1965

Washington University Magazine, Summer 1965

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COSMIC RAY BALLOON capsule undergoes low altitude test flight by Washington University physicist. On the front cover, the capsule is shown beginning its ascent into the upper atmosphere from a launching site in Texas. The capsule in flight was packed with sensitive equipment designed to capture and record the tracks of extremely high velocity particles arriving from outer space. Data gathered on the flight was later studied in the laboratory on campus.
WASHINGTON UNIVERSITY has been awarded a $15,000,000 challenge grant by the Ford Foundation, Chancellor Thomas H. Eliot announced June 18.

The grant is the third largest single grant ever made by the Ford Foundation to any university. Under the terms of the grant, the University is required to raise three dollars in gifts from other private sources for each dollar provided by the Ford Foundation. The $45,000,000 in matching gifts must be received by June 30, 1969, four years from the effective date of the grant.

In commenting on the grant, Chancellor Eliot said, "Washington University accepts the challenge presented by this magnificent grant. It is a demonstration of the Ford Foundation's confidence in our ability to play a leading role in American higher education. The members of the University's administration and its board of directors realize fully the hard work and sacrifice that lie ahead of us."

At the same time, the Ford Foundation made a challenge grant of $5,000,000 to St. Louis University, the first time that two universities in the same city have been awarded such grants.
“It is a credit to everyone in St. Louis that our community should be singled out in this way by the nation's largest philanthropic foundation. The Ford Foundation, in placing its confidence in the two private universities here, is indicating its faith in the future of this metropolitan area.”

James W. Armsey, director of the Ford Foundation’s Special Program in Education, under which the grants were made, explained the basis on which challenge grants are awarded:

“Institutions are selected for grants under the Special Program on the basis of their tradition of scholarship, their plans and ability to make pace-setting improvements, the quality of their leadership, the strength of their support from alumni and other sources, and their strategic geographic location.

“St. Louis, one of the great urban centers of America, can play a leading role in the educational development of the Midwest. Both Washington University and St. Louis University have made notable progress in recent years, and significant new achievements can be expected from them.

“While designed to meet the specific needs of the universities, the grants have three other common features.

“First, they are intended to strengthen each institution's ability to achieve and sustain new standards—educationally, administratively, and financially.

“Second, the funds are not restricted and may be used in any way each university decides will help it attain its long-range goals.

“Finally, rigorous matching requirements are intended to help the institution broaden the base of its regular financial support from alumni, business and industry, and other sources.”

In Chancellor Eliot's words,

“This grant is the high point of a series of dramatic announcements.

“In early February, the University announced its capital program to raise $70,000,000 by 1970.

“Washington University learned in April that it is to receive a total of 61 graduate fellowships under the National Defense Education Act—out of a maximum of 75 awarded to any institution, regardless of size.

“Also in April, a joint application by Monsanto Company and Washington University resulted in the award of a multimillion dollar contract to Monsanto, under which the University and Monsanto will conduct a joint research effort. This is a new program combining the interests and talents of leading industries and universities in research projects of value to government.

“In May, President Johnson announced that Washington University was one of the first four universities selected to receive Science Development grants under a new program sponsored by the National Science Foundation. This program is designed to create new centers of excellence in science and engineering. This $3,900,000 grant, plus support from our Seventy by 'Seventy campaign, will do just that.

“And now, in June, Washington University has been awarded the third largest single grant ever awarded by the Ford Foundation to any university.

“This sequence of events lends credence to the view that Washington University has begun to emerge as one of the leading private universities in America. We believe this is a matter of importance to the nation as a whole, as well as to St. Louis and the Midwest.”
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PHOTO CREDITS: Cover and "Cosmic Rays" story by Tom Stewart; all other photographs by Herb Weltman.
Washington University physicists are studying high energy particles from outer space; studies of primary cosmic rays may someday provide clues to the evolution of the universe.

A high altitude polyethylene balloon is prepared for launching at the National Center for Atmospheric Research, Palestine, Texas. It carries equipment to detect cosmic radiation at heights from 23 to 26 miles.
COSMIC RAYS

A spray of atomic fragments from outer space constantly collides with matter in the earth's upper atmosphere. These nuclear fragments have great energies: traveling close to the speed of light, they split the nuclei of atoms in the air. Fortunately for life on earth, the upper atmosphere absorbs essentially all of the particles. They produce secondary radiation which penetrates to sea level; however, this is a part of the naturally radioactive environment to which life has adapted.

Only a minute fraction of these particles comes from the sun. The rest originate from points far out in space and are the earth's only material contact with the vast reaches of the universe beyond the solar system. Called "primary cosmic particles" by physicists, they may provide clues to long-standing unsolved problems of the nature of the universe. The particles already have illustrated in many ways the interchange of energy between matter and radiation. They made possible the discovery of most of the known elementary particles of matter through studies of the atomic debris created by their splitting of nuclei in the atmosphere. But the question of their origin has been for fifty years one of the great puzzles of astrophysics.

It may seem old-fashioned in this era of rocketry and satellites that one of the mainstays in cosmic ray research is the balloon. Among the many research groups in the world who study cosmic rays and use balloons to gather information about them is one based in Washington University's physics department. It is headed by Drs. Michael Friedlander and Joseph Klarmann, associate professors of physics, who have used polyethylene balloons to carry radiation-detection equipment to heights well above 100,000 feet. There a balloon can stay for hours or days in a region where winds are reasonably constant in direction. A relatively small amount of primary radiation is absorbed in the atmosphere above this zone. In addition, balloon launchings are simpler and cheaper than rocket launchings. For certain experiments, satellites probably will replace balloons; for others, they probably will not.

Extraneous photographic emulsions are one of the main techniques by which primary radiation is detected. Primary particles carry an electric charge and produce a latent image in high concentrations of silver bromide crystals, similar to the way in which light affects the crystals in ordinary photographic emulsions. When the crystals are developed, microscopic examination reveals rows of silver grains which effectively trace the paths of the particles. Detailed measurements of the tracks identify the particles.

"Many detailed properties of the cosmic radiation can then be studied—the composition, the energy spectrum and the arrival directions," Professor Friedlander said. "And with similar experiments conducted in other parts of the world, a composite picture which gives a better understanding of cosmic radiation can be built up. From this, one may infer the types of stars and stellar processes in which the particles might have originated and the conditions which they encountered on their journey to earth."

In order to get this composite picture, physicists draw information not only from current experiments, but from past observations made through spectrometry, telescopes, and radio-telescopes. Since World War II, information on cosmic rays has accumulated at a more rapid rate through advances in balloon techniques, electronics, and the perfection of more sensitive emulsions. All of this data has formed the basis for theories on the origin of extrasolar primary radiation.

"The most fruitful hypotheses have come from physicists who have suggested that most of the particles originate in supernovae explosions. Supernovae are a class of stars which explode with great violence. This could explain how cosmic particles get their tremendous energies. But the
Professor Michael Friedlander looks up through framework of gondola to be carried by balloon. The University physics department launched four balloons from the national research center in Texas this spring.

Top is lowered onto gondola by technician John Epstein, graduate student Kenneth Krippner, and Professor Joseph Klarmann.

Gondola's ability to withstand pressure is tested in University's Wilson Pool. Tests are done under water as a safety measure.

After balloon launching, University group gathers around map in control room of national center, which provides equipment and personnel for launching and tracking.
Ascending balloon is shown within one minute after launching. Partially filled with gas, the balloon expands as it rises and the air pressure decreases. It attains a length equal to a 30-story building.

By studying details of the charge spectrum of the heavy particles, and the fragmentation processes, one can calculate how far they have traveled through interstellar space in order to have produced the observed amounts of lithium, beryllium, and boron. The average distance is about five million light years. In an article in the *Scientific American* Dr. Herman Yagoda said of these enormous journeys: "The last grain at the rest point of a heavy primary cosmic particle is a thing to marvel at. Embedded within the grain of silver in the emulsion is an atom with a history unlike that of its neighbors. It is an atom which may have been blown out of a star in our galaxy millions of years ago. . . . For millions of years it escaped collision with cosmic dust. Finally it plowed into the earth's atmosphere, and in a single moment lost its store of energy accumulated since birth. . . ."

The full range of primary particles was not detected until immediately after World War II when polyethylene balloons were developed. Before that time balloons could not carry equipment high enough. Secondary radiation resulting from the collisions of "primaries" with atmospheric matter have been observed for many years. In fact, at the turn of the century, it was the effect of secondary radiation on devices which measure electric charge that led to the discovery of primary particles. The secondary radiation caused ionization of air around these devices, called "electrosopes," and accordingly, created minute leakages of electricity. Special shielding reduced the leakage; but the question remained as to what caused it. In 1911, an Austrian physicist, Victor Hess, in a series of balloon flights systematically eliminated all possible sources of radiation that might come from the earth or atmosphere, and deduced that the cause must be high-energy particles from outer space.

One of Professor Friedlander's former teachers, C. F. Powell of the University of Bristol, England, who won a Nobel Prize for his cosmic ray studies and for the development of the photographic method, said in his 1950 Nobel Lecture: "Only about 25 years have passed since it was generally recognized that part of the residual conductivity of a gas at sea level is due to the arrival from out
of space of a radiation of great penetrating power. In the 1928 edition of *Conduction of Electricity Through Cages*, J. J. Thomson and G. P. Thomson remark that 'it would be one of the romances of science if these obscure and prosaic minute leakages of electricity from well-insulated bodies should be the means by which the most fundamental problems in the evolution of the cosmos came to be investigated.' In the years which have passed, the study of what might, in the early days, have been regarded as a trivial phenomenon has, in fact, led us to the discovery of many new forms of matter and many new processes of fundamental physical importance. It has contributed to the development of a picture of the material universe as a system in a state of perpetual change and flux; a picture which stands in great contrast with that of our predecessors with their fixed and eternal atoms . . . .

**Experiments at Washington University** related to cosmic radiation began with Professor Robert D. Sard (now professor of physics at the University of Illinois) who from 1948 to 1958 studied the effects of secondary radiation, chiefly for information on elementary particles. He recorded these effects with cloud chambers and geiger counters, located at ground level. As indicated above, studies of the secondary atomic fragments produced by cosmic particles resulted in the discovery and elucidation of the properties of most of the known elementary particles of matter. The bulk of this work was done immediately before and after World War II, long before the advent of high-energy particle accelerators. Since the construction in recent years of machines such as the Berkeley and Brookhaven accelerators, most experimentation on elementary particles has shifted to the more ideal, controlled laboratory conditions.

