room may refer to a manuscript which is available down the hall in the manuscript room . . . and possibly in three or four other places in the world. Or one will want to examine all the commentaries on Dante written during the first century after his death. They have all been published; some of the editions are very rare, but there they all are together on the open shelves of the "Hall of Scientific Study." No need to pull them from Washington, New York, or Cambridge on interlibrary loan.

You may question my use of the word "power." But to the student this immediate availability means command not only of the books, but also in a satisfying way of historical circumstances that have destroyed the books and manuscripts by the thousands over centuries or scattered them over the world. And, of course, immediacy gives the ability to chase down a theory or reference at the moment of initial insight and clarity.

POWER MAY ALSO BE CONCEIVED as range. By this I mean that the historical resources of Florence have suggested issues and lines of interpretation I could not possibly have developed at home. I'm thinking of the archive now. As you may know, there is, although there shouldn't be, a certain hostility or suspicion between archive people and library people. The archive-types claim that less attention should be given to the formal literature of a period and more to matter-of-fact records that were not meant to be read by future generations and which, for that reason, may be more honest and so give us a truer picture. The library-types continue to rely upon the great literary figures of an age, say Dante or Marsilius of Padua, for what they say.

(Of course, this is a simplified statement of the opposition; many of today's better scholars run back and forth from Biblioteca to Archivio.)

In any event, my discovery this year was the Archivio. With its resources, I was able to get beyond the rather formal picture of citizenship suggested by the legal commentaries and see, for example, who, precisely, was petitioning for Florentine citizenship, who was getting it, why, by what vote, and in what number. I expect my book will be better for having some of the answers to these questions. What I also learned is that archival research is more thrilling than library work. In leafing through page after page of a notary's register, or the record of a debate, or orders to Florence's secret police, you never know what's going to turn up. And so often what you do find flies in the face of every generalization on the subject you've ever read. The archives also remind us that even the best treatment of a given subject can be improved upon through analysis of new material.

ARCHIVE AND LIBRARY are also great for people-watching, *the* great European pastime. (What is the cafe that one finds as a fully developed institution from Budapest to Paris but a great, delectable mechanism to satisfy human curiosity . . . about humans?) The reading room in which I worked, reserved for (library) card-carrying professors and their research assistants, was a dream subject for the social science voyeur. Regular visitors included the old, bearded, internationally famous scholar, whose students fought to carry one of his two briefcases, and who could always be seen mid-morning in conference with a young and pretty girl helper; the reputedly brilliant young girl *assistente*, party member I was told, who drove to the library in her sports convertible and who attracted many of the boy *assistenti* of an obviously inferior social status; the grimly serious graduate student from Heidelberg, studying Italian literature now for years . . . to whom no one ever spoke; the professor from a provincial university, now pushing forty, who commuted hundreds of miles a week to his post that he might live in Florence and use its library in the production of a review a morning and a book a year. ("Writes too much" was the judgment of an established academic, one of those the poor devil is killing himself trying to please.) When the inclination to Olympian categorizing was strong, I always reminded myself that I must appear in their conversation, if at all, as some sort of American "character." The important thing, of course, is that we were all members of the same tribe driven by the same passions and ideals.

As you see, their academic world is not unlike our own; but much rougher, for the really prestigious and pleasant spots are few. There are many fewer professorships in a given field, and the academic hierarchy is very



corrupt. If the muckraking weekly *Espresso* is to be believed, the power of certain professorial families is such that one may speak of hereditary chairs of this or that subject in the major universities!

But if Italian academics politic and perish the way we do, they also, many of them, become highly learned in their special fields. It was instructive for me to see myself (and my American friends) in relation to them and others in the international world of scholarship. I think I have a good idea now of where my strengths and weaknesses as an American scholar of Italian history are, of what subjects I should work on, given my distance from the sources and the foreseeable frequency of my visits. More of the traditional American quest for identity, perhaps, but valuable nonetheless.

ALSO VALUABLE WAS A CLEAR appreciation of what professional skills are most valuable in the field. Now I'm thinking of paleography. At home my own work was mostly with editions printed in the fifteenth and sixteenth centuries, rarely with manuscript materials. My seminar work was also restricted to the printed word. There seemed no reason to change; the emphasis seemed right. Then in Florence came the realization that my own paleographical skills had rusted, and following upon that the decision to change the *nature* of my teaching. What had happened was that years in America with a primary concern for the lecture and conference had resulted in a certain professional imbalance. In Florence, personally involved and awakened to the research needs of my students—as opposed to their teaching needs—the balance was righted, at least in intent. So I'd say that this research year will have important specific effects on my teaching.

My teaching should be improved in other ways too, I hope. As the years passed after my last Italian stay in 1957-58, I noticed that the quality of my language was deteriorating. The colors, smells, moods, tactile sensations of Italy faded after a while, and as they did so I noticed that my ability to find *the* precise word was diminishing. So the walks in Florence, the many drives throughout Tuscany, the hours spent looking at a silver hillside of olive trees, will rekindle, I hope, my powers to communicate a sense of reality to people who may have never seen a hill town or even pictures of Florence.

It's been said a million times, but damn it, it is important for the historian to see what he thinks and talks about. For one thing, we have to convey a sense of terrain and scale, difficult today when the traditional value of words is destroyed by misuse in the most authoritative mouths. For years I'd read about the great Hungarian plain over which Huns and Magyars rode. Now I've seen it and I have a clearer idea of what men fought over for a thousand years. Dante writes of the river Arbia that its waters ran red with the blood of Florentines killed in battle on its banks. Until recently I never knew whether to think of the Arbia in terms of the Mississippi at Lake Itasca or at St. Louis. Florence is, of course, vivid now in terms of layout of historic quarters, relation of great family strongholds to each other, and actual walking time between key points. Presumably my familiarity with Florence will give me a heightened sense of reality with respect to cities like her. Danger here, but legitimacy too.

From an insight into what Florence *must have been*, the next step (hopefully) is to insights and questions of a higher order: the nature, process, and speed of change; the relation of town and countryside; personal views on

Professor Riesenberg in a Florentine setting. "What I must stress first is how different life is in Florence."

the classic question of the relation of the Middle Ages to the Renaissance.

Still on this question of live language: a year in Italy—and I don't believe any other country would affect one the same way—frees one from the self-consciousness with which American academics use BIG words. Even after a year of defending oneself from Italian rhetoric, words like History, Beauty, Spirit, and Soul come easy to the tongue. History *is* here. Beauty *does* exist. Here is where men have died believing in God, Soul, Truth, all in great big capital letters. Submerged in easy flowing concepts as one is in Italy, the trained suspicion, the scientific attitude towards such abstractions, is dulled. These powerful words come easily to Italian lips because of historic tendencies toward abstraction in the history of the language, a long rhetorical tradition, and a more recent and almost universally influential Crocean philosophical idealism. They come easily to all men after a while in Italy because there the full and free use of such words seems apt and just. And when you think of it, these words, some of them, constitute what the freshmen are supposed to learn from me in "Western Civilization."

YOU ASK ABOUT I TATTI. What can I say but that it made the year immeasurably rich. During the fifty years or so before he died in 1959, Bernard Berenson, the famous American expatriate critic, had made his villa into one of the great cultural houses of Europe—a place where artists, scholars, and writers met and talked. Since his death it has functioned as Harvard's Center for Renaissance Studies, with many of its old activities and more specialized and formal new ones. It is now a research library—surely the most beautiful and elegant "facility" for humanists in the entire world—whose more than 50,000 volumes

are open not only to its few fellows and associates but also to all scholars interested in Renaissance culture.

