**UR Not Second Choice**

The February issue of *Harper's* magazine made public a fact which UR alumni have been well aware of these many years: that the University of Rochester is a school good enough for even the most talented high school student. In an article titled "Good Colleges That Are Not Crowded," freelance writer Martin Mayer states that the UR should not be considered a second choice to such "prestige" institutions as the Ivy League colleges. Mayer says that roughly one-fifth of all places in entering classes go vacant every year, with a surprising number of these vacancies in first-rate schools.

The UR's College of Arts and Science, he notes, accepted 1,130 applicants in 1958 to get 572 enrolled freshmen.

"Rochester's position is such," he writes, "that it can attract more than a thousand highly able applicants, and 82 per cent of these who finally enrolled were in the top fifth of their high school classes. Other colleges which lose half their admitted candidates, however, wind up with a student body unable to take full advantage of the opportunities offered by the school."

The UR is not a school with vacancies in the entering class, according to Charles R. Dalton, Director of Admissions. "We haven't had any vacant space in a long time," he added.

There is a fast-growing habit among the qualified high school student to make application to two or more highly rated schools. Thus, in order to secure a class of entering students of the size called for in the projections of student enrollment, the Office of Admissions normally must offer admission to more students than will actually appear for the opening of college in September. Carefully worked-out formulas have been devised by Mr. Dalton to assure an entering class of high quality that does not deviate by more than one or two per cent from the number called for. Generally, this means two offers of admission for every freshman who actually registers. The 1,130 who were offered admission were selected from 2,134 applications.

Arrange(d) for Summer

Long concerned with the problems of the composer, the Eastman School of Music this summer will focus attention on the arranger with a two-week long laboratory-workshop. Four ensembles will be available as demonstration groups and will perform scores prepared by the participants—a large orchestra of the type usually associated with recordings of the music of Leroy Anderson, a smaller orchestra, a dance orchestra for music of the popular idiom, and a concert-marching band.

Rayburn Wright, chief arranger for the Radio City Music Hall, will head the workshop. Assisting will be Everett Gates, Associate Director of the Music Education Department of the Eastman School, and Donald Hunsberger, former arranger for the Marine Band. Dr. Richard Hill of the Library of Congress will lead a seminar on the copyright law.

**For Better Health**

Research at the University in the problems of health was implemented in the last quarter of 1958 by grants totalling $119,735 from the National Institutes of Health.

In October, grants totalled $47,206. Almost half of this amount will go to Dr. Scott N. Swisler, Assistant Professor of Medicine, for study of the interactions of antibodies and blood cells.

Work on the structure and function of hemins and hemoproteins by Dr. Elmer H. Stotz, Chairman of the Department of Biochemistry, received a grant of $15,025. A grant of $7,994 was awarded Dr. Victor M. Emmel, Associate Professor of Anatomy, for research on kidney changes related to vitamin E deficiency.

Dr. John H. Flavell, Assistant Professor of Psychology, received a grant of $1,969 in the field of mental health for a study of meaning and its relation to word association.

Also during October, fellowship awards were made to Jean Louise Harris and William H. R. Nye for post-doctoral study in medicine at the UR.

Continued support in the amount of $37,030 came during November. The sum of $13,030 was awarded for study of contrast media for cerebral angiography, directed by Dr. George H. Ramsey, Chairman of the Department of Radiology. Work on physiologic effects of vascular contrast media will be supported by a grant of $24,000. This research is being directed at the UR by Dr. Frank L. Campeti, Research Assistant Professor of Radiology and research associate in medicine.

The largest of the three grants by the National Institutes of Health during December was one of $17,962; it will support research being directed by Dr. Robert B. Duthie, Chairman of the Division of Orthopedics, on the properties of heterotransplanted skeletal tumors.

A study of cortical recording from multiple electrodes by Donald W. DeMott, Research Associate in Psychology, received $14,547; and research on *in vitro* cultivation of human thyroid epithelial cells directed by Dr. Lester M. Cramer, Instructor in Plastic Surgery, received $7,210.

**Operation: Research**

From $2,700,000 in 1952, sponsored research at the UR has grown to more than $5,500,000 in the current fiscal year. There are about 250 sponsored projects in fundamental research and training currently underway at the UR. These projects are being undertaken by 340 scientists, 165 technicians, as well as many graduate students. The research budget, which comprises more than one-fifth of the University's total annual operating costs, is financed largely by funds from government, industries and foundations.

The past month has seen several changes in the administrative officers who coordinate these research activities.