Professor Friedlander, who had been studying cosmic rays at Bristol under Dr. Powell, came to Washington University in 1956. He began the University’s first balloon flights for cosmic ray detection the next year. In 1961, he was joined by Professor Klarmann, who had received his Ph.D. in cosmic particle research at the University of Rochester. They have supervised balloon flights from launching stations in Minnesota, New Mexico, Texas, Canada, and South Africa, and have had payloads launched for them on several other flights, including launchings in India and in the Pacific. Their research is planned around their teaching duties: Dr. Friedlander instructs the freshmen physics class and a graduate class in cosmic radiation and Dr. Klarmann teaches an undergraduate course on electricity and magnetism.

During the past year, Professor Klarmann has been directing the construction of equipment designed to improve the long and tedious process of searching for cosmic particle tracks in photographic emulsions. Usually, microscopists screen the exposed emulsions for tracks. More detailed examinations are then made by Dr. Klarmann, Dr. Friedlander or graduate students. The whole process may take weeks or months; and there is a chance that significant tracks may be missed.

In an attempt to make the microscopy more efficient, Professor Klarmann has been working on the installation of a small spark chamber over the photographic emulsions in the balloon’s gondola. When a cosmic particle passes through the chamber, several sparks are produced and automatically photographed. By studying the trajectory of the sparks, it is expected that one will be able to determine precise points in the emulsions where the tracks are located. Spark chambers have been flown in cosmic ray experiments at other institutions. However, in the University’s flight this spring, the chamber was employed to track heavier cosmic particles; and as far as it is known, chambers have not previously been used in this way.

Professor Klarmann and a team of four technicians directed three balloon launchings this past April and June at the National Center for Atmospheric Research in Palestine, Texas, where they gave the spark chamber its first trial. The flights were also the first the University had made from the center, which was opened in 1963 and is the only national balloon launching facility in the world. The center is financed by the National Science Foundation and is operated by the University Corporation for Atmospheric Research, a nation-wide association of universities. Research groups using the facilities pay for the balloons and the gas to inflate them; the center provides equipment and personnel for launching and tracking flights.

The University’s flights from the center this spring were part of a world-wide program called International Quiet Sun Years research. Scientists have referred to the sun as being quiet this year and last because visible solar explosions, popularly known as sun spots, subside drastically at the end of an eleven-year cycle. When sun spots are most active, cosmic ray particles with lower energies are deflected in greater numbers from the earth. To coordinate as much information as possible during this special period, the International Council of Scientific Unions established the IQSY program, and many universities in this country and abroad are taking part.

"Programs such as IQSY and the International Geophysical Year, out of which it grew, are tremendously valuable. You know little if your studies are not tied in with many others, which is typical of most fields of research," Dr. Friedlander added.

Before launching, a balloon is filled partially with helium. As the balloon ascends, the surrounding air pressure decreases and the gas expands. It takes a balloon, on the average, two hours to ascend twenty miles, or approximately 105,000 feet, which is far above aircraft routes. It stops rising in the air ocean when the external pressure equals the internal gas pressure. The balloons launched by the University this spring were one to three million cubic feet in volume, attaining a height equal to that of a 30-story building. After the data has been collected, the gondola carrying the payload of emulsions and equipment is released from the balloon via a radio signal which triggers a mechanism that cuts the nylon load line. The gondola descends to earth by parachute and the balloon usually disintegrates in the atmosphere.
Gondola from first flight descends to an open field about 200 miles east of center. It was recovered by a crew in a truck, which was guided by a two-man plane to the landing site.

Recovery of gondola from second flight was made after dark in woods northwest of Baton Rouge. University researchers were greeted by police and crowd of 25 farmhands, who carried 250-pound payload to the truck.

The conclusion of a multi-million year journey. Track of heavy primary particle extends from upper right side of photograph. It collided with a heavy nucleus in the center, generating a “star” effect of atomic debris.
COSMIC RAYS

Over Texas, the high-altitude winds during the summer blow constantly from the west; recovery of the gondola usually can be expected to take place in sparsely populated farm lands a few hundred miles east of the launching center. In April, two flights were launched from the center. The gondola from the first balloon, which did not carry a spark chamber, was recovered in an open field about 200 miles to the east.

Professor Klarmann explained that the recovery team is made up of a two-man plane which keeps in sight of the balloon, and a crew on a truck, which is guided by radio to where the gondola lands. The photographic emulsions from the first flight recorded an excellent collection of particle tracks, he reported. The second flight, which carried a 250-pound payload, including the spark chamber, landed more than 350 miles east of the center in a rather thickly wooded area about 60 miles northwest of Baton Rouge, Louisiana.

The parachute came down into a tree just before dusk, and the gondola hung down from the chute in a convenient position a few feet from the ground. A farmhand saw the parachute go into the woods, and thinking that there had been an airplane accident, called the police. Three policemen answered the call, went into the woods and found the gondola. A sign on it informed them that the equipment was part of an experiment and that if they heard a plane over the area, a recovery team could be expected in a short while. The plane did buzz the woods; but this turned out to be a bit misleading. Professor Klarmann and the crew in the recovery truck had then reached a point at the Mississippi River a few miles to the west, where they were midway between two bridges—200 miles apart. By the time they arrived at the area of the landing, it was well after dark. Luckily for them, the policemen and a crowd of about twenty-five spectators were waiting outside the woods which held the gondola. The curious and hospitable Louisianans led them through the brush to the payload, and graciously carried the heavy equipment back to the truck for them. “We never would have found the gondola that night if those people hadn’t waited for us for more than three hours. Also, we were tired out from having been up most of the previous night preparing for the launch, and their help in carrying the gondola was most welcome,” Professor Klarmann said.

But there the luck ended for that particular flight. Upon examining the equipment, they discovered that a short circuit had created a battery leak and the acid had spilled over the emulsions, ruining them. Although eager to find out if the spark chamber device would work, Klarmann and Friedlander accepted the accident philosophically.

All of May was spent in cleaning up equipment, making minor alterations, and incorporating an improved high voltage supply. By June 6, the apparatus had been returned to the balloon base in Palestine and, after thorough testing, was flown again on June 10. All indications were that the flight was successful, but it will take several months before the data is fully analyzed.

Batting two out of three this season could be contrasted with 1961, a year in which all the luck was bad. That year the United States Navy cooperated with N.A.S.A. in three flights for the University from the U.S.S. Pine Island, near the equator, about 900 miles west of South America. All three flights attempted from the ship failed, including one in which the balloon crashed into the sea after being punctured by birds. In a flight from a station at Fort Churchill in Canada, the balloon ascended to 60,000 feet; then the polyethylene burst and the payload crashed into the middle of Hudson Bay. Bad luck also plagued two flights which were launched in India in cooperation with the Tata Institute for Fundamental Research, Bombay. Both balloons ascended properly, but one balloon was not recovered because the gondola’s release mechanism failed. On the second flight, although the payload did return, the gondola was found by a group of woodsmen who chopped it open and ruined the emulsions. Since 1957, however, most of the University’s flights have escaped such bad luck.

Plans for future experiments include the launching of a payload containing an infra-red telescope, which would be used to gather detailed information on the sources of infra-red radiation from outer space. Conventional astronomy hasn’t yielded detailed data on the subject since infra-red radiation is absorbed by water vapor in the atmosphere. Sources of the radiation could include the remnants of supernovae explosions or other possible origins of primary cosmic particles. But the infra-red astronomy of the type being planned at Washington University is a brand new field as far as balloon flights are concerned, and physicists aren’t sure what the experiments will reveal.

“If we knew exactly what we expected to find, there wouldn’t be any sense in looking,” Professor Klarmann concluded.
Theodore H. Von Laue, a professor of history at Washington University since last September and an authority on modern Russia, is the author of several books including Why Lenin? Why Stalin? published in 1964. Here he examine, as a historian, the question of responsibility for the conflict of wills in a global world. Von Laue contends that the rise of the West and the antiwestern revolt are part of a unified historical process which lays responsibility for today's conflicts on western doorsteps.

THE SUBVERSIVE WEST

By THEODORE VON LAUE
Professor of History

The clock on the cover of the Bulletin of the Atomic Scientists points to the hour of thermonuclear suicide. But the mechanism that moves its hands (or, if you will, prompts the editors' sense of doom) has nothing to do with the bomb. The mainspring of that clock lies in human relations, in politics, in the conflict of disturbed and impure wills in the global world. The bomb is but a tool, and the scientists who service and improve it are but instruments. Like their fellow men they are at the mercy of political, social, and psychological forces which they do not comprehend and which they cannot control. At no time, the wise men tell us, has man been fully master of his destiny, but at no other time in history, one might venture to say, has he been so driven and tossed by the hurricane of unanalyzed and misunderstood conflict as at present. There exist in the world, to be sure, interior areas of relative stability and rationality—happily we in the West live in one of the foremost of these—but we are increasingly at the mercy of the storms that rage without. Our efforts to project our internal order outward meet with persistent and debilitating failure. Sometimes it seems that we barely succeed in containing the poisons tossed over our storm-walls, and there are seeds of chaos even within ourselves.

What makes the struggle against the hostile elements so uneven is the absence of sufficient explanations, of perspectives that, while not necessarily lessening the conflict, make it at least intelligible and offer some hope for eventually developing handles, dials, and control knobs. Yet there is no reason why in our extreme need we should not experiment with hypotheses aiming at such understanding. I offer the following interpretation of the sources of global conflict as no more than such an experiment. We all know the pitfalls of generalization, but we should also remember that our advances in any field of human knowledge are based on generalizations, and bold ones at that. My generalizations, incidentally, come from a historian's workshop: our debilitating blindness in world affairs, so I shall argue, is, in part, the result of faulty historical perspective.

We are caught, so my line of argument begins, by a profound change in the dimension of human affairs during the past two generations. The West has risen and shaped a global world—at least on the surface—according to its image. As a result we are suffering through a prolonged and tortuous transition. Since roughly the nineties, we have been passing from what we used to call "modern history," i.e., western history since the French Revolution, into what we might tentatively term "early global history," i.e., the story of global mankind in which the consequences of the great confluence of separate cultural destinies under the aegis of the West reveal themselves with elementlal force. For all we know, the full fury resulting from the incredible activation of political ambition and the incitement of social expectation in an ever more tightly
packed and intensely interacting global world may yet lie ahead. In this flaming tilt of fierce human interaction over the length and breadth of the globe, the future of the world is being decided and the use of the bomb determined. The global cosmopolitanism which we can observe in the making since the middle of the nineteenth century is, a hundred years later, still but a thin and fragile rim. The very unity in the global world which it has created tends, by its inherent nature, to annul itself. For a long time to come, so I shall argue, the further unification of the global world will proceed—and can proceed only—through an accentuation of disunity.