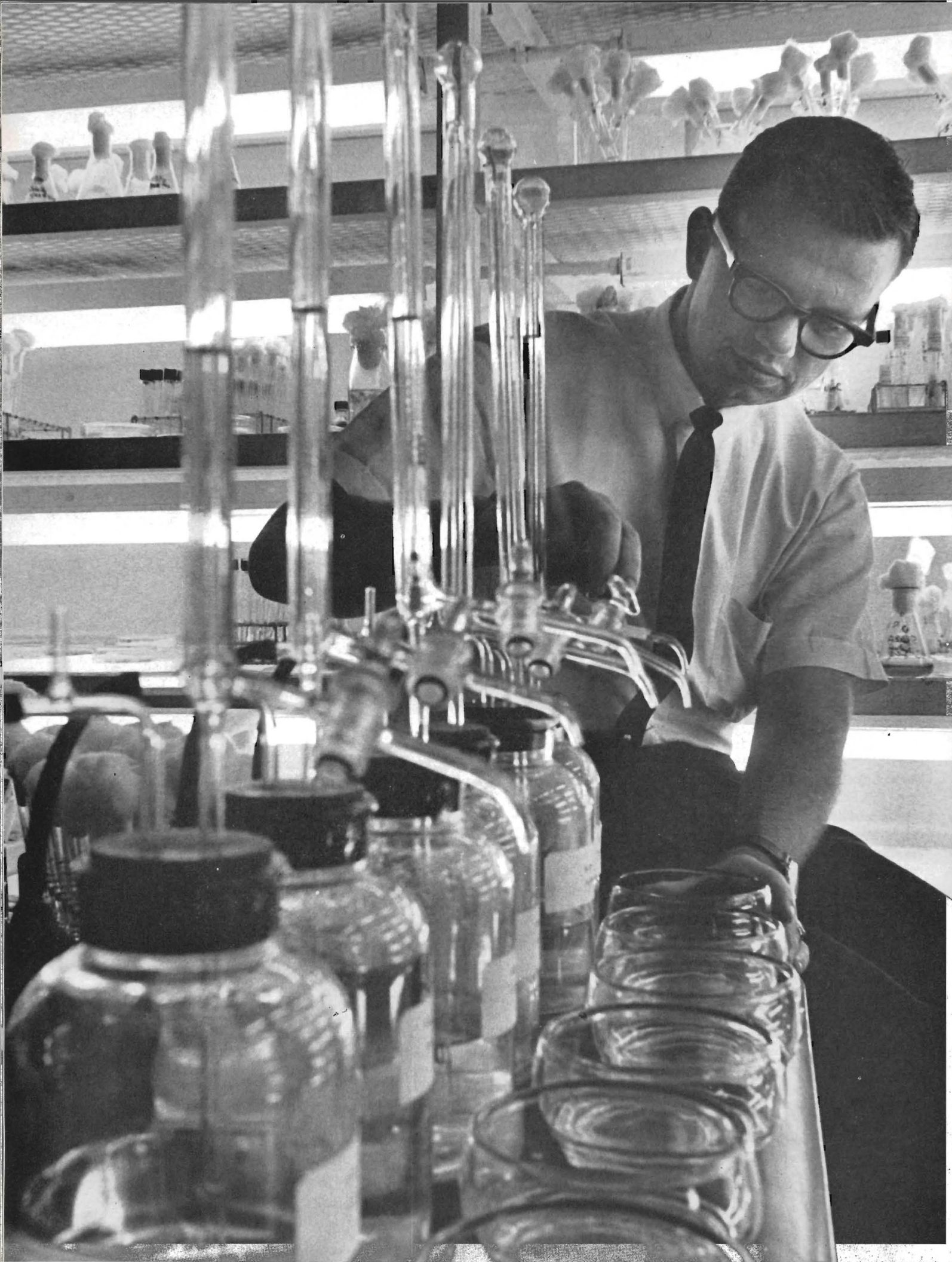
During the year we had French, Swiss, English, Norwegian, Italian, and German scholars in residence; at lunch one might argue with birdlike pre-Neanderthal Englishmen, or answer Herman Wouk's silly questions or Douglas Dillon's perceptive ones. After lunch we took our coffee in the garden, and looked over the valley of the Arno to the hills in the hazy distance; or in the great salon where Berenson's Renaissance pictures looked down on us.

The villa is set on a hillside at the city's outskirts, and it was toward the hill that my study window faced. From it I watched the olive trees pass through another year; below it walked the great white oxen that still do the heavy work on Tuscan farms. (If Florence gave me, so to speak, a sense of traditional city life, I Tatti gave me a sense of the old countryside, for the villa is also a manor house, and the Harvard Corporation is lord of the manor to the forty or so "souls" that constitute the working family of I Tatti.)

Besides the view, the study gave me solitude and a chance for reflection. I like to think that the many hours I spent looking out the window musing, reflecting, day dreaming, just not rushing, will show somehow in my work. Reflecting upon the year at I Tatti, and putting things in the big rhetorical words, I think of it in terms of Civilization, Tolerance, Intellectual Creativity, and Good Fellowship. Under its director Myron Gilmore, life at the villa synthesizes many of the best features of American and Italian culture.

* There you have it. People will ask if I am glad to be back. The answer will be yes . . . and no, for obvious reasons.

Yours,
Pete



Relatively little scientific data exists on algae, fascinating plants which exhibit radically different forms and exist practically everywhere on earth. In the past three years Washington University has become an important center of study on marine and fresh water algae and is doing as much basic research on these plants as in many large schools on the coasts. This is due mainly to the work of one young man, Wayne Nichols, associate professor of botany, who teaches marine botany each summer at the Woods Hole Marine Laboratories.

Algae

A DESCRIPTION OF THE many-faced plants called algae depends a lot on who's giving it. Vacationers on a beach look disdainfully at clumps of algae called kelp or seaweed. A tourist in a curio shop near the beach looks admiringly at another type of marine algae which resembles a delicately shaped leaf, and pays \$25 for the privilege of taking it home. In a summer home nearby, a man and woman blithely eat a dish prepared with yet another sea algae, while their small son makes a face, insisting he'd rather eat broccoli.

To Dr. Wayne Nichols of Washington University's Department of Botany, marine and fresh water algae are important objects of basic research. Since joining the University in 1963, the 28-year-old associate professor has set up a thriving teaching and research program in this field, which is called phycology (from the Greek word *phykos*, meaning seaweed). It is the University's first phycological program.

What's more, the University is doing at least as much basic research on algae as many of the large schools on the coasts or anywhere else in the country.

It seems strange to some people that a midwestern university, approximately 600 miles from the nearest ocean, has become a center of research on marine algae. But Dr. Nichols pointed out in his mild southern drawl (he was born in Bessemer, Alabama) that in the first place, fresh water algae are just as important as the salt water species in his program. Gathering marine specimens is no special problem; he collects nearly all he needs during the summer at the renowned Marine Biological Laboratories, Woods Hole, Mass., where he is a professor of marine botany. Dr. Nichols and his students gather

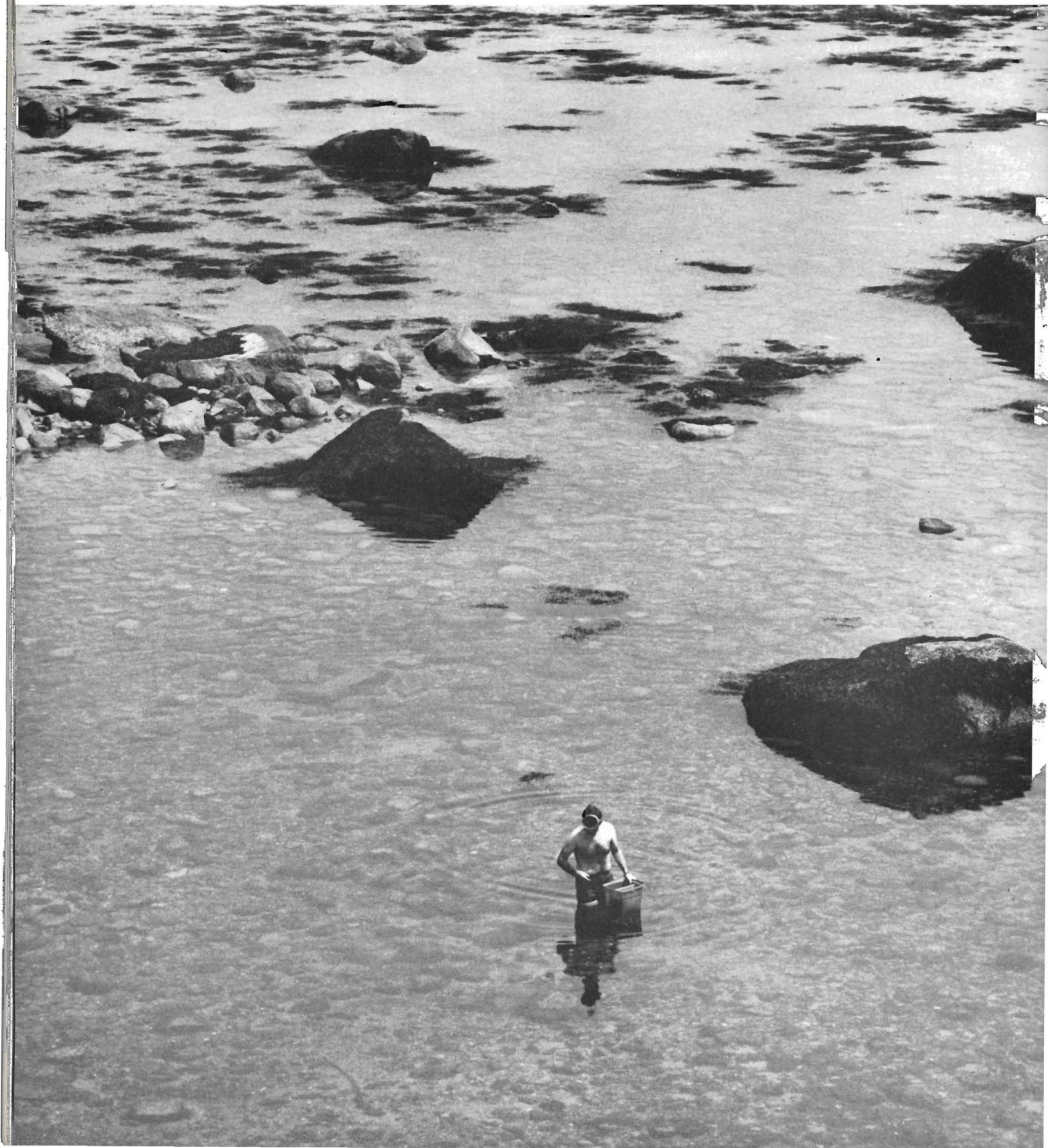
plenty of fresh water algae from Missouri's streams. In addition, plants are shipped to Dr. Nichols from friends in labs throughout the world. Most algae can be shipped safely by air express. The plants are rolled in damp towel- ing and mailed in metal photographic tubes.

As far as salt water in which to grow marine plants is concerned, it is shipped to the University from Woods Hole and also produced artificially in Dr. Nichols' lab.

Algae have long fascinated laymen because of the delicate beauty of many species and, more recently, in this and other countries because of their potential as an important food supply (they are rich in protein). The plants are fascinating, too, from a scientific point of view because of their tremendous diversity in nature and their importance in evolution. But the scientific knowledge on these aspects of the algae is scant. In recent years, Dr. Nichols said, there has been an increased awareness of the need for basic data on algae and the field of phycology has almost overnight become a glamorous one.