David A. McBride, Jr., was promoted to the post of Director of Research Administration. He succeeds La Roy B. Thompson who will devote full time to his duties as Associate Treasurer of the University. Richard J. Susat has been named Assistant Treasurer of the University.

McBride has been a member of the UR administrative staff since 1956 and was named Assistant Director of Research Administration a year ago. A graduate of Cornell University in 1943, he was associated with the Pfaudler Company in liaison work with engineering, production and sales divisions before joining the UR staff.

Research has been the preoccupation of La Roy Thompson since coming to the UR in 1949. In 1957 he assumed the duties of Associate Treasurer of the University while continuing in the position of Director of Research Administration to which he had been appointed in 1954.

Susat received a Bachelor of Science degree in Business Administration from the UR in 1951; he became a member of the research administration staff the
same year. His promotion reflects a transfer of the business and financial activities from the research administration office to the Treasurer's office. He will also assist the Treasurer with new building projects that are currently being planned to be undertaken in the next decade.

UR in Big 10 in Physics

The University of Rochester Physics Department ranked tenth among the leading universities of the country in the extent of research contributions by its members, according to a survey by Fortune magazine.

A table in the November issue of the magazine giving the leading 20 contributors of papers to The Physical Review, the nation's most important journal of theoretical and experimental physics, shows the UR well up in the list of non-industrial research with a total of 43 papers printed in the Review in 1956 and 1957.

The other universities listed were the University of California, Massachusetts Institute of Technology, the University of Chicago, Columbia University, the University of Illinois, California Institute of Technology, Harvard, Yale and Princeton. The other 10 on the list are government laboratories or U. S. industries.

Said Dr. Robert E. Marshak, Chairman of the UR Physics Department:

"The members of the University of Rochester Physics Department are to be congratulated for the impressive contributions which they have made—and are making—to basic research in the United States. The community should take pride in the fact that the University has achieved such standing in an important phase of the activities of its College of Arts and Science."

UR Host To Conferences

In the past few months the UR has been the host to five important conferences in fields of diverse interest.

In November the University sponsored the fifth annual Canadian-American Studies Conference. Participating were some 20 historians representing 17 colleges in this country and Canada.

The purpose of the conference was to discuss problems which are faced by Canadian and American scholars and academic administrators.

Cinefluorography—the use of motion picture equipment in conjunction with x-ray—was the subject that attracted 250 experts from both this country and abroad to the UR campus in November. The conference, the first of its kind, was sponsored by the Department of Radiology of the School of Medicine and Dentistry.

The symposium was designed to acquaint radiologists with the techniques pioneered at the UR Medical Center for using the equipment, as well as processing the motion pictures taken, and their clinical uses. The UR Radiology Department was for many years the only such group able to film x-rays as well as process the motion picture film.

Scholars representing the 29 member societies of the American Council of Learned Societies traveled to Rochester in January for the 40th annual meeting of the group. The Council, which was founded in 1919, is a federation of 29 societies in the humanities and social sciences, representing some 60,000 scholars. Each year they award $10,000 prizes to ten scholars for distinguished work in the humanities, as well as fellowships and grants-in-aid.

One of the 21 fellowships chosen from more than 300 applicants was awarded to Dr. George Harry Ford, Professor of English at the UR, during the conference.

The major public event of the three-day meeting was the address by Dr. J. Robert Oppenheimer in Strong Auditorium. A standing room only audience heard him speak on "Tradition and Discovery."

Of special interest to the UR family is the fact that President de Kiewiet is a former chairman of the board of directors of ACLS.

The College of Education was host at the University's Woodward House in LeRoy for a conference of the New York State Collegiate Association for the Development of Educational Administration.

Some 50 educators who are concerned with training for school administration in the state's public and private teacher-training institutions attended the two-day meeting in January.

In February, Protestant, Catholic and Jewish religious leaders took part in a three-day Campus Conference on Religion. The theme of the conference was "How Are We to Understand Man?" Major speeches were presented in Strong Auditorium each evening; the points of view expressed approached the topic in the light of contemporary culture, psychiatry and philosophy and theology.

Appointments ... Honors ...
MARCH

3-5 STUDENT CONFERENCE, "America: Advance or Decline," Dr. Herbert J. Muller, University of Indiana; Dr. Hans Kohl, City College of New York; Dr. Benjamin Botkin, University of Oklahoma; Dr. Clinton Rossiter, Cornell University; Dr. L. C. Dunn, Columbia University, River Campus.