The paradox may become clearer if we consider the rise of the West in terms of the global expansion of a universal model, that of the western way of life. The West—and its English-speaking members foremost—has furnished, and is still furnishing, a global model of the good life and the good society. Yet in the process it has subverted all nonwestern authorities and traditions—all nationalist models. How small a part physical force and compulsion played in the ascendency of this model may be seen in the fact that, despite its patent imperfections, its subversive outreach continues essentially unchecked at present, while the anticolonial and antwestern revolt runs its course. World history has never witnessed such rampant subversion. It would seem to be the central phenomenon of “early global history.”

What are the ingredients of this amazing model? First of all, it sets the standards of political power, of empire, of global sway. Before World War I, it was a British model, thereafter increasingly an American one. The voice of an American president is now heard above all others in the global din. Second, the model sets the standards of freedom and good government: government by agreement of all the people through a process of representation and debate, with due guarantees of the liberties and the dignity of the individual. Again it is an English-speaking model, but it has been added to by all sorts of foreign copies and translations of translations. For the third ingredient I would lump together (for brevity’s sake) the various facets of urban-industrial life, the constant advancement of what one might call the “scientotechnical” control over the forces of nature and the ever more elaborate rationality governing all human relations, the glorification of productivity, a high standard of living, and protection against basic wants.

Let us consider the effects of these ingredients of the model separately. We hardly need to trace the imitation of the aggressive western nation-state down the cultural slope to the very lowest rung of political organization. “Seek ye first the political kingdom and all others shall be added unto it,” was the first commandment among the converts starting with the German National Liberals and ending among the Nkrumahs of Africa. The political kingdom was revealed not only in terms of self-preservation but of expansion and empire as well. As a consequence, state sovereignty and raisons d’État have become much more important than the cultural bonds of the great historic civilizations. The political role of Islam, for instance, is fading, but that of Egypt or Pakistan is rising fast. Most major civilizations are divided into competing states.

The imitation of the western model by former colonial or semicolonial peoples has led within our own lifetime to an antiwestern revolt, the western anticolonial revolt, which is now almost completed in its surface manifestations. But how the newly created states are to sustain their untried sovereignty remains to be seen; the burden of statehood has sometimes been excessive even in the West. The resulting uncertainty will surely aggravate the instability resulting from the multitude of units in the new global state system. If it has been difficult, in a period of rapid modernization, to preserve peace and order in the relatively simple European state system, the global system of currently 115 members, all of greatly varying description, offers infinitely more opportunity for conflict.

As for the imitation of political freedom and constitutional democracy, let me first observe that the rise of the West has successfully undermined the authority of any contrasting form of government. Already before 1914 constitutional democracy was on the march; the end of World War I witnessed a triumphant expansion of the model into central and eastern Europe and beyond. After World War II the process became accelerated. Every new sovereign state has begun its career with a new democratic constitution, copied directly or through various intermediaries from the West. The adoption of the western model has, of course, been almost uniformly a failure; but the failures still affirm the model. Freedom and democracy are seldom if ever repudiated; they are being redefined, and in all subsequent versions, even in totalitarianism, the continued subversion by the western original is still acknowledged.

The march of freedom continues unchecked into the last continent to be awakened by the West. “Africa will show the rest of the world,” so Tom Mboya has said, “what freedom really means.” Yet even in Africa ambition and hope have not sufficed to make a go of constitutional government, as we gather from the emergence of “one-man democracy” or “guided democracy.” One may venture to predict then that, like Soviet totalitarianism, none of the new versions of democracy can be secure as long as they significantly diverge from the original. Their only hope may be to shield themselves from open comparison, as the Soviets and the Chinese are doing. Yet iron curtains are hardly compatible with global cosmopolitanism.

As for the imitation of the western urban-industrial way of life, let me offer only a few reflections. It has created an
unprecedented revolution of expectation. Nothing less than the western standards of living will do for those who have had a taste of them. Yet at the same time the model has not provided any instructions on how to attain the necessary level of productivity from among the nonwestern peoples themselves. Only now are we beginning to see that the machines and factories which produce prosperity can function properly only in the invisible environment of the attitudes, skills, and motivation of those who have originally designed them. Technology, in other words, needs a built-in individual and collective self-discipline so deep as to seem nonexistent to the conscious mind.

The basic and still unsolved problem of industrialization in societies where modern industries have not sprung up spontaneously is how to infuse those invisible ingredients of western urban-industrial society, which is sustained by spontaneity, into native traditions where these invisible ingredients are missing and where the required self-discipline is not spontaneous. Experience thus far has shown, I think, that the involuntary and drastic change from a pre-industrial society to the modern urban-industrial way of life is excruciatingly painful and destructive. Native forms of community involving the very purposes of life are being dissolved while the complex western model offers no adequate substitutes. The resulting social, psychological, and spiritual chaos militates against even the superficial cosmopolitanism characteristic of the new capitals. And if recent western experience with nationalism offers any analogy, the tempestuous tensions created by the Great Subversion may, for the sake of a pittance of native order and stability, be most constructively turned against the Great Subverter.

**It is not the separate ingredients alone that we must consider, but their totality.** Here we encounter another paradox. No matter how great the havoc caused by the western model, it has yet raised—and still is raising—from the ruins an overreaching desire for equal and superior universality. Among all those peoples who give themselves a chance to replace the western model, it has aroused a rival sense of mission. They now offer us their native values and institutions as an infallible, absolute cure for the ills of the world. Thus in making itself universal, the western model has created—and continues to create—a global competition of universal creeds, each claiming a truer universality.

The emergence of competing universalities is, of course, an old story. At the time of the French Revolution, English and French presumption prompted a German claim to universal spiritual leadership. The German prescription has since made the global rounds through Slavophilism, Sinophilism, or Indophilism to the contemporary defenders of Negrophilism. Starting from sociological rather than ethnic factors, communism too claims a universal significance, with the ability to reconstitute life—all of life—on a superior plane. In short, global politics since the rise of the pan-movements has centered around the conflict of rival universalities—all of which are copies of the western original.

This fact—and I take it to be a fact—should force us, incidentally, to reconsider our working definition of power in global politics. Power, we should say, is no longer primarily a matter of physical force and armed strength; it is above all the ability of one small minority in the global population to impose a drastic change of life—all of life—upon the rest while itself remaining largely immune to any such inroads into its continuity. The crucial issue in the global power struggle in our day is: who changes whom? Political sovereignty as currently established in Asia and Africa is no safeguard against continued subversion from without. The deeper sovereignty of continuity and organic change, of full spontaneity in native development, is still the prerogative of only the original model, and above all currently of the United States, and there is every prospect that for a long time this crucial power will continue to reside where it does now.

The varied efforts on the part of the peoples of Asia and Africa to arrive at a fusion of native and western elements, a fusion both stable and dynamic like the original, seem to be doomed to failure. These improvisations will never measure up to the model. Most likely, the experience of these peoples will follow the pattern of modern Russian history, in which we can observe a fresh start toward closer approximation of the original at every change of rulers right down to the present. In short, the western headlong advance has not yet exhausted itself; there will be no respite for the others until it has run its course. Yet if it should ever be stopped, the relative stability of aims and goals which the western model imparts to its victims will also be lost—which, however, may not keep them from pursuing what is their only common interest: to end for good that western subversion.

Yet, rather than get lost among these distant horizons, let me pursue another facet of my thesis, the fact that the model is indivisible: no part can flourish without the others; by itself each must wither. I am aware that many scholars consider this view an intellectual error, but their refutation of it is not convincing. They have no difficulty proving that, say, Imperial Germany successfully industrialized before 1914. But they forget that during this period profound stresses, directly attributable to rapid industrialization, developed in the German body politic and in the deeper reaches of the German mind. These stresses not only contributed to the outbreak of World War I but also to the rise of Hitler and, eventually, to the expulsion of Einstein and the decline of German physical science. In the German setting, in short, the western im-
pulse of "scientechnical" progress was stifled by the many resistances which its one-sided growth evoked.

More generally, we need only look at the various forms of political irrationalism, as the doctrines of blood and soil, racism, anti-Semitism, and genocide, which precipitous industrialization, urbanization, and democracy have caused on the European continent, to see that in the alien setting they had very different results than in, say, England or the United States. There are also parallels in the development of all these countries, to be sure; but it is the differences that have mattered. As for the case of Japan where industrialization has apparently been supremely successful in a non-western setting, let us remember the strange atavisms that arose in Japanese life between 1931 and 1945, when western influence was curtailed. Since then the American influence has been so overwhelming as to repress all native resentments. In order to profit from the Japanese experiment we must still ask ourselves: what would happen if American and western influences should suddenly cease? Would the Japanese by themselves be able to maintain the impetus of western progress?

The Russian experiment of modernization is even more instructive. The czars, at least up to Nicholas II, argued—in the vein of many current authors—that it was perfectly possible to introduce modern technology into Russian life without upsetting the continuity of native tradition. Yet they found that industries need suitable managers and experts, that industrial employment creates a proletariat, and that industrialization brutally recasts society and undermines all tradition. The czars were trapped by the changes which they could neither understand nor control. Their Soviet successors discovered further that successful industrialization not only called for a profound recasting of state and society, but also for the creation of a "new man" with new values and a new self-discipline. As they did not find these invisible ingredients in the spontaneity of their peoples, they were forced to substitute a complex set of external compulsions. The extent of Soviet totalitarianism is determined, I submit, by the pragmatic estimate among the Soviet leaders of what is lacking in Russian spontaneity for the operation of a reasonably efficient urban-industrial society. Here indeed lies the essence of Soviet totalitarianism.

In this manner the Soviets have created a secondary model in native conditions. Yet the Soviet model is still at the mercy of the original. Nor is it likely ever to catch up and overtake the capitalist West, for the simple reason that progress prompted by untrammelled spontaneity among members of society is more rapid than progress based on the "guided spontaneity" of compulsory imitation.