NO PLACE ON EARTH seems out of bounds to algae: they grow in the arctic snows, in hot springs, in the soil, and inside and on other plants and animals. They range in size from one-celled organisms to giant seaweed several hundred feet long. Their means of sexual reproduction ranges from the most primitive to perhaps the most complex in the plant kingdom. There are many thousands of species of algae, an exact figure on which is impossible since new plants are being discovered every day. One of the problems of algae identification is that a plant which someone thinks is unique actually may be a radically different manifestation of another plant.

Dr. Nichols collects red algae in
50-degree water on north side of Cape
Cod Canal, near Woods Hole Marine
Biological Laboratories



Algae

"Take the marine plant *Porphyra*, for instance, which the Japanese have farmed and eaten for generations," Dr. Nichols said. "It wasn't known until a few years ago that the plant is in this form only a few months of the year, and exists most of the time in a microscopic form inside sea shells." The discovery was made in this way: a phycologist grew specimens of *Porphyra* in the laboratory under various conditions. In one environment, the microscopic form turned up. Then the scientist looked for this form in the ocean and found it. There probably are other phases, Dr. Nichols added.

The matter of a plant's many faces was illustrated by an experiment conducted by Dr. Nichols and a student. They collected a marine plant of a genus for which fifteen other separate species had been named. By varying the plant's environment in the laboratory, they produced each of the fifteen species that have been described as existing in the plant's genus. "It could be that it's the same plant exhibiting several different phases," he speculated. Or perhaps there are several other phases and the plant belongs in another group of algae.

The laboratory environment of the plant is controlled in a precise way by devices called growth chambers, which are equipped with programmed thermostats. The phycologist may use the chambers to simulate the seasons and transition from one season to another by programming varying periods of light and temperature on thermostats.

Dr. Nichols explained that he and his students study a plant both from the holistic viewpoint (the interrelations of all the parts of the whole plant) and at the molecular level, such as the structure of cellular organelles. A clearer understanding of algae and their interrelationships, he continued, will come from phycologists who can bring a broad knowledge of all the species to new techniques being provided by other disciplines such as physics, chemistry, and mathematics. Information gathered from a wedding of these disciplines, together with data from new techniques developed by paleontologists, may permit the testing of current evolutionary theories on algae. For instance, it is speculated that algae were the first plants on earth, and perhaps were the first organisms to unlock the sun's energy to produce sugars through photosynthesis. There is little evidence to substantiate such speculation.

WHEN DR. NICHOLS joined the University in 1963, his research was given a start through funds from the National Science Foundation's annual institutional grant, which is made to schools on a non-stipulative basis. This grant often is used to encourage research in new directions. The foundation since has granted specific project funds for Dr. Nichols' work and so has the American Cancer Society, which is interested in information on cell division and growth being recorded in his laboratory.

Competent phycologists such as Wayne Nichols are scarce and the University considered it a real coup to land him. Why did he come? "First of all I was impressed by the calibre of individuals here, such as Dr. Barry Commoner (head of the Botany Department) and Provost George Pake. The academic atmosphere is superior to any place I've ever been. There's more interaction between people in our department and other science departments than I've seen anywhere. This is a rare thing where research is being done, and it's one of the main reasons I'm here," Dr. Nichols said.

ANY IMAGE THAT ONE might conjure of Professor Nichols as the stereotype of a super-specialist who is locked in a laboratory far from students is dispelled by this brief history: In his first year at Washington University he taught four undergraduate and graduate courses. Last year, in addition to his six graduate students, he taught a phycology class for thirty undergraduate and graduate students. He also taught an experimental course for twenty students, each of whom tackled a specific research problem. This class included an engineer and a chemist.

"Engineers are interested in algae because of the plant's possible role in water pollution; and chemists, of course, use algae in all sorts of fundamental studies in biochemistry and photosynthesis," Dr. Nichols explained. The experimental class had to be divided into two groups, and the classes extended from 2 p.m. to 11 p.m. "We had a lot of fun, though. Two of the projects begun in this course will be expanded into doctoral theses," he pointed out.

That teaching and research must be fun for Professor Nichols was borne out early this summer at Woods Hole. University photographer Herb Weitman found him collecting seaweed on the north side of the Cape Cod Canal, where the water was about 50 degrees. "I always like my students to see some of these cold water reds," he explained. (Algae are commonly grouped by their pigment: the reds, browns, blue-greens, greens, yellow-greens, and golden browns.)

Professor Nichols did his first research on algae as an undergraduate at the University of Alabama (where he also took his Ph.D. in botany). During his undergraduate days, he found time to play the trumpet for dance bands; he also played the French horn in several symphony orchestras. Since becoming teacher, researcher, co-chairman of the botany department, and curator of algae at Shaw's Garden, there is little time for playing the horn. "Now I just listen."

But his presence in the botany department is sweet music to the University: prominent botanists now are sending outstanding students to Dr. Nichols to do graduate work on algae. St. Louis definitely is on the map, phycologically speaking.

Alumnus Robert Phillips has been waging war in Asia for decades—a relentless jungle war against disease, death, and human suffering



Capt. Robert A. Phillips in his Navy laboratory on Taiwan. Bottles contain copper sulfate used in new technique Captain Phillips developed to fight epidemic Asiatic cholera.

GUERRILLA FIGHTER

AS AMERICAN MILITARY MEN FIGHT and die in Viet Nam, a quiet, dedicated Navy physician and his crew cover all Asia in a different kind of war—a war against an enemy common to both sides, regardless of political ideology.

For nearly ten years, Washington University alumnus Capt. Robert A. Phillips of the United States Navy Medical Corps has fought against the Far East's age-old killer—epidemic disease. Asiatic cholera, Japanese encephalitis, trachoma, blackfoot disease, these are the enemies of this military medical man and the United States Medical Research Unit No. Two, which he heads.

In the makeshift emergency ward of a Saigon hospital at the height of a cholera epidemic, in an outland village in East Pakistan, in a native schoolroom in the mountains of Taiwan, the fifty-nine-year-old Navy physician and the men of his unit win the love of Asian peoples, for to thousands of suffering humans they are the makers of miracles.

This grey-haired, crew-cut alumnus works his "miracles" not in the field but in the laboratory during the long, tedious hours of research which have filled his life since he received an M.D. degree from the School of Medicine in 1929.

In theory, NAMRU-2's mission is research. Its purpose is to study acute infectious diseases in the Far East and to provide biological knowledge required for controlling the animal and insect vectors of area diseases. In practice, this amazing low-budget, high-yield unit has become a symbol of American concern for the humanity of the Asian peoples.

This story is told in an official day-by-day report on the 1964 cholera epidemic in Viet Nam:

On December 20, 1963, the Viet Nameese Ministry of Health received a telegram from the International Office of Epidemic Control in Geneva, reporting the occurrence of cholera in Cambodia.

Like medieval cities of Europe when the first door was painted with a black cross, Viet Nam was marked for widespread death. By January 7, the first suspected case of cholera occurred in Saigon. Within two hours after admission to Cho Quan hospital, the patient, a nurse from the slum area, had died. Viet Nam girded itself for a siege.

By January 19, Cho Quan corridors were filled with

patients. The feverish, withered victims arrived in a growing stream to wait and often to die. At Cho Quan the death rate was 23 per cent; at nearby Children's Hospital mortality was one in three. Through a U. S. public health mission, Saigon sent an urgent request for help to the Taiwan headquarters of NAMRU-2.

On January 21, NAMRU-2 arrived.

"A six-man team headed by Navy Capt. Robert A. Phillips brought with them nine thousand pounds of equipment. They unloaded in the reception room of Cho Quan Hospital."

The men went to work with an efficiency born of long practice. They had seen a Cho Quan in nearly every populated center in Asia in the past decade, though sometimes there was no hospital. Then they worked in a tent.

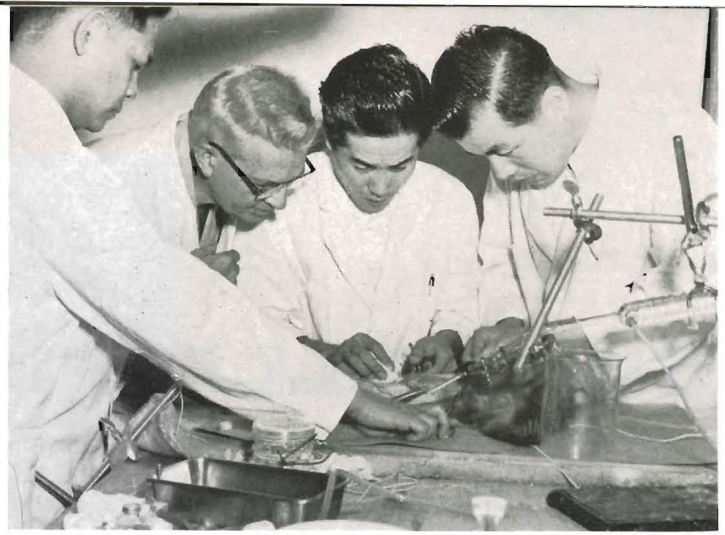
"On January 22, the treatment ward was inaugurated. Sixteen Viet Nameese were assigned to help the team. The purpose was two-fold: to save lives and to demonstrate a new technique." The Ministry of Health moved in the next few days to bring in doctors, nurses, and technicians from all over Viet Nam. The epidemic had spread to twenty-three provinces.