22 CONCERT, All University-Symphony Orchestra. Strong Auditorium, 2 p.m.

29 VARSITY BASEBALL. Rensselaer at Rochester.

4 VARSITY BASKETBALL. Hamilton at Clinton.


APRIL

4-5 WATER SHOW, presented by women students of River Campus. Alumni Gymnasium.

10-11 QUILTING CLUB, presented by men students of River Campus. Strong Auditorium.

20 VARSITY BASEBALL. Union at Rochester.

29 VARSITY BASEBALL. Rensselaer at Rochester.

Next Issue... A special report on the state of college teaching in America today—and the outlook for the years immediately ahead. This 16-page feature will be read by alumni of 250 colleges and universities; be sure YOU read it in the May Rochester Review.
Time to Play  “Play” means one thing to Ralph Winkler—the violin! Above, he plays in the Philharmonia Orchestra under the baton of Dr. Howard Hanson. He also plays in the Rochester Philharmonic Orchestra, and he has played many recitals both in Rochester and in Ohio. To play as well as Ralph Winkler does requires a great deal of hard work plus a generous amount of talent, ambition and faith. How he combines all these qualities is indicated on the following pages. Winkler is the violinist second from the left above.

Prestissimo  

. . . the fast tempo of activities of a student at the Eastman School of Music

Life has been described as one long symphony—sometimes melodious, sometimes discordant, sometimes largo, sometimes prestissimo. In the symphony of the life of Ralph Winkler, senior at the Eastman School of Music, the current “movement” titled “Performer’s Degree” must be labeled prestissimo. If the melody is provided by his wealth of talent, then the harmony is a blending of the great faith, ambition, and zeal that he applies to the many activities that he has programmed for each day.

The following pages chronicle some of the activities that he manages to accomplish during a day—all of which by plan and desire, promote further growth as a violinist, as a teacher, and as a human being. His primary goal is to teach violin at a college or music school. Towards this end he is planning graduate study at the Eastman School.

During his high school days in his home town of Dover, Ohio, Ralph Winkler found time to devote many hours to the practice of the violin, as well as go out for the track team. It was good preparation, for he has held an Eastman scholarship through all his four years of study towards a Performer’s degree. His experience on the track team has come in handy, too, for he runs, does not walk, from one appointment to another. This is the way to get things done.

Winkler is a member of both the Rochester Philharmonic Orchestra and the top-rated student orchestra, the Philharmonia Orchestra. He has performed in many recitals both here and in Ohio as a violin soloist and as a member of chamber music groups.

A deeply religious young man, he says that if something were to prevent him from realizing his goals in the field of music, he would choose the ministry as his career. He is now the president of the Inter-Varsity Christian Fellowship.

Is Ralph Winkler an unusual student? In many ways yes, but according to Dean Flora Burton of the Eastman School of Music, almost one-third of the students hold part-time jobs of one sort or another.
Ralph Winkler
Races the Clock
in Pursuit
of a Career

Time to Pray
Their heads bowed in silent prayer, Ralph Winkler and his girl friend, Margie McCollom, join a group of friends in a prayer meeting held each morning in the lounge of "C" House of the Eastman Dormitories on University Avenue. Ralph starts his day at 5:30 a.m. by reading his Bible for at least an hour.

Time to Work
Hands that can delicately draw beautiful music from a violin can also manipulate a broom. Money earned as early-morning clean-up man in a downtown dress shop helps augment his scholarship. He has also worked as a bell boy.

Time to Learn
Private instruction is a key to the success of Eastman School students. Once a week Ralph meets with Millard Taylor, concertmaster of the Philharmonic, for an hour of intensive study. Chamber music, too, is on his schedule with classes under John Celantano of the Eastman faculty. Ralph has given eight recitals here.

Time to Teach
The picture above gives an insight into Ralph's character and ability—his young pupil actually looks interested as he explains an especially difficult scale. Ralph wishes his busy schedule would permit more than just this one private pupil who some day, perhaps, will follow Ralph's giant footsteps at the Eastman School.
Time to Rehearse

From 9:30 to 12:30, Monday through Thursday mornings, Ralph rehearses with the Rochester Philharmonic Orchestra for the regular Thursday night concert. Several afternoons a week there are rehearsals of the Philharmonic Orchestra. Above, Dr. Howard Hanson, conductor of the orchestra, points out a subtlety in score.