I am fully aware that my pessimism runs counter to many current assumptions about the prospects for the developing countries. Yet all we can say at this point with any finality is that the experiments of mixing western and nonwestern elements in the global pursuit of the western way of life have not yet half run their course. It is far too early to agree with either the optimists or the pessimists—which, however, will not stop me from ruling out the possibility of a global managerial revolution which one observer considers a possibility for the near future.

But let me not enter further into this controversy. Any conclusions we draw about contemporary global history are highly tentative. If I claim a special justification for my views is that they tie together the rise of the West and the long story of the antwestern revolt: both are part of the same historical process. Such reasoning also saddles us, the peoples of the West and particularly we Americans, with the responsibility for all the hostile outcries and affronts that the West has encountered and will encounter for a long time to come. We are the beneficiaries of western civilization; therefore we are its accomplices as well. We are the cause of the chaos resulting from the triumphant subversion of all native order; we are morally responsible for all the desperate efforts to rebuild native society after the western pattern. We have laid an impossible burden upon all the non-western peoples: how to copy the intricate, tentative, and highly imperfect western model from non-western resources. Since nothing in the model has any bearing on that novel experience, we have left our admirers in the lurch at the most crucial phase of their modern development.

Thus it is we who bear the guilt for the frightening brutalities in the domestic politics of the newcomers, and we who bear the guilt for modern totalitarianism wherever it has arisen. Our gifts are being returned to us in repulsive caricature, which is yet the best copy that native conditions will permit. And then we gloat (or panic) over the misfortunes of our most loyal and determined imitators! Such, roughly, should be our estimates of the current state of global cosmopolitanism.

Let me conclude by being specific and topical. Most Americans proudly fell in with President Johnson's invitation to the Soviet leaders for a visit to the United States. Most Americans felt disappointed (or even resentful) over the tardy and lukewarm response from Moscow. But what did we expect? That Great Society of ours (even with all its imperfections) profoundly humiliates all others who, no matter how hard they try, cannot match it (their triumphs in the space race notwithstanding). It shows up their impotence; it rubs salt into the wounds of their self-esteem. Why should we wish to make them eat humble pie by luring them outside the defenses with which they so laboriously have hedged in their pride? Unless we cope more effectively with these psychological realities that apply to most of the global population, we intensify rather than assuage global conflict and set forward the hand that points toward midnight.
Alumnus Bernie Fuchs is one of the nation’s top magazine artists.

The Bernie Fuchs survey the Connecticut countryside from the lawn of their Westport home. Bernie’s studio occupies the second floor of the garage wing at right.
ILLUSTRATOR

When Bernie Fuchs was a student at Washington University's School of Fine Arts in the early 1950's, he reached a point about half way through his college career when the money began to run out. Then he received a partial scholarship from the Wednesday Club, a St. Louis women's organization, which enabled him to finish college and to get his degree.

This year, Bernie Fuchs, BFA '53, made a donation to the University to cover a full scholarship to enable some other aspiring young artist to get his training.

In the twelve years since his graduation from Washington University, Bernie Fuchs has become one of the leading magazine illustrators in the nation. His work appears regularly in McCall's, Look, The Saturday Evening Post, Good Housekeeping, Cosmopolitan, Redbook, Sports Illustrated, and other leading magazines. He was recently named "Illustrator of the Year" by the Art Directors Club of New York.

After graduation from the University, Bernie began his career as an illustrator with a St. Louis art studio, doing advertising and commercial illustration of all kinds. Three years later, he joined a studio in Detroit and shortly after that started his own studio, The Art Group. It was while he was with his own studio in Detroit that Bernie began to sell illustrations to the national magazines. Because most of the national magazines have their headquarters in New York, it was inevitable that he move East and in 1957 he sold his studio and came to New York as a free-lance illustrator.

Today Bernie averages about three major assignments a month, although his work schedule varies considerably and he may often have several jobs in his studio simultaneously. As a free-lancer, Bernie lives the year-around in Westport, Connecticut, and works through a New York agent, Tom Halloran, who deals directly with the magazine and agency art directors, handles most of the business details, and even helps gather background for many illustrations by photographing props and settings.

As a free-lance artist, Bernie and his family can enjoy the beautiful setting of Westport and its pleasant suburban life without enduring the rigors of commuting that beset most of his neighbors. Bernie works in the studio wing of his handsome, rambling New England home and finds it necessary to go into Manhattan on business only once every two or three weeks. He is married to a girl from his hometown of O'Fallon, Illinois, and the couple has three children, two girls and a boy.

Like most magazine illustrators, Bernie works almost exclusively from photographs. When he has an assignment, he first finds the appropriate settings, models, and props and takes numerous photographs. Then he projects the pictures in his studio and paints from them, altering and modifying the various elements as he paints.

Within the world of the slick national magazines, Bernie's work is considerably varied. Much of it consists of illustrations of magazine fiction and in this area the artist has considerable freedom to interpret the story in his own way. Usually, he receives advance galley proofs of the story and then is completely free to choose the situation within the story that he wants to emphasize.

The illustrator takes infinite pains to assure authenticity. He will search New England to find just the right house or village street to photograph for a model setting, round up friends and relatives to serve as models when the professionals don't seem just right, and haunt antique shops for just the right prop. In one short story, a vintage Duesenberg phaeton figured prominently. Bernie tracked down an authentic model in New England, photographed it from every angle, and worked it into the lead illustration.

Besides fiction, Bernie has illustrated many other kinds of articles. His handsome portraits of John F. Kennedy for Look magazine received wide acclaim, as did the recent series of portraits of Negro leaders he painted for the same magazine. As background for these portraits, he photographed the late President in the White House and visited all the Negro leaders to photograph them and to acquire the feel for their characters and personalities he could get only through actually meeting and talking with them.

Bernie has also become one of the leading illustrators for Sports Illustrated magazine, doing paintings of golf, football, and baseball scenes. For one series of baseball illustrations, the magazine sent him to three major league parks across the country to photograph players and actual game situations on which he later could model his illustrations.

In his work, Bernie Fuchs is constantly experimenting and exploring new approaches to his art and new methods of expression. After earning a reputation as one of the leading illustrators of magazine fiction, he has become perhaps the top sports illustrator in the country, and has created an entirely new kind of magazine portrait illustration.

Just in his early thirties, Bernie Fuchs has come a long way from St. Louis—but he still has a long way to go.
At left are two typical Fuchs illustrations for magazine fiction. Both scenes were based on photographs taken of real settings.

Two noted portraits by Bernie Fuchs in the series he did for *Look* magazine: at left, President John F. Kennedy, and below, Negro leader Roy Wilkins.
For his series of portraits of Negro leaders for *Look*, Bernie interviewed and photographed each of his subjects. At left is Whitney Young, Jr., and below, the Reverend Martin Luther King.

At left are two contrasting examples of the work of Bernie Fuchs. Above is a study of Dodger pitcher Sandy Koufax in action; below an illustration for a short story.
Gunnar Myrdal is best known in this country, perhaps, for his monumental work *An American Dilemma*. The Swedish economist and political leader delivered the address on which this article is based as the annual Theresa M. Loeb lecture. His talk opened a four-day "Conference on Planning for the Quality of Urban Life," designed as a major contribution of the University to the St. Louis Bicentennial celebration. In this article, Professor Myrdal advances the thesis that foreign policy decisions, compared with decisions on domestic policies, are regularly less well founded on knowledge and much more influenced by irrational motives.

**INHERENT IMPERFECTIONS**

**IN FOREIGN POLICY**

By GUNNAR MYRDAL

Some three hundred years ago, long before there was a United States, Oxenstierna was the chancellor of Gustaf Adolphus and Christina of Sweden. When in his old age Oxenstierna reflected on his life experiences—which included Sweden's participation in the Thirty Years' War that brought so much havoc to Europe and was ended by the Westphalian Peace Treaty of which he was the dominating statesman—he coined the sentence: "My son, my son, if you knew with what little wisdom the world is ruled." A pope in Rome two hundred years earlier had said the same thing in almost the same words. I am afraid their judgment is equally true today.

Indeed, I am afraid that the foolishness of foreign policies may, on balance, be even greater today. In any case, mistakes in foreign policy today are fraught with immensely greater dangers than at any previous time. These judgments are not made light-heartedly. For at least two decades I have been devoting hours every day to following closely the rapidly changing international policy scene by systematically reading a rather fair sample of the newspapers, periodicals, and literature from different countries.

For several years as a member of the government or in other national posts, I read the confidential diplomatic reports coming in from the whole world. For ten years I was then directly involved in international politics as the executive of an intergovernmental organization that had as its members all the European countries and the United States. For almost as long a time since then I have been hard at work on a study of the development problems of the newly liberated countries in Southeast Asia, where a quarter of mankind lives.

These problems, and indeed the very existence of these countries and their futures, are closely connected with foreign policies, their own and those of the rest of the world.

My thesis, which I shall try to make credible and also try to explain so far as that can be done in a brief presentation, is that foreign policy decisions, compared with decisions in internal policy matters, are regularly less well founded on knowledge and careful weighing of the facts as they exist and the alternatives, as they are open to action or inaction. Those decisions are much more influenced by irrational motives. In my opinion this is true in all countries. But the damaging effects to the citizens of a country and to the whole world are, of course, much greater when less rational foreign policy decisions are taken by a superpower like the United States which feels responsible for, and is interfering with, developments all over the globe.

The word "inherent" in my title is meant to imply that
the causes of the irrationality of foreign policies are deep-rooted and not easily remedied. I don’t mean to say, however, that we cannot strive to improve the situation. As a seasoned professor, I should not be suspected of under-rating the possibility of spreading knowledge and making people more rational in their attitudes. Moreover, as an internationalist, my faith is that all nations have a common interest that more rational foreign policies, directed more upon cooperation than conflict, will be pursued. There is more true harmony of interest among nations than is being realized in international relations.

I might start out with the observation that foreign policies often fail and fail utterly. The colonial wars fought by the Dutch in what is now Indonesia and by the French in Indochina and later in North Africa are instances of clear and total failures of foreign policies—pursued for years and causing immense human suffering and great material costs until they had to be given up.

This was foreseen long before these colonial powers had been defeated by those who had given thought to the problems involved. We can observe that a critical attitude was more prevalent in countries that were not themselves involved in these wars, while in Holland and France criticism was suppressed by false loyalty to what was considered to be the national cause as well as by political pressures exerted by the governments.