The report describes NAMRU-2 in action.

"Two minutes after a cholera admission the ward staff was able to give an infusion of saline solution to a patient. The ward had thirty-eight Watten cots placed in parallel rows. Each cot had a hole under which a bucket was placed to collect the patient's body wastes. Beside each bed stood a bamboo pole used to hang the fluid bottle and the patient's record. At the entrance to the ward there was a scale to weigh the patients on admission and at the back of the ward there was a laboratory and store room."

KITS WITH COMPONENTS to set up complete NAMRU-2-type wards were airlifted to select provincial hospitals. Saline solution and kits were flown in from abroad. Army cots were procured locally and adapted to Watten cots.

On February 3 the NAMRU team left treatment work entirely to the Viet Nameese personnel and two weeks later returned to Taipei. The epidemic died slowly, continuing into June, but the mortality rate dropped continuously throughout the land. Almost all deaths occurred before the establishment of the treatment centers or in areas



In the physiology laboratory, Captain Phillips supervises cholera studies on monkeys. Research fellows assisting Captain Phillips came from Japan and Thailand.

where adequate treatment was not available. Of the 1,875 cases treated in the NAMRU-2 treatment center, only two patients died.

Miracles? The taciturn Captain would protest. NAMRU-2's treatment method is extraordinarily simple. In the decade since the unit was established on Taiwan, it has been developed and refined for use in almost primitive circumstances, under conditions an army might face.

CHOLERA KILLS BY DEHYDRATION of the body. If rehydration is accomplished and maintained, mortality is minimized. Ten years ago, this was possible only with the use of costly and intricate laboratory equipment. Since then the NAMRU team has sought and found methods of rehydration which can be carried to a people with simple equipment and at small cost and, further, can be taught to medically untrained personnel.

A cholera victim's first need is the replacement, through intravenous feeding, of lost sodium, potassium, and water. Captain Phillips himself is responsible for the discovery of a simple method of determining the dehydration of a patient within five minutes after admission at a treatment center.

"The chief advantage of the method," says Captain Phillips, "is that a twelve-year-old boy can perform the laboratory test. When cholera strikes, schools are closed. People who are not trained in medicine are available. With simple instruction any high school student can determine whether a patient needs one, two, or three liters of fluid."

As in Saigon last year, once the crisis is past, the U. S. Navy team turns treatment over to the native personnel whom they have trained, and devotes its time to research.

Data is collected at the epidemic's center. Captain Phillips and his men then return to the red brick buildings in Taipei which house the unit's headquarters offices, laboratories, and a small patient care ward. Then, for the veteran team, research work begins.

NAMRU-2's province is any infectious disease which may affect the health of U. S. military personnel called to serve in the Far East. It is one of four such Navy-operated research centers located at Taipei, Cairo, the Great Lakes Naval Training Center in Illinois, and the University of California.

The Pacific unit was established on Guam when Japanese encephalitis decimated the ranks of U. S. Marines following the recovery of the island from the Japanese in 1943. With the end of World War II, however, the unit was disbanded. Reactivation was postponed nearly a decade. In 1955 the Navy established a research center on tropical diseases in the Western Pacific from headquarters in Taiwan.

Captain Phillips was brought to Taipei to establish the unit. He had undertaken a similar task in Cairo a decade before, when following World War II the government threatened to close the Cairo laboratories to which he was assigned. Captain Phillips was given the task of locating, within the government, a sponsor to continue research in infectious diseases. He interested the Navy in the project, transferred from reserve to regular Navy, and was assigned to Naval Medical Research Unit No. Three as its first commandant.

With the move, the young physician firmly joined a military career with the medical career he had decided upon as a teenager. Born in Clear Lake, Iowa, Captain Phillips is the son of a physician, nephew, and cousin of other physicians. In 1927 he completed his undergraduate work at the State University of Iowa and entered medical school at Washington University. Graduating *cum laude* in 1929, he remained in St. Louis to enter a surgical internship at Barnes Hospital. He was the first of a long line of Phillips scholars at WU. A brother, Allan, followed in his footsteps with an M.D. degree in 1933 and another brother, Donald, began his medical training here. In addition, two of Allan Phillips' children are now attending the University—Robert Allan as a research instructor in molecular biology and Janet as an undergraduate.

In 1930 the young Dr. Phillips went to Harvard and to the Albert Ludwig University in Germany. He returned to the U. S. for further study before joining the faculty of the Yale School of Medicine, and later Harvard, Stanford, and Cornell.

Dr. Phillips joined the Navy in 1940. He was first stationed with a team from the Harvard Fatigue Laboratory on a project at the Naval Air Station in Pensacola. He served for several years at the Rockefeller Institute for



Captain Phillips examines a small patient for trachoma. His group is trying to perfect a vaccine to prevent this disease which inflicts 400 million in Asia.

GUERRILLA FIGHTER

Medical Research in New York and in 1945 was assigned to temporary duty with the U. S. Typhus Commission in Cairo. He remained with the commission when it was called to Dachau, Germany, on the heels of the allied advance which liberated the Nazi concentration camp, but returned to Cairo as the new unit was set up.

After five years at the Navy's first peacetime overseas research laboratory, Captain Phillips and his young family were called back to the United States to spend three years in Washington, D. C., before pulling up roots again to plant them firmly in the Far East.

On Taiwan, the Phillips family is respected and accepted by the population. Mrs. Phillips, a graduate of Vassar, is a counselor in the American school in Taipei. Four of the six Phillips children attended or attend Chinese school. As their father explains, "Our children will live in a world where 700 million people speak Chinese. We thought it would be a grave error to bypass an opportunity for them to learn that language."

When the family came to Taipei in 1955, Captain Phillips advanced one dollar from his pocket for the twenty-year rental for unit headquarters of a building which had been part of the National Taiwan University Hospital. Conversion of the new quarters was completed in 1957 and the unit was formally commissioned.

Though NAMRU-2 is in its infancy in terms of medical research centers, its progress in ten years is impressive.

The unit appears close to perfecting a vaccine to prevent trachoma, an eye infection from which some 400 million Asian people suffer. The destructive virus causes progressive infection of the eye tissue, ultimately resulting in total blindness.

The research staff also pursues studies of highly lethal Japanese encephalitis. Members are certain that the key to control of the disease is the development of a vaccine similar in action to the familiar smallpox vaccine. Throughout the Orient, millions of adults have developed a natural immunity to the disease. Its victims are the children of the area and military personnel.

Another of the unit's research studies seeks to solve the mystery of blackfoot disease, or spontaneous gangrene. This medical enigma victimizes only residents of one area, a few hundred square miles of the west central coast of

Taiwan. Victims develop gangrenous infections which eventually may cause the loss of hands or feet.

NAMRU-2 researchers delve into the life cycles of a trio of parasites whose victims number well over 500 million people. They seek a means of control over the microscopic animal killers which have terrorized the Orient since the first year of the Tiger.

In the laboratories of NAMRU-2 the white-coated scientists and technicians live and work in the world of the twentieth century. But for most of them it is only half of their lives. They also live in the cities, villages, and primitive backlands of a half-dozen island nations.

Captain Phillips' research in cholera actually began eight years before he came to the Far East and half a world away in Cairo. In the past three years he has been a frequent mid-week commuter to Manila, to keep abreast of research being conducted there. In Taipei his workday often spans twelve hours in order to crowd research into a day usurped by administrative duties.

IN THE LABORATORY he pursues two questions—how is cholera produced, and how can cholera and other diarrheal diseases (especially prevalent in the Western Pacific) be treated without giving intravenous fluid?