Time to Think

Some day Ralph hopes to be giving examinations rather than taking them as he is in the picture above. His goal is to teach at a music school or college. Towards this end he is studying Theory and Orchestration this semester. He added a course in German in hopes of winning a Fulbright Scholarship for study in Germany.

Time to Relax

The luxury of a leisurely dinner is enjoyed by Ralph in the company of Margie. Although they don't have time for the usual dates, movies or dances, it is times like these that helps romance blossom. Ralph claims the title of "railroading buff" and in following this hobby has built his own model railroad cars and equipment.

Time to Serve

Tuesday evening is choir rehearsal night at the Church of the Good Shepherd. Besides directing the choir, Ralph is the organist at two Sunday services. The ministry would be Ralph's second choice for a career, but right now he has a running head start towards achieving success in the world of music. Prestissimo!
SPACE—what are the military and scientific potentials? What are the problems and how can we solve them?

We know of the man-made objects in space—the satellites and the missiles. We are finding out about such things as radiation belts and ionization. We are making a coordinated effort to increase our knowledge and understanding of what lies beyond this, the last frontier to be conquered by man.

The Advanced Research Projects Agency (ARPA) of the Department of Defense is charged with the military aspects of our space program as well as being responsible for the advanced research and development of an adequate ballistic missile defense system.

Of the two major assignments, the one which is most difficult in that it involves the greater number of our staff of 60 is the one of ballistic missile defense. It is an extremely difficult problem and by describing the threat I hope to give you some feeling for what the country is facing in trying to solve this problem.

The most important facet of the ballistic missiles that makes the defense against them so difficult is the enormous speed at which they travel. They go roughly 25 times the speed of sound, or the speed of our fastest airplanes—something like 18,000 miles per hour. Putting it in other terms, their speed is five miles per second, so that if you detect it 300 miles away, let us say, you have exactly 60 seconds in which to determine—first, that there is a threat; second, the trajectory
The article below is based on a speech given by Dr. Herbert F. York at the Trustees' Corporate Relations Committee Dinner on November 20, 1958. At the time of the speech, Dr. York was Chief Scientist of the Advanced Research Projects Agency in the Department of Defense. On January 1 of this year he became Director of Defense Research and Engineering. Under the President's defense reorganization plan, he is No. 3 man in the Pentagon.

Dr. York is in charge of all military research and development, a program that is budgeted at over seven billion dollars a year. It is his prediction that man may set foot on the moon by 1965 and Mars and Venus three years later.

At 37, Herbert York is a veteran of some of the nation's biggest scientific efforts. During World War II he worked on the atomic-bomb project. After receiving his Ph.D. from the University of California he joined its Radiation Laboratory where he worked on the design of nuclear warheads for missiles.

He received his B.S. degree from the UR in 1942 and the following year his master's degree.

on which the missile is traveling; third, the action that should be taken; and then to get a missile up and try to make the intercept.

Sixty seconds is an extremely short time in which to accomplish all of this. If you detect it 600 miles away, you are twice as well off and have a whole two minutes to do all this.

Another feature about the ballistic missile as compared with the airplane as a threat is that the ballistic missile warhead is very small—maybe two feet in diameter, maybe six feet, depending on what the Russian weapon design details are. This is to be compared with the hundred-foot wing spread of an airplane. Since it is very much smaller, as well as moving very much faster than the present-day threats, it gives an increased measure of difficulty of detection by present-day radar or by other means.

A missile warhead is also probably a tougher target than an airplane. An airplane is a fairly large and relatively flimsy structure with many large air foil surfaces such as wing, tail, and fuselage, which can be destroyed or broken with a relatively weak shock wave. Likewise—an airplane is manned, and man is also one of the more frail parts of the system.

On the other hand, a ballistic missile nose cone is a small, very compact object; it has no "handles" on it to make destruction easier. Thus, whatever method is being used to destroy the incoming nose cone—whether it is a nuclear warhead or what have you—it is necessary to get closer. You have to make a more accurate intercept.

A fourth point is one that was illustrated by some pictures that were published in Life magazine a few months ago. They showed the nose cone of a missile fired by the Army from Cape Canaveral in Florida; it went out into space and re-entered the atmosphere some thousands of miles away.

The striking thing about these photographs of the re-entering nose cone is that they showed that there was not just one object in the sky at the time, but there were three. In this particular case, these were the nose cone proper, a compartment containing certain instruments which was separated from the nose cone, and the remains of the big rocket which had been used to propel it into space. Of these three, the smallest and least obvious was the nose cone itself.