We recall that the United States took a critical view of the Dutch “police actions” in Indonesia and actively contributed to forcing Holland to give up. Later there was also much criticism in the United States of the French colonial wars in North Africa. But in Indochina after the Communist revolution in China in 1949, the United States actively supported the French. At the end of that war, with the defeat of the French in 1954, the United States carried 80 per cent of the costs, and France’s failure was therefore a failure of American foreign policy.

In fact, the United States continued the French policy, though now as its own, by trying—contrary to the agreement which the United States had not signed but unilaterally promised to follow—to build up South Vietnam as a permanently separate colony and by preventing the elections in all Vietnam from being held in 1956 under international supervision.

The motivation was that North Vietnam was communist and that the communists would win the elections. This was no new insight, as it was clearly to be foreseen as early as 1954. In this connection I will not comment further on the United States’ involvement in Vietnam, except by pointing out that the view that this policy will end in a failure is commonly held in all countries outside the United States—not least in countries where there is no anti-Americanism, as in Sweden—while it is not admitted by the United States government.

This characteristic of foreign policies, that they often end in failure, demonstrates a fundamental difference from domestic policies. The latter can be more or less successes, but they are seldom complete failures, and if failures are rarely sudden and catastrophic.

In internal politics the common pattern is for policies to be changed gradually in order to improve their effects. Lessons are thus drawn from experience. Indeed, the regular course of development in domestic politics is not only that the politicians in opposition demand change of policies, but that the government itself from time to time proudly advertises a new line of policy.

A characteristic of foreign policies, on the other hand, is their rigidity. Governments invariably attach the greatest importance to convincing themselves, their people, and the world, as long as it is at all possible, that policies remain unchanged. Too commonly, no other lessons are drawn than the pretended one, that experience shows that policies are right and have been right from the beginning. This is a main reason why failures are so often catastrophic.

In foreign policies there is an altogether irrational stress on sticking to a line. Related to this, and sometimes expressly stated, is the fear that changing the policy line would imply “losing face,” which is supposed to be dangerous. That consideration is very much less important in domestic policy. In foreign policy there is in this respect also an astonishing inverse correlation between the intensity of this fear and the size and power of a country. I don’t believe that in a small country like Sweden this fear of “losing face” plays any great role, while obviously it does in big countries like the United States and the Soviet Union. I should further add that the fact that “losing face” can be dangerous is usually a testimony of the irrationality of the foreign policies of other countries.

In a strange contrast to the value attached to an unchanged policy line in foreign affairs—and the practice, if it is at all possible, of covering up and concealing a change even when it occurs—stands the fact that there are regularly many more sudden changes actually occurring in foreign relations. The changes are not only sudden but often immensely great and consequential. Without much forewarning a nation may thus wake up one morning and find itself in a war or, more often, in fundamentally changed relations with other countries. By comparison, changes in domestic policies are regularly gradual and deliberately slow; policies lead to great changes only over a long period of time.

 RELATED TO THIS IS THE FACT THAT IN THE FORMATION OF FOREIGN POLICIES ORDINARILY VERY LITTLE USE IS MADE OF AVAILABLE KNOWLEDGE. THIS IS PARTICULARLY TRUE WHEN ONE OF THESE SUDDEN AND HEAVILY CONSEQUENTIAL CHANGES OCCURS. WHEN THE BRITISH, TOGETHER WITH FRANCE AND ISRAEL, JUMPED INTO WAR WITH NASSER’S EGYPT IN 1956, THERE HAD BEEN, AS WE NOW KNOW, INSUFFICIENT CONSULTATION EVEN WITH THE BRITISH DIPLOMATS STATIONED IN THE MIDDLE EAST AND WITH THE MILITARY ESTABLISHMENT AT HOME—NOT TO MENTION WITH THE
“In foreign policies there is an altogether irrational stress on sticking to a line. Related to this ... is the fear that changing the policy line would imply ‘losing face,’ which is supposed to be dangerous.”

United States government, whose reaction was bound to be crucial. Nor was much consideration given to how the Soviet Union would react. The small group of people who made the crucial decision for Britain seems also to have had totally illusory ideas about the Egyptian possibility of blocking the Suez canal. At an even earlier date they had been mistaken about the Egyptian capacity for keeping up the traffic when the old company’s pilots left.

This recent example of a crucial policy decision made for a great power by a small group of persons is not in any sense unique. The United States has within its huge State Department and a whole phalanx of other agencies, including much work contracted out to the universities, the instruments for detailed reporting and analysis of the factual situation in all corners of the world. There are very obvious indications that much use of this accumulated knowledge is not brought to bear on the formation of policy decisions, even when they are pregnant with grave consequences.

Sometimes I even have the feeling that the very size and complexity of the American apparatus for assembling and analyzing the facts abroad tend almost to insulate the small group responsible for making foreign policy decisions. More overview and wiser councils would seem to prevail when the apparatus is not so big that its outpourings tend to clog the channels.

Thus far, however, I have been moving only on the surface of the problem of why foreign policies are less rationally considered than internal policies. Before I try to pierce deeper into the problem, I want to stress that foreign policies are equally as dependent on public opinion as domestic policies, if not more so. At the bottom of the problem there must be some fundamental deficiencies in the formation of public opinion in foreign policy issues.

I am referring here to the democracies. But we should remain aware of the fact that even in totalitarian countries of the communist type, no government is entirely independent of public opinion. It is true that a totalitarian country has means of influencing people’s opinions, but such means are also available to the governments in democratic countries, and are used by them to some extent. With regard to the dependency of their foreign policy on public opinion, there is a difference only in degree between these two types of government. I will simplify the task by considering only the situation in a democracy.

One fundamental deficiency in the formation of public opinion on foreign policy issues is obviously that, while people generally have rather clear ideas about how things really are and how they should be at home in their own country, their ideas about foreign countries and international relations are much more incomplete. In foreign policy matters their ability to think rationally for themselves is much more limited.

More particularly, ordinary citizens tend to believe that the government has information of a secret nature, not available to the general public. This belief is particularly strong in the United States and stands in odd contrast to the old inherited mistrust of American diplomats’ ability to cope with the clever diplomats in Europe.

Preserving this popular belief that the government has more information than can be made available to the public is naturally always a tactical interest of every government. From all my experience I have drawn the conclusion that outside of purely military matters, this common belief is vastly exaggerated, when it is not entirely false. Ordinarily, no government has more knowledge about a foreign country than is easily available in the press and the literature.

This implies that an individual who has the leisure and the ability to inform himself carefully on an issue may often have more knowledge to bring to effective use in forming an opinion than those persons who actually make the decisions. I believe that my debunking of the commonly assumed superior knowledge of governments is strongly in the interest of an effectively functioning democracy. Governments are rarely worthy of that much respect for superior wisdom. In so far as this wrong belief is shared by the citizenry in a democracy, the formation of foreign policy tends to take on an autocratic character contrary to the spirit of democracy.

It is a fact that the ordinary citizen takes only a cursory interest in world affairs. It is indeed natural that he become prepared to abdicate his own judgment in regard to foreign policy. He is much better informed about facts and policies at home. There he feels much more definitely that his own interests are at stake, and he has much clearer ideas about what these interests are. Ideals also have a concreteness in regard to specific issues, which they seldom have in foreign policy.

I have already referred to the fact that domestic policies are regularly developed by a process that is slow, gradual, and deliberate. A reform is usually preceded by years of pleading, planning, and negotiations. Often the inauguration of a new policy is initiated by experimental activity. In any case, it is commonly taken for granted that the
FOREIGN POLICY

continuation will have to take on a pragmatic character. We learn as we proceed.

In an institutional frame, there are political parties and a whole infra-structure of organizations standing for different interests and ideals. There are sanctions in law and established practices assuring a hearing for parties, organizations, and even individual persons who want to have their say. This gives life to "government through discussion," which is the essence of democracy. There are law courts to settle disputes. At the top there is the sovereign national state to legislate and several layers of political assemblies below.

People are part of an organized unity. As the state and its infra-structure of public and private organizations are functioning ever more intensively, the citizens experience a basic feeling of "belongingness." With all the opinion clashes, there is much consideration given in a democracy to the other party in a dispute. In any case, nobody contemplates war as a "continuation of politics"—as war has been defined.

When we move up to the international level there is no world state, and I am afraid that we will not see one emerge in our lifetimes. There is a world court, but nations have not undertaken the obligations to let the court function and pass a binding judgment when they find their own vital interests at stake. International organizations should rightly be called intergovernmental organizations, for that is what they are. The governments have not given them the power to decide any important matter over an individual government's head. There is no international infra-structure, no really important organizations including citizens of different states with similar interests.

The lack of a framework of truly international institutions implies that conflicts of interest cannot be settled by collective bargaining and cooperation or by decisions of a court or a legislative assembly. To the citizens, and even to the governments, foreign policy becomes a game without established ground rules. The moves in this game come naturally to consist of threats and various types of actions aimed at damaging the interests of an adversary nation. Ultima ratio, the last resort, is war, which in modern times, when gradually the inherited complex of international law has broken down, tends to mean indiscriminate killings of people in another country aimed at forcing them to subjugation. The conclusion of alliances also belongs to the game, it is true. They are, however, always government alliances which, lacking an institutional coordination, typically remain unstable.

Lacking the experience of life in an institutionalized world community which does not exist, the ordinary citizen cannot feel with any intensity a "belongingness" to mankind. While he feels more and more at home in his own country as national integration proceeds and he is educated to an ever greater knowledge and rationality in internal questions, the world outside the nation's boundary will tend to appear more and more as a dark destiny, definitely outside his control by the peaceful means used in domestic politics.

Irrational impulses result. As we know, foreign relations is a field in which people can more easily find an outlet for their hostility and aggressiveness. And while such emotions are kept down by various sanctions in domestic relations, they are traditional and are even given a moral backing in international relations. To stand up for the interests and rights of one's own country, to get tough with a foreign nation which gets in its way, becomes generally acclaimed as displaying national vigor and virtue. To join with one's compatriots in showing dislike for any foreign nation with which one's own government has a conflict of interest actually increases the individual's subjective experience of national "belongingness." Such an attitude is commonly felt to be a unifying force of the nation. It is a shortcut to patriotism.