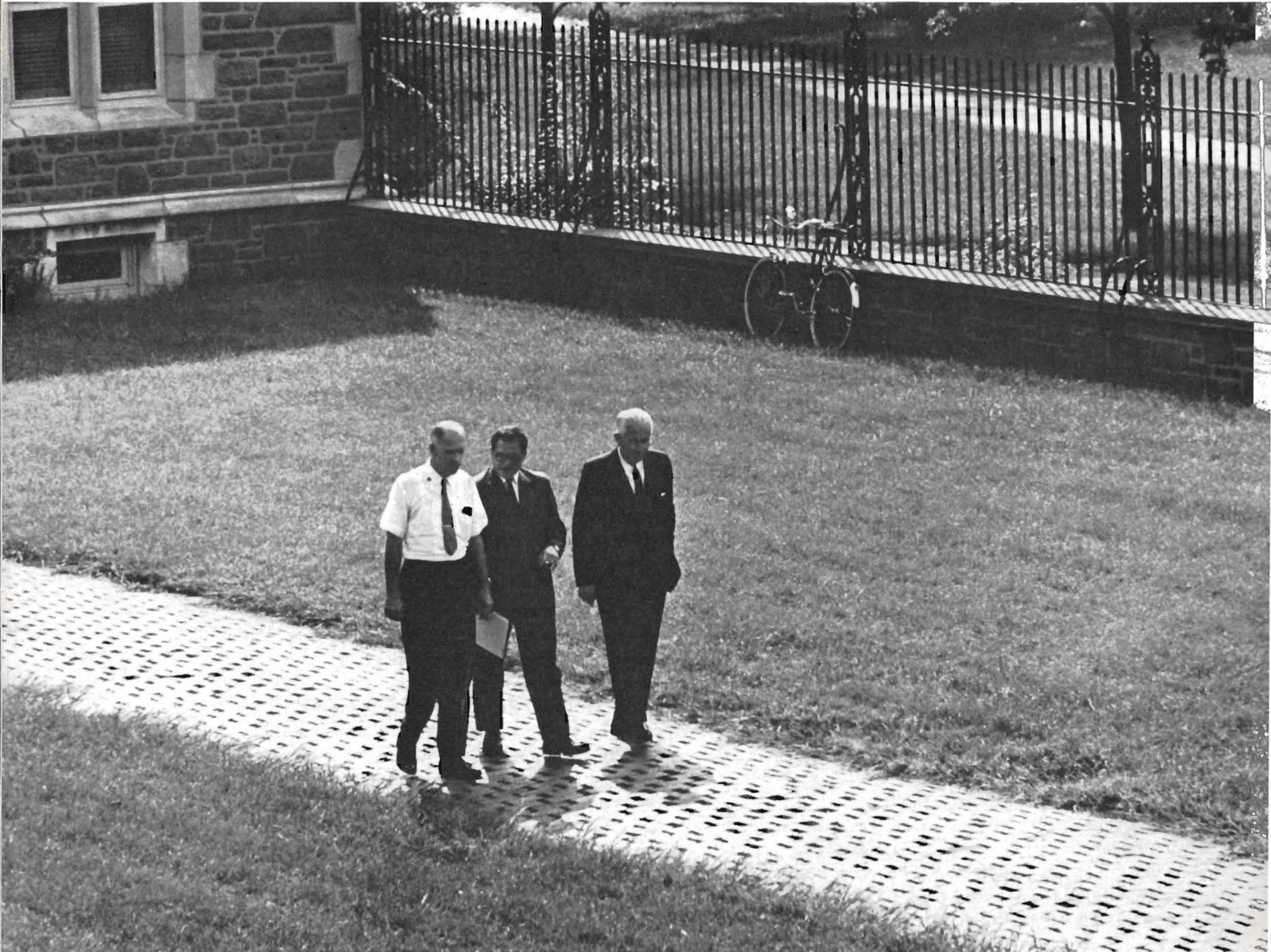
"Our most pressing need is for some way to treat cholera outside of a treatment center. People are still dying in inaccessible villages where there is no means of giving fluid.

"If one could develop something which could be given orally by the village headman either to cure the disease or alleviate the process of dehydration long enough for the victims to reach a treatment center, this would be a real advance."

In his work, Captain Phillips travels the Orient as nonchalantly as an American business man hops between New York and Los Angeles. He has been cited and commended by a dozen countries, including being named to the Order of the British Empire. Last July the Captain was awarded the United States Distinguished Service Medal.

"Appropriately," noted the Navy, "the world-known research specialist had returned to Taipei from cholera research in the Philippines less than two hours before the presentation."

Thirty years ago Raymond R. Tucker helped to clear the smoke from the skies of St. Louis—and then went on to be mayor of the city for three successive four-year terms. This year the former Washington University engineering professor is back on the campus as professor of urban affairs, prepared to lend an experienced hand to clearing the academic skies of misunderstandings about the problems faced by America's burgeoning metropolitan areas.



Back on the Washington University campus, Professor Tucker talks with two colleagues, Professors Carl McCandless (left) and Charles Leven, on way to Tucker's new office in McMillan Hall.

THE MAYOR COMES HOME

THERE WERE NO FLAGS in the office, no carpeting on the floor, no receptionist outside to screen visitors or answer routine questions.

One telephone, without any flashing buttons, sat on the corner of the desk. There was not yet even a name on the door to the tiny office on the second floor of McMillan Hall.

But the conservatively dressed man seated behind the small metal desk was obviously comfortable in these quarters, which, like the role he was assuming, were new to him.

Raymond R. Tucker, mayor of the City of St. Louis for the past twelve years, was back at Washington University—back to within 500 yards of the buildings where he taught mechanical engineering for nearly twenty-three years before his election to the mayor's post in 1952.

This September, "His Honor" became "Professor" again as he began a one-year appointment as professor of urban affairs at the University.

"I'm relaxed, I haven't a worry in the world, and I'm looking forward to this year very much," said the man whose record at City Hall has been applauded by members of both major political parties and who, in 1961, became the second mayor in the city's 200-year history to serve three successive four-year terms. He was unsuccessful, last winter, in his attempt to secure the nomination for an unprecedented fourth term.

As a member of the Faculty of Urban and Regional Science, Tucker will be in charge of a non-credit seminar for students in law, architecture, economics, sociology, and political science with interests in urban affairs. He will also periodically meet with students in Carl McCandless' municipal government course, in Robert Salisbury's political parties course, and in Charles Leven's urban economics course. And he will be busy with extracurricular matters, serving on boards and commissions at the local and national levels.

Tucker's long association with the University surpasses his formal experience in municipal affairs by only a few years. He entered public life for the first time in 1934 as

secretary to Mayor Bernard F. Dickmann, during whose administration Tucker prepared the city's much emulated basic smoke elimination ordinance—a contribution St. Louis voters never forgot—and served as the city's first Smoke Commissioner and later as Director of Public Safety. After eight years in these posts, Tucker resigned in July, 1942, to return to Washington University as chairman of the Department of Mechanical Engineering, a position he held for the following eight-and-a-half years.

Then in January, 1951, he again left the lecture hall for a civic post—director of the Office of Civil Defense—and two years later announced his candidacy for the Democratic nomination for Mayor, a nomination he received the following March. A month later he became Mayor of St. Louis. He was re-elected twice, in 1957 by a margin of 71,735, the largest in the city's history, and again in 1961.

The twelve Tucker years saw great changes in St. Louis. When Tucker entered office, the downtown area was bordered by slums so memorable as to be a point of reference for out-of-town visitors long after they had left the city. The citizens of St. Louis, in 1953, approved a \$1,500,000 bond issue permitting the replacement of those slums with an attractive apartment and commercial development in the plaza area, just west of downtown.

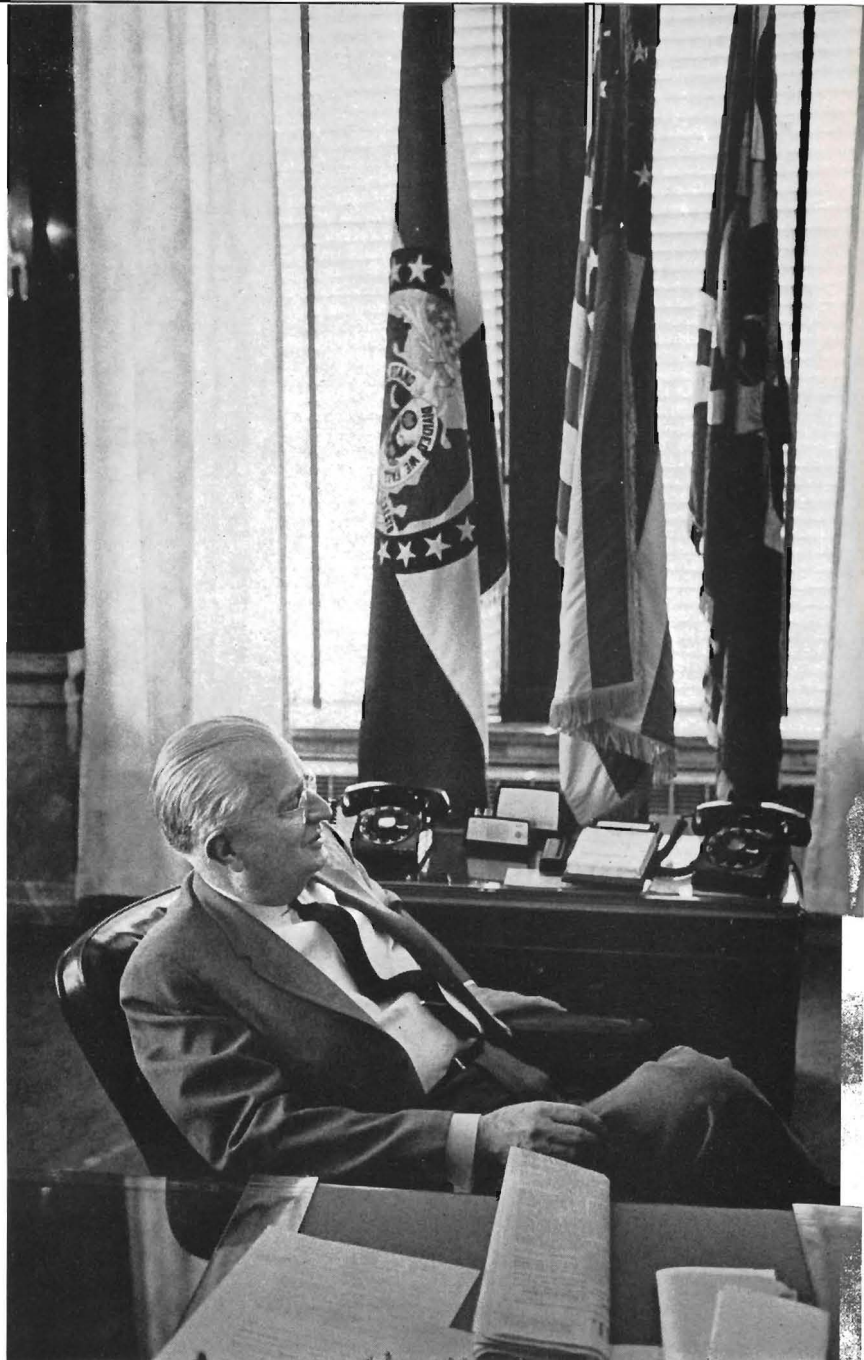
The city's financial problems also were facing Tucker on his arrival at City Hall. He convinced the city of the need, in 1954 and again in 1959, for Charter amendments authorizing an earnings tax of first one-half per cent and then one per cent, a difficult task but one which, when done, placed St. Louis in a sound financial position.