This means that there is, in addition to all the other problems, the problem of discrimination—how to tell which one of the bodies re-entering the atmosphere is the one that must be destroyed; that is, which is the deadly one.

In addition, you can easily imagine that, if by accident or on purpose, the large rocket case were to disintegrate or be blown up or break up into fragments, there would be a very much larger number of objects that must be identified in order to discern which one must be destroyed.

Compared with any other defense problem we have ever faced this ballistic defense problem is a fantastic one.

The Department of Defense is taking a two-pronged approach to solving this problem. The first makes use of present-day technology and present-day state of the art. Thus, the Army and the Air Force are developing and building systems for detecting and intercepting ballistic missiles. The Army is
building a system that you may recall having heard about under the name of Nike Zeus. Briefly, it is a system of radars for detecting the approaching warhead, computing machinery for determining its trajectory, and a missile for intercepting and destroying it.

Similarly, the Air Force is building another system called BMEWS (the initials stand for Ballistic Missile Early Warning System). This is a large and high powered radar system that is to be located in the Far North for the purpose of detecting an enemy raid when it is, roughly speaking, half way here. When it still has several thousand miles to travel, we have 10 to 15 minutes in which to alert and get all the rest of the system ready to make its detection and the intercept. These two systems constitute one prong of the approach to the problem.

The other prong of the Department of Defense approach is the ARPA program in this field. In brief, it is to sponsor the research and development necessary to provide the groundwork for building a second generation ballistic missile defense. It is certain that as the threat becomes more sophisticated, as special decoys in large numbers are employed. As higher speeds are attained, as ways of reducing radar reflection are attained — then the present system will be very greatly degraded and it will be necessary to have a much superior system.

The ARPA program includes such matters as investigating the phenomena which occur when a nose cone enters the earth's atmosphere; that is, what kind of shock waves it makes, what this shock wave does to our atmosphere, what other phenomena take place. We are stressing these and other basic matters in the hope that as a result of this work we will find some phenomenon which we haven't thought of yet. We are looking behind as many doors as possible, as fast as possible. Perhaps a discovery in a basic field will provide the key to making the immediate problem easier, perhaps enabling us to simplify the discrimination problem or make it easier to detect and track the incoming missile.

In addition to these more basic aspects, we are emphasizing further development in the state of the scientific art of radars, computers, and other components of an over-all anti-missile system. This research on basic problems, plus the development of better radars—higher powered and of greater accuracy—will undoubtedly be needed in order to build the improved system that will become necessary. Details of what we are doing in this field are largely classified, and that is why I have approached it by describing the magnitude of the problem rather than describing our program with any precision.

The other major field, and the one for which we have the largest budget, is the space program. At present, ARPA has only the military space program, but it had responsibility originally for the entire national program. ARPA was responsible for setting up the program that led to the last two additions, the three or four satellites, for the three lunar probe attempts by the Army.

The present programs of military interest in space are several in number. One of the most interesting to us, and we think one of the most important, is that of the communications relay satellite. We have several different kinds of satellites in mind here for serving several different purposes. The basic idea is simply that for short wave communications, normally the waves do not reach beyond the horizon, which may be 50 or so miles away, depending on how high the transmission is. The operation of your television set is based on this fact. What the satellite does, essentially, is to provide a radio station in space whose horizon is many, many thousands of miles away, depending on how high the satellite is. A satellite relay system consists of a transmitter station on the ground, which sends messages to the satellite which receives them, amplifies them, and then rebroadcasts them in the general direction of earth. This means that any two points on earth which can see the satellite can communicate with each other, using the satellite as a relay. Our research people believe that the number of simultaneous voice conversations that ultimately can be handled by a satellite is as large as the number of simultaneous voice conversations carried by the Bell system across the United States. It is estimated that for a power consumption of a hundred watts, television programs could be relayed across the oceans. Whether this is something we want to perpetuate across the world is another matter, but the capability will be there.

The location of such a satellite in space is also of interest. There is a circular orbit about 22,300 miles from the surface of the earth which has a rather special property of interest here. It is an orbit in which a satellite revolves around the earth in a period of just one day. Therefore, since the earth also turns in one day, it appears to stay directly overhead. This is literally true only if it is precisely over the equator, but it is still more or less true if it is a little north or south. Such a satellite is called a stationary satellite. It has the advantage that once it is properly positioned it always stays in the same place and so the elaborate ground antennas necessary can be pointed at a fixed spot in the sky.