Whenever a government comes into conflict with another country, this strengthens immensely the tendency of foreign policy to take on an authoritarian character, to which I referred as being a result of the exaggerated, or false, belief that the government has superior secret information to guide its action. The more serious a conflict becomes, particularly if it leads to war, the more the government can rely upon the nation to "close the ranks," as the beautiful expression runs. Ordinarily, the only opposition that is felt to be fully respectable is to urge for a more determined way of dealing with an adversary. The politicians, even the good and responsible ones operating in this milieu, must often feel pressed to exploit this easy way of directing aggression outwards as a means for acquiring popular backing for their policies.

Nevertheless, people feel scared. A government that has entered a conflict and wants to pursue it will resort to propaganda and feel free to twist the truth in the direction of making its policy seem the only rational one. It will also attempt by the same means to get understanding and support abroad. But it is a common experience that such propaganda has only slight influence abroad; usually it has a negative effect. At home it is regularly much more effective. A disadvantage, however, is that it cannot be easily switched off, when that might be desirable. Its propaganda will then tie the hands of the government itself.

My conclusion is that the crucial fault of the makers of foreign policy is their tendency not to take the people into their confidence, i.e. to become authoritarian. I attach my hopes for a more rational foreign policy to the more perfect working of democracy, in which the people demand the same control of foreign policy as of national policy. This assumes enlightenment of the general public which, in turn, assumes that individual persons who have the capacity to probe deeply into the issues, do that and stand up for their opinion, even when these go against the official policy. Democracy is "government through discussion." This is as true in the field of foreign policy as it is in our policies at home.
This spring a number of internationally known scholars, planners, and public officials gathered on the Washington University campus to discuss the myriad problems of urban development.

Designed as a major University contribution to the St. Louis Bicentennial celebration, the conference was devoted to "Planning for the Quality of Urban Life."

The list of participants included such notable observers of the urban scene as Gunnar Myrdal, the Swedish economist and political leader; Leonard J. Duhl, chief of the Office of Planning of the National Institute of Mental Health; Jean I. Gottman, University of Paris sociologist and author of *Megapolis*; Wilbur R. Thompson, director of the Committee on Urban Economics of Resource for the Future, Inc.; John R. James of the London Ministry of Housing and Local Government; Hylan G. Lewis, director of Community Research Projects at Howard University, and Marc A. Fried, research director of the Center for Community Studies at Massachusetts General Hospital.

In a series of roundtable meetings that began on a Wednesday morning and ran through Friday evening, the participants examined and described the qualities of St. Louis and other areas and attempted to "identify those environmental possibilities which have not yet been exploited."

Papers were delivered by the assembled scholars on such topics as urban policy, urban physical environment, social welfare, urban working class job patterns, middle class job disorders, and lower class employment problems and their relation to poverty life styles, politics, and urban education.

Gunnar Myrdal participated in the sessions and gave the summary address at the conclusion of the conference.
Sam Bass Warner, associate professor of history and architecture at the University.

Left: Hylan G. Lewis, director of Community Research Projects at Howard University, and Ralph Pumphrey of the University's George Warren Brown School of Social Work.

Lee Rainwater, associate professor of sociology at Washington University.
Urban Life Conference

Judson T. Shaplin, professor of education and director of the University's Graduate Institute of Education.

Wilbur R. Thompson, director of the Committee on Urban Economics of Resource for the Future, Inc.

Jean I. Gottman, University of Paris sociologist and author of Megapolis.

Dean Joseph R. Passonneau, dean of Washington University's School of Architecture.
THE ARTIST IN RESIDENCE has become an institution at Washington University. At the School of Fine Arts, in the Music Department, and in the School of Architecture, the visiting expert has long been an important part of the teaching process.

Each year celebrated painters and pianists and sculptors and singers come to the campus; each year noted architects and city planners visit the University. They spend anywhere from a few days to a semester or two on the premises. They meet with students, take part in student and faculty discussions, participate in panels and seminars, and work with individual students. Perhaps the most important thing these visiting experts contribute is their mere presence. It was said that just watching Max Beckmann walk and hearing him talk was an inspiration for the Art School students when the great German expressionist was on campus a few years ago.

This spring the artist in residence idea was given a whole new dimension. The Academic Committee of the Congress of the South Forty, an organization of the student students and their faculty advisers, invited John V. Lindsay, Republican congressman from New York, to spend a few days on campus as "politician in residence."

The choice of John Lindsay was a happy one. He came to the campus not merely to make a few speeches and to have himself photographed with the students, but to plunge himself completely into campus life. The personable young congressman spent three full, busy days with the students and faculty. He took all his meals in the student dining hall and slept (when he finally had time) in a student residence hall. The rest of the time he was in a constant dialogue with the students and faculty.

ARRIVING IN ST. LOUIS on a Thursday evening, Lindsay drove straight from the airport to Graham Chapel, where he delivered an address on the future of the Republican party. As soon as the address was finished, he found himself in a fast-moving question-and-answer period that lasted until bedtime.

Early the next morning, he met at breakfast with politi-
Former Chancellor Ethan Shepley, recent candidate for Missouri governor, and St. Louis County Supervisor Lawrence K. Roos confer with Lindsay.

The congressman addresses a political science class. The inverted “No Smoking” sign in the background has no political significance.

Between meetings and panel discussions, Lindsay met with individual students in his apartment in the residence hall area to discuss politics, careers in political science, and sundry other subjects.
Congressman John V. Lindsay strolls along the Riddley arcade with a group of Washington University students. During his entire stay, Lindsay was in almost constant conversation with the students.

cal science students for another lively discussion of political conflicts and interests in foreign affairs, labor, social welfare, and other vital questions.

The breakfast session was followed by a press conference in the student lounge, where local press, radio, and television reporters fired questions before a capacity crowd of student kibitzers. Then came a coffee reception in the Mary Brooks Holmes lounge with more informal questions, answers, comments, observations, and debate.

At noon, the congressman had lunch with twenty-five students in the student dining room. The students were the first twenty-five who signed up for the privilege. As the same procedure was followed for dinner that night and for lunch the following day, some seventy-five students had the opportunity for face-to-face discussion with the congressman.

After lunch on the first day, Lindsay was the guest lecturer at a regular political science class: Dr. Robert Salisbury's Political Science 424—"The Legislative Process."

The class period was followed by a student-faculty tea, to which all interested students and faculty members were invited and where the discussion ranged far, wide, and fancy-free.

Dinner with a different group of students was followed by an open-end faculty panel discussion at Wohl Center. On the panel with the congressman were Chancellor Thomas H. Eliot and Professors Robert Salisbury, William Chambers, Lattie Coor, Barry Karl, and Richard Dawson. A crowd of some 300 students heard the discussion and provided many provocative questions from the floor.

Undaunted by his first full day in residence, Congressman Lindsay started the next day with another breakfast meeting. Then he participated in an interview by the stu-
Before a capacity crowd of students and faculty at Wohl Center, Lindsay (at microphone) discussed the future of the Republican party with a panel of University political scientists, moderated by Chancellor Eliot.

In the Mary Brooks Holmes Lounge, Congressman Lindsay talks with students about a wide range of subjects. Discussions were a long way from one-sided; students answered as many questions as they asked.
POLITICIAN IN RESIDENCE

dent newspaper, a live radio interview on the student station, and an informal meeting of the January Inn Law Club in the law school courtroom.

After another student luncheon, he went into a two-hour faculty-led discussion meeting in the Liggett Apartment in the residence hall area. There again the discussions were thrown wide open and students were privileged to ask any and all questions of the congressman.

For the next two hours, the congressman was available for interviews with individual students who wished to ask him questions, to inquire about careers in politics, or to seek information about our government and its operations.

On Saturday evening, the congressman addressed a local civil liberties dinner, to which many University students and faculty members were invited.

At the end of this whirlwind tour, one could ask "Was it really worth it? What did the students get out of it and what did the congressman derive from the experience?"

Judging from the capacity crowds that showed up for every event in the marathon appearance and based on the opinions the students expressed later, the experience was a most valuable one for hundreds of students. They got to meet first-hand a real live congressman, and a famous one at that. More important, they were privileged to hear him discuss real issues at length and they were free to ask their own questions and to express their own opinions.

For many students of history and political science and sociology, and for that matter for many students of engineering and physics and architecture, it was a practical lesson in practical politics.

For the congressman, it was an opportunity to engage in some really hard-hitting discussion, to meet with young people from all over the country, to exchange views and ideas, and to get a first-hand notion of what young people are thinking about these days.
ANDREA JOKISCH, whose last three days at home in Ashland, Ill., last September were described in the Fall, 1964, Washington University Magazine, is back home again for the summer, not quite believing—but nevertheless thankful—that her freshman year is behind her.

“The volume of work was unbelievable, the level of the assignments was like nothing I had experienced before, and the pressure to get assignments done and to make grades was almost unbearable.”

It’s not that Andi didn’t enjoy and profit from her eight-and-a-half months on campus; it’s just that the pressure, especially during first semester, was so much greater than she had imagined it would be that she missed a lot—concerts, art exhibits, lectures—and there were times when she was tempted to look for an easy way out.

Such as the night before her final examination in math. Andi relates, “I really wasn’t doing very well, but I was passing. As I was studying for the final, I seriously considered dropping the course next morning before the exam. That way my record would have shown ‘Withdrawn Passing’ and my grade point average wouldn’t have been affected.”

Fortunately, she stuck with it and earned an A both on the final and in the course. With that A, three B’s and a C (the last in zoology—‘my toughest course, but I learned a lot’)—Andi’s second semester average of 2.0 (B) was a triumph. Renewal of her much-needed scholarship was assured.

“Getting those grades and being initiated into the sorority (Kappa Kappa Gamma) were the high points of the year,” Andi says. “And getting to know Wendy, my roommate.”

Apart from meeting Wendy, however, most of Andi’s first semester experiences she recalls with anything but exuberance. Because the first high-rise residence hall on campus was not completed last September, Andi and some 100 other freshman women were forced to live for five weeks in the Ambassador Hotel on Kingshighway, now a residence for persons over 50. The inconvenience of commuting by shuttle bus, recurring complaints of noise by some of the girls’ older neighbors at the hotel, and a feeling of detachment from the rest of the University added up to an unpleasant beginning.

Her hours in class were little better. In her small, rural high school she had had no experience with research papers, consequently English and history baffled her. French and logic—and extra-tough zoology—she found manageable, but the volume of work in every course was unanticipated—and frightening.

Altogether it was a tough year, but not an unrewarding one. “I learned a lot—especially how to go about learning—and I met many wonderful people,” Andi says, adding, “Despite all the pressure, I’m very satisfied with my choice of a university. I have no regrets.”