The city's confidence in itself was growing, and in 1955 the voters approved all 23 items in a \$110,639,000 bond issue, the largest in the city's history. It made possible new highways, health and hospital facilities, parks, playgrounds, swimming pools, urban renewal and neighborhood rehabilitation, a planetarium, and many other important capital improvements.

When the Jefferson National Expansion Memorial on



His Honor leaves City Hall after his last day as Mayor with "a mixture of regret and relief." Outside he looked back just once for a few final thoughts on his twelve years in office.



The Mayor reminisces during his last day in office. He found the problems challenging, the place exhilarating: "In that office you know almost everything happening in St. Louis."



Final hours as chief executive of St. Louis found the Mayor and members of his staff packing the numerous personal items accumulated over twelve years.

the riverfront, with its towering Gateway Arch, is completed this year, it too will stand as a monument to Tucker's administration. For it was he who helped to settle a deadlock of many years over the relocation of railroad tracks to accommodate the national park and thereby to permit the project to proceed. Tucker served his last eighteen months in office as president of the U. S. Conference of Mayors.

That Raymond Tucker should feel comfortable back on the campus, among students and faculty, and eager to give all he's got in his new position, surprises no one who knows him.

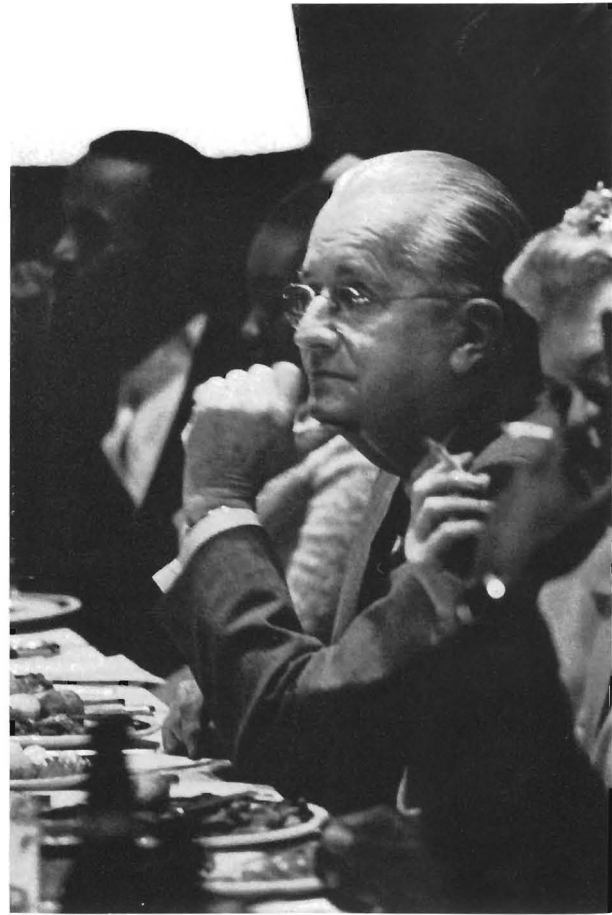
"Ray has a lot of academic blood in his veins yet," says longtime colleague and friend Carl McCandless of the Political Science Department, with whom Tucker will be closely associated throughout the year.

Tucker's enthusiastic devotion to the job of the moment—in the current instance lending his wide experience to a growing number of undergraduate and graduate students interested in urban problems—was perhaps best illustrated thirty-one years ago when he accepted the secretary's appointment in the Dickmann administration. About to leave the University after thirteen years of teaching, Tucker was offered a leave of absence from the University.

"If I had accepted that offer and had kept one foot in the door here, I might have been tempted to quit what I was hired to do for the city whenever things got tough," Tucker explains. "Besides, with that sort of arrangement, I wouldn't have exhibited much confidence in myself, would I?"

Rather than risk "taking his eye off the ball" (to use an allusion which golfer Tucker understands well), he resigned his post at Washington University outright. The University's 1934 loss was the city's gain.

Now, happily, it is once again the University's turn to profit from the talents and experience of one of its—and St. Louis'—most distinguished citizens.



Ceremonial duties of the office Tucker found numerous and time-consuming. Through four campaigns, he successfully avoided one ceremonial practice of the politician—kissing babies. "I never did that," he says proudly.



Tucker prepares to take his last chauffeured ride in a city limousine. Within hours he had purchased his own car, the first one he has owned since leaving the University for City Hall in 1953.

This past summer, Vice Chancellor Payton became the first person to complete an assignment under the State Department's newly inaugurated program of including "public members" among its foreign service inspection teams. That assignment took him to Ecuador for more than a month, with side visits to the embassies in Peru and Chile. In this article, he gives his impressions of the State Department from the unusual viewpoint of an outsider invited to participate in the inside operations of the organization.



By ROBERT L. PAYTON
Vice Chancellor
For University Development

HOW GOOD IS THE STATE DEPARTMENT?

COLUMNIST MARQUIS CHILDS, commenting on the declining influence of the Department of State, remarked that the Department has reached a condition of "overgrown bureaucracy." Decisions at the State Department he said, are "committee-d to death," and decisions are usually the result of "timid compromise."

In a recent article in *The Nation*, Charles W. Tait expressed concern that the military now dominates foreign policy matters: "The result has been to reduce the Department of State and the Foreign Service to the status of a second-echelon agency that conducts certain technical overseas operations of the U.S. Government."

I read such comments with a different eye these days, because for the better part of two months this summer I served as a "special consultant" to the State Department. I was part of the first group of citizens to serve as public members of the Foreign Service Inspection Corps, and my assignment was the inspection of the U.S. mission in Ecuador.

The tour of duty amounts to an intensive short course in the actual workings of U.S. foreign relations. I doubt that I'll ever again be able to read newspaper and magazine reports about the State Department with idle indifference.

The State Department gets a bad press. The Department is pilloried for every U.S. "failure" overseas. Its "successes" are never reported. Liberal or conservative, Republican or Democrat, the State Department is fair game. Some people have never doubted the late Senator McCarthy's accusations, others, of a different persuasion, see the Department as a helpless captive of the military and the Central Intelligence Agency.

On the other hand, there is a romantic aura about the Foreign Service that appeals to anyone who has ever traveled—or even wanted to travel—overseas.

Because the Department is subject to constant criticism and attack, the matter of public understanding of its operations is important. One way to increase public understanding, the Department decided, might be to add public

members to its Foreign Service inspection teams. Such a plan would help the Department evaluate its personnel and its activities by bringing to bear the presumably objective and disinterested appraisal of outsiders.

In the long run, such a plan might also create a cadre of informed citizens who had watched it up close, and who could help to counter public misunderstanding of what the Department is and is trying to do.

The Inspection Corps, made up of senior Foreign Service officers who serve in it on special assignment for two years, is an established branch of the Department. Working in two-man teams, the Corps inspects every overseas post once every three or four years.

When I say "the Corps inspects," I mean just that. The inspection is rigorously thorough. Each Foreign Service employee, from the highest rank to the lowest, is personally interviewed and evaluated. Each operation of the mission is examined with great care; no files or records are kept from the inspectors' eyes. (Public members, as well as regular inspectors, must have top secret security clearance.)

Whether it is traditional reporting on the political situation, management of the commissary, or the relationships with other U.S. agencies; whether it is the emergency evacuation plan, the assessment of local reaction to the Watts district riots in Los Angeles, or the handling of cables and airgrams by the communications section; whether it is the way applicants for visas are handled, the way relationships are maintained with American businessmen in the country, or the adequacy of language training provided at the post—whatever the activity, it is the job of the inspectors to study it, to evaluate it, and—if necessary—to make written recommendations and reports to improve it.

The requirements of the inspection are outlined in a handbook prepared for the inspectors and used by them as a basic guide. The handbook is a mimeographed document of almost 200 pages, and if an aspect of the Foreign Service is overlooked in it, I didn't find it.

The inspectors begin their assignment with a series of briefings in Washington. The briefings last about a week, and include visits to other agencies as well as to the appropriate offices of the State Department itself.

For the public member, this first week is fascinating but bewildering. The amount of information he has to absorb is staggering, and he has the further handicap of not being familiar with the jargon and the abbreviations that characterize every big organization these days.

The inspections vary in length depending on the size of the mission and the number of consular posts that have to be inspected along with the embassy. Typically, an inspection requires from six to eight weeks in the field.

When the inspectors return to Washington, they inspect the "back-up" operations there: the personnel and services that support the overseas post. It is at this point that the public members go back to their regular jobs and the professional inspectors began the briefings for their next assignment.

THE INVOLVEMENT OF public members is a new procedure, of course, and still experimental. The plan is to have eight public members serve in each quarter of the year, and to draw them from widely varied backgrounds.

Among the other public members involved this summer were an insurance man from Denver, a management consultant from Hartford, Connecticut, a retired admiral, a retired government employee, the city manager of Palo Alto, California, and an official of a national labor organization. (One other, a federal judge, had to withdraw because of illness.)

In addition to Ecuador, public members were sent to Portugal, Sweden, India, Switzerland, Nicaragua, and Honduras. A member of the second group of public members, a building contractor, is now with the team I served with, inspecting the missions in Colombia and Costa Rica.

Nominations of public members come from within the Department, from other agencies, and from the White House staff (and perhaps from other sources; I don't know).

One of the inspectors with whom I worked in Ecuador was Thomas K. Wright, former ambassador to Mali and a member of the Foreign Service since 1948. Wright, who is 57, was a Navy commander during World War II and has spent most of his life since 1942 overseas in such places as Mexico, the Philippines, Belgium, Jordan, Mozambique, and Malaysia. He is tough, well disciplined, and devoted to his job. In spite of his toughness, he has great personal charm and an endless store of knowledge about the exotic cubbyholes of the world.

The other inspector, William D. Calderhead, is 46, a Texan who joined the Foreign Service in 1944. He has served in Spain, Costa Rica, Guatemala, and Ecuador, and is primarily an administrative specialist. He is quiet, thoughtful, analytical, and a walking encyclopedia of the countless rules and regulations that Congress (and at times the Department) has spelled out to make sure things are done the way they should be.

Inspection teams usually combine a "substantive" expert—a specialist in political and economic matters—and an "administrative" expert—a specialist in consular and administrative matters. Although this is the usual division of labor, the men work as a team and both get involved in all areas of work before the inspection is completed.

Public members participate in the whole process, working as equal members of the team with the regular inspectors. They are also free to pursue special areas of interest—in my case, this meant visits with those concerned with education, and particularly representatives of St. Louis, Houston, and Pittsburgh universities who are working with Ecuadorean universities under government contract.

Public members are given great latitude in shaping their participation. I regularly attended the ambassador's staff meetings and met with special committees as well. I was free to read the "traffic"—the current as well as past accumulation of reports regularly sent to Washington. I shared fully in the preparation of recommendations and reports, and concurred with them—although public members are told beforehand that they can submit separate, dissenting opinions if they find that they disagree with the conclusions of the regular inspectors.

Because this was my first contact with an embassy overseas, I paid an intensive four-day visit to the embassy in Santiago, Chile, and a three-day visit to the embassy in Lima, Peru. This side trip was invaluable in getting perspective on the staff and operations in Quito, and I've strongly recommended to the Department that it be made a regular part of the program for public members participating in an inspection.

It is one thing to pass judgment on the work of the Department of State as a private citizen; it is another thing to pass judgment on the Department as a private citizen who has watched the actual workings of the Department in Washington and overseas. When I now read, after returning from such a tour, Marquis Childs' comments on "overgrown bureaucracy" and "timid compromise," or read about the downgrading of the Department as the center of our foreign policy, or reflect on the charges that are made against our "diplomats," I have to relate these things to individuals in specific situations.

I have not *publicly* criticized the U.S. mission to Ecuador, or the Inspection Corps, or the Department of State, and I don't intend to. The specific criticisms I've made have been directed to those immediately concerned, because I came away convinced that I had been dealing with responsible and competent people.

It was made very clear to the public members, before we left Washington, that there would be no restrictions on what we had to say upon return. Deputy Under Secretary William Crockett told that we would be entirely free to criticize the Department, the Foreign Service, or the Inspection Corps should we come back disappointed, disillusioned, or otherwise dissatisfied with what we found. Only matters involving the national security would have to be considered as privileged.

The level of performance in the Foreign Service is high,



if my own experience is indicative of the general situation. The people are intelligent, well trained, and capable, and they work hard at their jobs. There is no question in my mind that they are working for the best interests of the United States, both short-range and long-range. The incidence of square pegs in round holes is certainly no higher than it is in business or in other areas of government, and is probably a good deal lower.

The three ambassadors with whom I met—Coerr in Ecuador, Jones in Peru, Dungan in Chile—are able men working very hard in difficult circumstances. Coerr and Jones are career men; Dungan is a political appointee. Each has his own style, and each is stong-minded enough to adapt tradition to fit the job that has to be done.

I saw no signs of the "privileged isolation" of the Foreign Service from the life of the host country. Foreign Service officers have wide personal contacts with local citizens from all segments of the population. They have a more-than-adequate mastery of Spanish. They have a high degree of interest in the country in which they work—they get around on their own time as well as when they're traveling in their work.

They are human beings, of course, not paragons of virtue and excellence. They make mistakes, get upset, and are not always perfect seers. At the same time, they are professionals, and they work hard at improving their skills (with encouragement from the Department, by the way, rather than opposition). They are, with a few exceptions, career men, devoting their entire working lives to the Foreign Service.

The junior officers—the next generation—look even better. The quality of young men (and a few women) coming into the Foreign Service is impressively good. They are top graduates of top colleges and universities. They are surprisingly stable and mature and, although they are ambitious, I saw no signs of the ruthlessness that marks unrestrained ambition. They adjust well to the difficult personal circumstances imposed on their wives and children by life overseas, and by frequent moves to other posts in other parts of the world.

The difficulties are real enough, but Foreign Service officers and their families are neither starry-eyed romantics nor tourists seeking all the creature comforts. They take the disadvantages and hardships of life overseas in stride, and they capitalize on the real opportunities that these present. It strikes me as a good career for young people to shoot for, if they have the ability and the maturity to qualify.

There seems to me to be a greater gulf between the Foreign Service and the academic community than there should be. Scholars and specialists on campuses can provide perspective on policy, as well as vast specialized knowledge. Foreign Service officers, on the other hand, have the job of making decisions, of applying knowledge

HOW GOOD IS THE STATE DEPARTMENT?

to specific situations, and they can add the dimension of immediacy and relevance to scholarly inquiry.

There is a natural tension between the man in the field and the man in the study, and it is healthy as well as necessary. To make it more productive, the Department and the universities should broaden their direct personal contacts.

A step in this direction began a year ago when the Department assigned a few senior Foreign Service officers to spend a year in residence at various universities around the country. The aim is not to use the time as a special year of special academic training, but to enable closer relationships to be established between the Foreign Service and the academic community. Thus far, the plan has worked extremely well from the Department's point of view, and I hope that it not only continues, but continues on a larger scale.

The social sciences, particularly, can be of great value in adding to the understanding the Foreign Service has of the vast social, economic, and political problems that confront the world and obstruct its peaceful growth and development.

LANGUAGE TRAINING PROBLEMS are becoming more difficult all the time. Training in sixty languages is provided by the Foreign Service Institute in Washington, yet even that program doesn't provide training in all of the primary languages in places where we maintain diplomatic posts. (In Latin America, Spanish and Portugese are all that are necessary. In Africa, Asia, and Europe, the problem is not so simple.) Universities have been able to provide valuable assistance in specialized language programs, and undoubtedly will continue to be a valuable resource.

There has been a trend toward functional and area specialization in the State Department—an economist will be concerned primarily with Latin America, for example. Working against specialization of this kind is the hard fact that ambassadors have to be generalists, able to deal with the full complex of problems in the country to which they are assigned. The Department tries to provide opportunities for enlarging the capacity of its most promising people by sending them on special assignment to universities, to the National War College, and the so-called "senior seminars" of the Foreign Service Institute.

In order to do this the Department has to be able to free key officers from regular duties—to have enough leeway in staffing to permit its most talented executives to develop their abilities still further. For reasons of "economy," however, the program is often slighted.

"Economy" has meant, for the State Department, holding its employment level for four consecutive years. In view of the magnitude of the problems we face, I came away wondering whether there weren't some better place in the Federal budget to economize than in the area of Foreign Service.

The State Department's job is difficult, often made more so by the gratuitous criticism of those who presumably think they could do better. Having met them and watched them work, I'll put my money on the professionals, every time.



A picnic supper on the booming St. Louis riverfront was an exciting introduction to the city for out-of-town students and a great opportunity for local students to show off the attractions of their home town.



The nearly completed Gateway Arch soars over the heads of the new freshmen. Despite cold and rainy weather, the class seemed to enjoy the junket to the riverfront and a ride on the Admiral excursion steamer.



Newcomers to St. Louis look over the mighty Mississippi. Moored at the wharf is the Goldenrod Showboat, a floating theatre and bar offering ragtime music and old-fashioned melodrama.

FRESHMAN CLASS

The freshman class of 1969 arrived on campus this September and was immediately plunged into the disorienting experience of orientation. Actually, it just *seemed* disorienting. After an activity-jammed weekend that included a reception at the Chancellor's, a picnic supper on the riverfront, and a ride on the Admiral excursion steamer, most of the newcomers began to feel at least slightly at home.

There are 925 of them this year and they come from 44 states and a few foreign countries. For many of them, it was the first time away from home, so they were a little scared; but they catch on fast.

Some generalities: The boys seem very tall, the girls quite short. As usual, the girls seem slightly more mature than the boys. Some 70 per cent of both ranked in the upper 20 per cent of their classes. Some came here because "My high school counselor said it was a great school," some came because "Your scholarship aid made it possible for me," and one came because "The University's catalogue is far and away the best."