Last fall, on the morning she was to leave home for the University, Andi huddled in bed late, watching the rain fall on the fields behind her farm home. It was a delaying tactic, conscious or unconscious. But chances are that when next September arrives, she will be up early and on her way to St. Louis, eager to see Wendy and her other friends and to find out whether, as she suspects, life moderates a bit during the second year.

Again, as last year, we wish her well.
Andi and roommate Wendy Williston of Colorado Springs, Colo., forget briefly about studies and play a game of tic-tac-toe. "The University must really try hard to match roommates sensibly. I saw so many good pairings—like Wendy and me."

Smile of success followed second semester grade report. "I left all my professors self-addressed postcards, and these trickled in the first week I was home. I couldn't believe it when the first one came: an A in math. I thought maybe there had been a mistake, but then the official Registrar's report arrived a few days later and I knew it was true."
Finals weren't too hard for Andi. She had kept up through the year. "You could tell when finals were approaching. So many of the kids in the dorm were short-tempered. Sometimes I studied at Olin Library, but usually I stayed at the dorm. I study better when I'm not very dressed up."

Time to sit and reflect didn't come often. "There's an awful lot of pressure. It seems the whole school is grade-minded. You wind up working just to make grades rather than to learn. That seems too bad to me."
The Washington University Choir and Madrigal Singers made their New York debut and then played an encore in the National Cathedral
The annual spring tour of the Washington University Choir and Madrigal Singers was a triumphant one this year, highlighted by enthusiastically received concerts in New York’s Town Hall and in the National Cathedral in Washington, D.C.

The two student choral groups, under the direction of Orland Johnson, have developed through the years into outstanding musical organizations. Composed of both music majors and students from many other divisions of the University, the organizations have received wide acclaim, both locally and in those parts of the country where the annual tours have reached.

This past tour, however, took the groups into the big time. To sing in New York’s famous Town Hall was a thrilling experience for the students and a rewarding one for the capacity audience of New York area alumni and regular Town Hall concert-goers. It was apparently a rewarding experience for New York music critics. The New York Times review the next day said in part:

"Two prides of St. Louis made a fine impression. . . . The Choir, some 55 voices strong, sang in a consistently pleasing manner, with a buoyant spirit . . . while the Madrigal Singers provided precision and fluidity of sound . . . what supple, beguiling sounds they made, and what a remarkable dynamic range they possessed."

The Washington, D.C. appearance, in the dramatic setting of the National Cathedral, was equally successful. In fact, the whole trip was a choir tour de force, resulting in the strong probability that the groups would be asked back to both Town Hall and Carnegie Hall in the near future, in a request for tapes of the performance by a national record company, and in the possibility of a European tour under the auspices of the State Department.

After the Town Hall concert, some 150 alumni living in the New York area were hosts to the choir at a reception in the adjoining New York University Club. It was truly a triumphant tour.
TOWN HALL TONIGHT
= BOOK

Each 99 on this page represents a recently published work of a member of the faculty of Washington University.
Despite the now trite status of the dictum "publish or perish," teachers, administrators, and the educated American public continue to ponder its implications, its validity. Ten outstanding Washington University faculty members, from nine departments of the College of Liberal Arts, were asked recently to give their views of scholarly publication: Does it complement teaching or interfere with it? Who really perishes? What constitutes a sensible balance between classroom and laboratory/study work? Several of the men and women interviewed—five full professors, an associate professor, and four assistant professors—suggest, in this article, that without research and the subsequent publishing, a kind of perishing does occur. But when it does, they say, it is something other than the professor's pocketbook that suffers.

Publish or Perish: Cliché or Reality?

By MARY JANE BEBOUT
Office of Publications

The man was a brilliant teacher. He was respected as a teacher and rewarded for his teaching—by losing his job. An assistant professor of philosophy at an eastern university, he was informed by the dean of the arts college there that his contract would not be renewed at the end of the academic year.

"We are satisfied that you have been effective in the classroom," stated the dean's note, "but we are frankly disappointed that the promise of scholarly contribution has not materialized."

The man had not published enough original material based on his research to convince the administration of his value to the university.

"He is not just an adequate teacher; he is by all accounts a truly inspiring one." So he was described by the head of his department and so his students felt about him.

And yet he was released.

While it is difficult to argue that justice was done this man, it is not hard to see that he is an exception to a rule, according to ten Washington University faculty members whose comments in this article are not specifically attributed. The rule: that great teaching is impossible without scholarly effort by the teacher himself. That this man could teach exceedingly well while side-stepping publishing makes him a rarity.

"Without research, the teacher will soon fall behind his students, and within a very short time he will be so dated in his knowledge and language that a barrier will grow up between him and his students," a young mathematician commented.

There is a tendency toward "second-class citizenship" without research, stated a physicist. Without feeding one's intellectual curiosity, the mind becomes grayed and dull. An educator will cease to interact with the other members of his department and to keep up with current activities in his field. His classroom presentations and writings will pall.

According to a WU philosopher, a teacher should expect his students to become pioneers in their fields. It is thus necessary that he show them just "how to pioneer," using his own research and writings as examples.

Teaching, including the many questions and comments by students, may serve to stimulate the researcher by indicating new areas of possible study, it was suggested.

But "teaching is not even quite respectable today," states an editorial in Life. "The absence of teaching has become a status symbol in the academic world." Yet we still need good teachers, the editorial continues, for "scholarship without the means of conveying it from one generation to the next is sterile."

"Conveying scholarship" is a key phrase to these educators. Several noted the obligation to present to their classes, their readers, and their communities the most accurate, most complete information. To some, teaching is more important in this communication; to others, publishing has greater significance.

Every faculty member has four responsibilities to his
students and his community, one professor suggested: to teach classes well; to be a creative researcher and writer; to take an active part in the administrative machinery of the university; and to be a good citizen, giving constructively of one's scholarly knowledge to the community and the world.

In addition to his responsibilities to others, the professor added, an educator owes something to himself. This man's cardinal rule is: "For God's sake, keep alive!"

To each interviewee, from relatively inexperienced assistant professors to substantially accomplished professors, intellectual life is a precious thing, to be carefully developed and tenaciously sustained. This life force is best developed and maintained through research. They defined "research" as the active probing through one's own mind as much as through the facts and concepts set down by others.

Free time for research is provided by most universities, including Washington University. In many cases, the maximum teaching load is three courses a semester.

During the first years of a teacher's career, his major duty is to prepare good class presentations and lecture notes. As soon as minimum teaching goals have been reached, however, the responsibility to publish looms large before him.

"Moral responsibility" is a phrase pervading the ideas and words of several interviewees. They declared that many educators feel a moral responsibility to present to the world the most sharply accurate and latest knowledge through their class presentations and publications. There is also a moral responsibility not to publish if the material is lacking in completeness, or accuracy, or importance.

This moral responsibility does not end at the campus boundary, stated an associate professor. "Scholars should develop a style of popular presentation which is meaningful to the intelligent people of the community. The scholar must be willing to cope with the values of the community. Published articles must communicate with ordinary people without thinning down the material. This is indispensable to the community."

There are, however, educators who feel no such responsibility, stated a political scientist, at least toward their students. He noted that in large universities emphasizing research there is a trend toward "academic entrepreneurship," in which some educators are appointed research professors and even do little research. They live in a whirl of meetings and conferences, recommending projects and advising government officials. They collect institutes around them, and are always running to New York or Washington to arrange for new grants. "These men literally don't teach, and if they do, they give it only a slap and a dash." He made a mock announcement in the words of such a jet-set educator. "No meeting next week, students. I'll be in Tokyo."

Nearly all faculty members interviewed noted a step one-step two relationship between research and publishing.

"Publication enters here in that throwing these tidbits of truth into one's own lectures exclusively is unfair," he said. The findings must be published to add the material to the knowledge of the world, not just to the inordinately lucky students of Political Science 374."

One of the younger men declared that researchers who fail to publish their findings are like misers. "Perhaps they even take out these valuable unpublished pages each night and count them," he suggested.

A more personal motive for publication came from an associate professor who stated that "we all require the test of the market, whether of the scholarly editor or of the wide public."

"There is the temptation," an English professor stated, "to play a little god in the classroom. But if one publishes and submits his ideas to the gaze of his peers, he will not become a demagogue. Many 'teachers' hide behind their titles, stating defensively that they are teachers and not scholars. This seems to me to be license for remaining ignorant."

Two basic reasons for not publishing, among those with the ability to write publishable material, seem to be a fear of failure and a lack of understanding of how to approach a publisher. Those in the first group are too thin-skinned to expose themselves to a critic; or they are afraid that a particularly bad publication may damage their academic reputations. So they submit nothing to the publishers. Those in the second group either hang on to their material so long it becomes dated, or they approach several journals at once.

There exists an ardent difference of opinion among educators concerning which is the better type of publication, the short article or the full-length book. Physical scientists generally make use of the shorter formats, while humanists and social scientists tend more to book-length works.

In considering the publications of its faculty, a university may favor one type of publication over another. One professor, well known as an excellent teacher, stated that "an administration which favors publishing, with an unnecessary respect paid to something in hard covers, produces among its faculty the tendency to pad article-length works into books."

In some university situations, policy may emphasize quality and be less concerned with the length of a man's bibliography. "A college administration which does not require quality, however, just may not get any," said a political scientist.

A younger man acknowledged the deference paid to books, and stated that in this situation lies the origin of the maxim, "one bad book is worth six good articles." He added that Washington University is far less impressionable, seeking quality before length.

One factor in the quality of publications is the necessity for speed inherent in the sciences. One professor stated that the competition in making discoveries and publishing the results is so great that one cannot afford to wait until one's ideas are in perfectly formed phrases on paper. "Each man is in danger of being scooped," he said.

Why publish? There are probably as many answers to this question as there are men and women publishing. But there is one overall factor common to all—promotion.
"It is a fact of academic life," stated an English professor. "The publish-or-don't-get-a-promotion idea may be unfortunate, but it's nevertheless true."

Another man came to the defense of the administration. "The basic item an administration looks for in a man before promoting him is some evidence of intellectual curiosity, a scholarly attitude of mind, and an unwillingness to accept second-hand judgments and information. This evidence is easiest found in publications.

"University administrators are human, and even to them it is a difficult and subtle problem to establish a uniform list of requirements for promotion. Each case must be evaluated individually, and one can only hope no drastic mistakes are made."