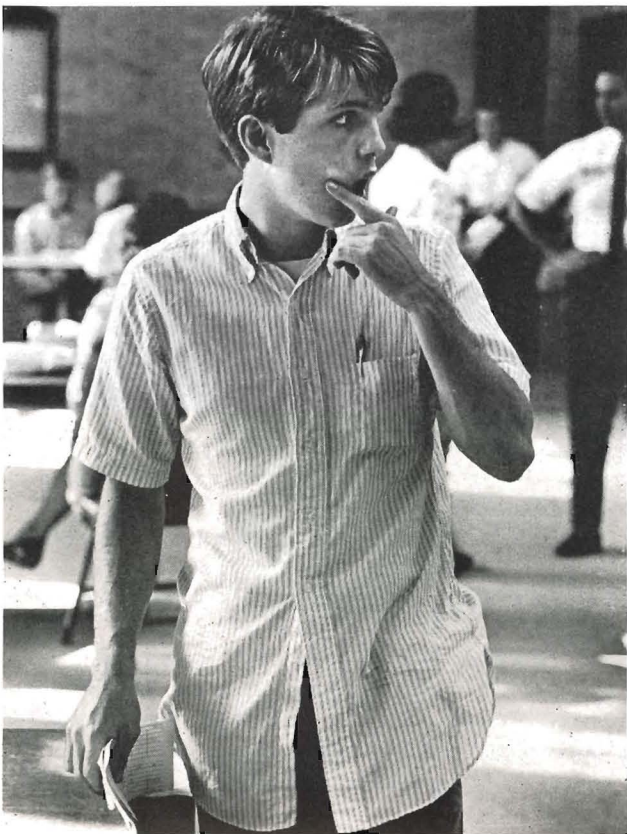
At the end of the first year, about 90 per cent of this class will survive, if past indications hold true. About 60 per cent will finally graduate from this University four years from now. Odds are, none of them will ever forget those first few bewildering days as a new freshman.



At the Chancellor's reception for the new class, one of the big attractions, naturally, is meeting the Chancellor.



Among the local students in the Class of 1969, complete with freshman beany, is Luther Smith.



The first day on campus can be confusing to a freshman—and almost always is.



The new class abounds in pretty girls. This one is Tina Glover from Gary, Indiana.

AS THIS ISSUE OF THE MAGAZINE went to press, workmen were completing the task of tearing down the wooden "temporary" stage and bandshell that has stood in the Quadrangle for the past five years.

The old structure is coming down to make room for a new concert pavilion, designed to blend into the Tudor Gothic atmosphere of the Quadrangle and to offer every possible facility for optimum presentation of Little Symphony concerts, August Opera Festival performances, and other University and community stage presentations.

The new structure was made possible by a gift of \$127,000 from the Louis D. Beaumont Foundation. Appropriately enough, the new stage and bandshell will be known officially as the Beaumont Pavilion. It will be ready for the 1966 concert season. The original concert shell was the gift of friends in memory of the late Benoist Tompkins, one of the chief founders and supporters of the Little Symphony. A plaque in his memory, noting that the new pavilion is standing on the site of the Tompkins shell, will be affixed to the new structure.

While the wooden shell seemed incongruous, perhaps, in its surroundings of Missouri limestone and granite, the Tompkins stage provided both the University and the community with hundreds of hours of enjoyment. Its passing will arouse nostalgic memories in the minds of thousands of persons who listened to the Little Symphony on beautiful summer nights, thrilled to grand opera for five straight Augusts, or watched with amazement the antics of students on Washington's birthday.

On that tiny stage, the Little Symphony presented five concert seasons. The limit on the size of the orchestra imposed by the restricted stage area was possibly a blessing in disguise, for it permitted the orchestra to present the more modest works of the great composers, focused attention on the music rather than the showmanship, and exposed a great many St. Louisans to a different kind of music.

In a way, Mozart's *Eine kleine Nachtmusik* was the theme song of the Little Symphony; we hope that the same spirit that this light, but hardly slight, composition conveyed will continue to symbolize the music that will be offered for many summers to come in the new and beautiful Beaumont Pavilion.

AS WORK BEGINS ON THE NEW Beaumont Pavilion, there are many other developments pointing to a resurgence of the performing arts on campus. In this issue of the Magazine, there is a picture story on the production of "The Fantasticks," sponsored by a new student organization with the unlikely and virtually inexplicable name of "Kadadiz."

Student-inspired, student-run, and student-oriented,

Kadadiz appears to be the vehicle through which the joyous spirit of Quad Show will be resurrected and the jollity of Bearskin Follies revived. The organization will hardly stop with revivals of past glories, but has plans, and ambitious ones, for exciting, inciting, and inspiring other campus adventures in the performing arts.

This new interest in the performing arts is coming along at a most appropriate time—as Dean Joseph R. Passonneau is hard at work on the plans for the theatre and performing arts complex that will form the heart of the proposed new University Center. In the plans for this exciting new center, which has a top priority in the University's Seventy by 'Seventy Capital Program, will be a large, modern theatre for opera, symphony, and drama; a small theatre for chamber music and experimental drama; and a whole array of rehearsal rooms, dressing rooms, and other supporting facilities.

These new developments represent a real revival of an interest in the performing arts that has a long history at Washington University. From Fannie Hurst's student days until its recent, and highly exaggerated, demise, Quad Show was an important and highly stimulating part of college life here for thousands of students, whether they actually participated in a performance or not.

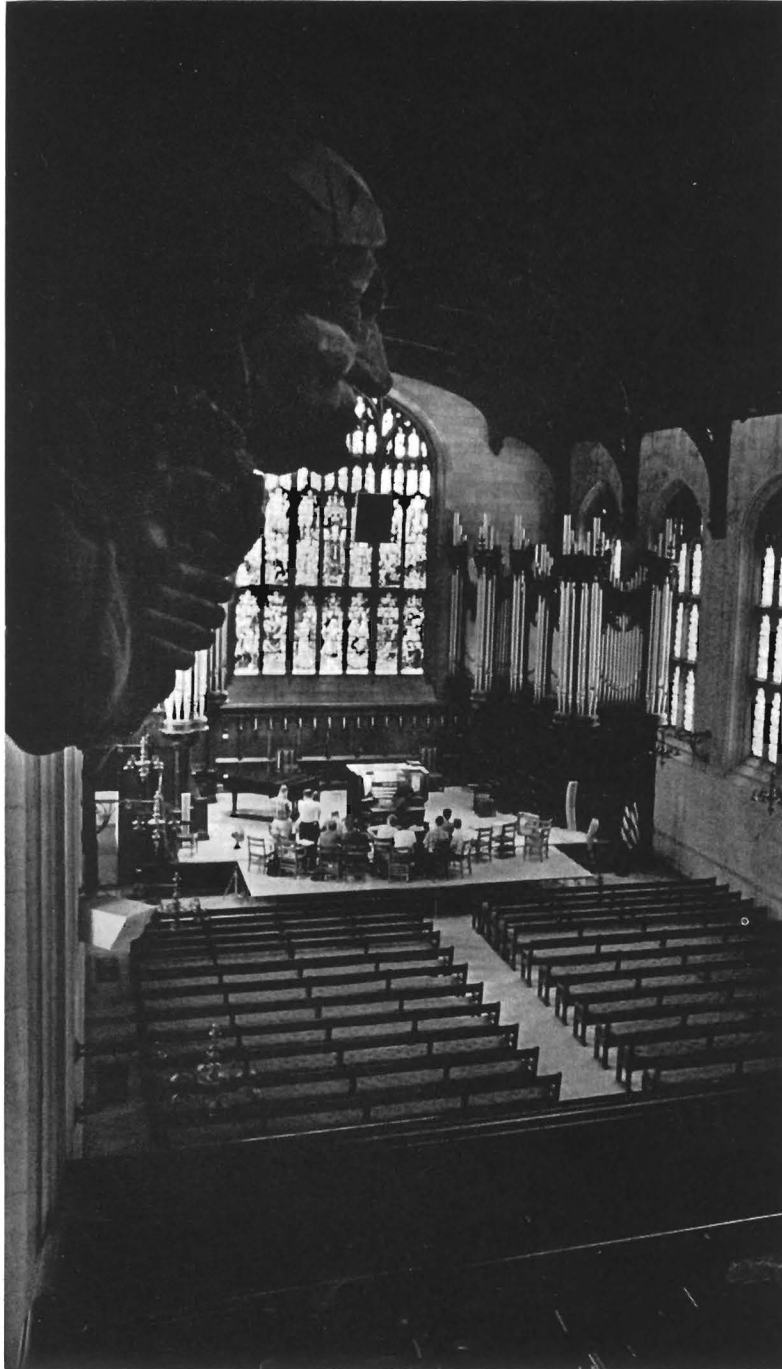
IN THE THIRTIES, WITHOUT ANY of the splendid facilities that are now being planned for the campus, the University turned out a whole galaxy of performing arts stars. A couple of years ago, in fact, it seemed that Broadway was dominated by Washington University talent. At one and the same time, alumnus David Merrick had several hit shows on Broadway, former student Tennessee Williams had another hit a few blocks away, Shepherd Mead's "How to Succeed" was playing to capacity crowds, Aaron Hotchner's "The White House," was in rehearsal, and Lou Ames was staging the NBC Opera. Then, of course, there were other alumni on the theatrical scene at the same time, including Mary Wickes, Marvin Miller, and Dave Garroway.

It could be that some important activities were overshadowed for a period when the University embarked on its drive toward absolute academic excellence after the war. With greatly raised academic standards, with intensified new academic programs, with the growing pains of the transition from a local student body to a residential campus, it was natural that some activities would be temporarily eclipsed.

It looks now, however, that without any loss of academic momentum, other valuable activities and experiences are finding their way back. The appearance on one campus in one era of a group like Merrick, Williams, Mead, Hotchner, Wickes, *et al.*, may never happen again, but at least the ground is being prepared. The Beaumont Pavilion, Kadadiz, and the Performing Arts Center will certainly offer the opportunity.

—FO'B

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Graham Chapel provided an unusual but appropriate classroom this summer for advanced music students studying the pipe organ under visiting Professor Anton Heiller. Professor Heiller of the Academy of Music in Vienna is an accomplished organist, composer, and conductor who has performed on most of the best pipe organs in Europe.

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