Publications may help one obtain a promotion in another way. To a young mathematician, publications are an important way to stimulate outside interest in and subsequent endorsement of his work. Mathematics is a hyper-specialized science, he noted, and even one's departmental colleagues may not have an accurate knowledge of one's work, not to mention a valid and well founded opinion. It is the expert in each specialized area who will be called upon for an evaluation before promotions are granted.

Even to the well-established scientist the opinion of one's peers is of vital concern. A man's good name, created by his publications, is his most valuable calling card when seeking an advancement, whether at his or another university or in industry. It is this "invisible college" of one's contemporaries which is of the greatest help in obtaining promotions.

Prestige is a red-letter word to educators of all fields, for it is prestige which brings tenure appointments, grants, and promotions. Publications serve to develop reputations for both the scholar and the university at which he is a faculty member.

Current publishing trends mirror the concern of young educators for putting their best foot forward. Stated one of the younger men: "I write a bit, but I'm pretty choosy about what I send to a publisher. I do plan to be promoted, however, and through my good-quality publications." A historian noted that in the past, books were published by older, better established men, and articles and other short works by their juniors. The majority of books published today are written by rising young men and women and articles are generally written by older educators, he stated.

To be entered on the "pro" side of the ledger is the fact that the dictum "builds a fire under those who would cultivate a Mr. Chips reputation and makes them creative," according to a young educator interviewed. "It exercises a salutary pressure on a lot of dead wood," he added. The "con" side may list that "publish or perish" tends to induce overspecialization among scholars at the cost of reduced abilities in other areas. The decline in the quality and effectiveness of teaching and publications, if such occurs, may also be listed as an objection.

But among the interviewees was a handful of men who refuted the practice and even the validity of such a dictum.

To one full professor, "publish or perish" is merely a cliche, and, like most cliches, overdramatized and grossly oversimplified. "It only hits the surface," he said.

The professor continued: "It would seem to indicate that publishing is enough to prevent perishing—which it isn't. The saying leaves out of account all the other factors in the line of academic success. It would be equally false if the cliche read 'teach or perish.' If this sounds foolish, it is no wonder; it isn't literally true either. It is equally superficial."

Even the alternative to publishing, that is, "perishing," came under fire. "One might suffer from a lack of promotions," stated one man, "but no one really perishes. There are plenty of third- and fourth-rate schools to turn to."

The young man continued, noting that the dictum might best be worded "publish or don't get a Cadillac." facetiously, he recalled the Notre Dame version, "publish or perish."

He added that those who complain about the saying are to be regarded with suspicion. "They want to dawdle and still get ahead, or they're dumdumheads," he stated flatly. "If money is their main objective, they should go into the business world, not into education."

Still, there is a form of perishing which occurs, suggested the political scientist, a mental stagnation which robs the educator of his intellectual curiosity and his enthusiasm for classroom, research, and writing.

This intellectual deterioration often occurs when a man is mistakenly kept on at an institution as an associate professor with tenure.

If an educator has shown few signs of intellectual growth during the years before his tenure was granted, these signs of growth are apt to disappear completely after his promotion, and the associate professor may come to an absolute intellectual halt. He may no longer work at any outside research or reading. Eventually, even the glow of classroom teaching may fade, and the man will have become just another boring, know-nothing, stale teacher, of no value to his field, his university, his students—or himself.
Other students follow closely as symphony conductor Eleazar de Carvalho reviews score with student in his conducting class.

Player-student Ken Schultz, whose view of conductor is usually from a chair in the brass section of the St. Louis Symphony, watches as the maestro demonstrates a movement. “Clearness is the main virtue of a great conductor,” De Carvalho told his advanced students.

On his own, Schultz opens a section of Beethoven's First Symphony with eyes up, poised to signal-in a section of his imaginary orchestra. A pianist followed the student’s directions.
This spring Washington University's Department of Music pulsed with excitement. Two new things were afoot: St. Louis Symphony Conductor Eleazar de Carvalho was on campus to teach conducting and a week of symphony-school sessions were scheduled under a grant from the Rockefeller Foundation.

Together they have established a continuing tie between music department and professional symphony orchestra which has made Washington University the envy of schools across the nation.

On campus Maestro de Carvalho conducted his class with the utmost formality. "Conducting," he told his pupils, "is a thing of great dignity."

The nine students included undergraduates, teachers, and two members of the symphony orchestra. Nearly every week, each was called upon to conduct as the maestro watched and then criticized.

"It was a trying experience," confided an undergraduate, "and a most rewarding one."

During Rockefeller Week conducting students were given a brief opportunity to conduct the symphony. The $15,000 grant enabled the Music Department to "hire" the symphony for a week of readings. Student, faculty, and guest composers sat in on orchestra readings and performance of their works.

The week was climaxed with a Sunday afternoon concert featuring the work of nine new American composers—university students of advanced composition, faculty, and visitors. Open rehearsals drew music students from all over the area. Composers were on hand to confer with the maestro on scores. Conducting students watched their mentor draw the orchestra into his mold.

In the darkened concert hall, on the bright stage, and in the classroom, the exchange between professional and student grew to an exciting, vibrant, living thing, opening new channels of cooperation between symphony and school.
De Carvalho puzzles over score during symphony readings for the Rockefeller Week concert.

In class a student seeks to compose himself before tackling the Beethoven score. De Carvalho encouraged pupils to wear coats and ties to undertake the conductor's formal role.
High school music teacher Adrian Boyer reflects the consternation even veteran teachers felt as they conducted before Maestro de Carvalho.

As instructed, student sings by syllable along with the parts. The method is called "solfege" by the Paris Conservatory School.

To the graceful conductor, even the position of the pupil's feet were of concern.
Comment / Declaration of Independence

**At Washington University's** commencement ceremonies on June 7, James S. McDonnell, chairman of the board of directors, read a declaration by the board. The full text is printed on the next page.

The declaration was a simple but eloquent statement of the University's purposes and an affirmation of its commitment to the pursuit of truth through open discussion and free debate.

That discussion at a university must be free and debate open seems so obvious and self-evident that it hardly needs stating. Yet, it is a principle that must be reiterated constantly, for some people find the whole concept difficult to grasp. We all believe strongly in freedom of speech and in the right of discussion and debate; some of us, however, find it difficult to extend these rights to people with whom we disagree or to ideas we find personally disagreeable. Yet, that is the very heart of the problem. Only by examining ideas and by subjecting them to debate and discussion can the truth be sought. As the board of directors stated in its declaration:

"The search for truth and the development of the human mind require an atmosphere of freedom of inquiry and freedom of ideas."

**Shortly before commencement**, the board of directors issued another statement, equally simple and equally pertinent to the subject. On June 4, the board of directors stated:

Washington University's academic year ends on June 7. On many campuses across the country, it has been a year of unprecedented turmoil. Disruptive campus demonstrations, sit-ins, and arrests have caused widespread concern.

We at Washington University have not had to face such turmoil.

The University's students and faculty are alert to the significance of major current issues. All sides of such issues have been discussed on the campus, as they should be.

We commend the Chancellor for expressing to the students and faculty his own condemnation of communism or any other ideology hostile to American principles of freedom and justice.

We approve the steps taken during the year to enhance communications between students and the faculty and administration.

We congratulate the administration, faculty, and student body of Washington University on maintaining a praiseworthy degree of equilibrium in a time of tension, and on working together to create an even finer institution.

In turn we should like to congratulate the board members for their understanding of the University's real role and purposes, for their sympathy toward its goals, and for the strong support they provide for the institution.

The St. Louis Post-Dispatch, in an editorial commending the board of directors for its declaration summed it up quite well. Said the Post-Dispatch in part:

"Commencement exercises offer an occasion for congratulating the graduates, but at Washington University this year's ritual called for felicitations also to the board of directors."

**The faculty members quoted in the article "Publish or Perish: Cliché or Reality?" in this issue represent a broad cross-section of the campus. Included are veteran professors and new faculty, physical scientists, social scientists, and humanists. All of them, however, have two important things in common: they all teach and they all do research.**

Actually, while there were many different opinions expressed on the subject by the professors who were interviewed, the general consensus seemed to be that the whole problem has been exaggerated in the many articles on the subject in newspapers and national magazines; in other words, there's more cliché than reality in the publish or perish idea. To be a truly effective teacher on the college level, the professor has to do research and scholarly work; to do effective research on a university campus, the professor needs the stimulation that only teaching can bring. The two are inseparable.

**The University, the Medical World, and most important, thousands of patients past and future, suffered a tremendous loss this spring when Dr. Paul A. Cibis of the School of Medicine died suddenly.**

Dr. Cibis, whose life and work was featured in the article "Eye Surgeon" in the Winter, 1965, issue of the Washington University Magazine, was 53 years old when he was stricken with a sudden and fatal heart attack. One of the world's greatest ophthalmologists, Dr. Cibis was the first surgeon to perform a successful operation on a secondary retina detachment using the liquid silicone method. Literally, he saved the sight of hundreds of patients who would be blind today if it were not for his scientific vision and his surgical skill.

—FO'B
A DECLARATION

WASHINGTON University's purposes are to serve the community and the nation by:

- training young men and women for responsible leadership in business and the professions, in science and the arts, in public service and education
- expanding knowledge, through scientific and scholarly research
- strengthening the economy, through cooperation with industry in science and technology
- helping to improve the health of the community
- helping to solve the problems of urban societies
- brightening the cultural life of the community

The achievement of these purposes requires a high degree of dedication and responsibility on the University's campus. The task of developing man's mental powers demands the concentrated and devoted efforts of the teachers of the young in seeking and imparting truth.

The search for truth and the development of the human mind require an atmosphere of freedom of inquiry and freedom of ideas.

The worth of ideas is inevitably and always a matter of differing opinions.

Truth can best be sought by open discussion and debate.

Sober and responsible intellectual controversy is the lifeblood of all departments of any good university. We welcome it.

The ideologies of despotism, communist or any other, would suppress dissent and disagreement. They are hostile to the spirit of a great university in a free society.

CHANCELLOR ELIOT expresses the philosophy of Washington University in saying of the advocates of such creeds:

"Because we have faith in freedom, we let them be heard; because we love freedom, we reject their message."

Washington University's future is bright because it is an institution where young and old work together with minds unfettered and unafraid.

In doing so, they add to the sum of man's knowledge and wisdom.

BOARD OF DIRECTORS

WASHINGTON UNIVERSITY

JUNE 7, 1965