Another kind of communications relay satellite is one which has been dubbed the mailbag satellite. This is the satellite which contains a tape recorder; when it passes over one point on earth messages are broadcast to it and recorded on the tape. Then, at some other point in its orbit, when it is queried by means of a coded electronics key, it rebroadcasts the stored message to a ground station.

This type of satellite relay is called the mailbag because it is like mail service—it is a delayed transmission but, since it takes a satellite only an hour and a half to go around the earth, it is not a very long delay and is suitable for most kinds of communication.

Another application of satellites of military interest is in the field of reconnaissance. This might be meteorological reconnaissance; it might be reconnaissance for intelligence or other purposes of that sort.

The possibility of being able to get out of the earth's atmosphere and look down so as to learn more about how the weather works is something that meteorologists are looking forward to eagerly. They regard it as a real possibility in literally revolutionizing the study of meteorology. It has been suggested to me that when that happens the name should be changed to meteoronomy in parallel to the way astrology became astronomy when it became an exact science.

In the case of meteorological reconnaissance, observation will obviously include the determination of cloud patterns and, through them, storm patterns and wind directions. In addition, observations of a very important matter called insolation will be made. Insolation is the balance between solar energy (sunlight) received and reflected, and the heat energy radiated away from the earth as infrared. A detailed study of insolation should make use of a long way toward understanding how weather "works."

In a much over-simplified way, what weather is can be ex-
plained as follows: In the equatorial regions of the earth, the earth receives more radiation than it reflects and re-radiates. Conversely, in the polar regions it radiates away more energy than it receives. What we call weather is simply the action of the earth's atmosphere in attempting to adjust this imbalance by carrying the excess from the equator to the poles. Getting outside the atmosphere and having an over-all look at these phenomena, and being able to get information from the whole earth instead of just part of the continental land masses, will make a tremendous difference in our weather predicting capability.

Another satellite application of military interest is that of providing navigational aids. In a sense, this constitutes a step backwards, because a satellite provides a new way of doing the old-fashioned stellar navigation. In a sense, a satellite, once it is high enough and is orbiting around the earth, becomes a star in that its future position can be predicted for some time with considerable accuracy. You can, in principle, if not in detail, write an almanac and issue it to all sailors.

For this purpose, the satellite will be observed by radio means rather than optical means; thus, it can be seen day or night, good weather or bad. The position of a ship relative to the position of the satellite can be determined by making use of what is called the doppler effect. This is the effect which causes the apparent pitch of a train whistle to change as it passes by. Thus as the satellite approaches a point on the ground the pitch of its radio signal is increased. When it is directly opposite, this apparent pitch changes to its true value, the value it would have if it were standing still. As it recedes in the distance, the apparent pitch is lowered. By observing this change in pitch it is possible to tell where you are in respect to the satellite and then by referring to the almanac you can tell where it is and therefore where you are. In this case you can gild the lily a little bit and get rid of the almanac by putting on board the satellite a tape recorder which announces latitude, longitude, time of day, and altitude as it goes by.

Another program of general interest is the man in space program. This program was started by the Department of Defense but is now under the direction of the National Aeronautics and Space Agency with the active cooperation and assistance of the Department of Defense.

The initial objective of this program is to determine the capability of man for doing useful work in space for prolonged periods of time, where protracted months or years might be possible to shield against it so that some of the early statements publicized about its being a barrier to man in space are probably false.

Although much has been made of this radiation, including its possible effects on man, film and other radiation-sensitive apparatus, the most important thing has not been emphasized—the fact that it was entirely unexpected! It has been known for some time that there were cosmic rays and other forms of radiation in space, but this particular intense belt of trapped radiation had not been predicted. It is this fact and the resulting object lesson that are, I believe, the most important things behind doors of which we are still unaware. The matters I have spoken of—communications, reconnaissance, navigation, meteorology, etc.—are very important in a practical sense, but I am certain that the moral of the radiation belt story is that when the history of space flight is finally told, the most important use of space flight will turn out to be something which has not been mentioned here.
Mass media can change your buying habits by influencing your

M O O D

by Dr. Vincent Nowlis
Professor of Psychology

If a man does not learn to control his mood, other people will! This dilemma is suggested by the very pervasiveness of mood-inducing factors. At a point in history when medical and engineering progress permits us some personal control of the health and habitability problems which in the past produced so much misery and intellectual rubbish, our culture is creating increasingly powerful media of visual and auditory communication through which we can be subjected to persuasive messages accompanied by atrocity mood-inducing embellishments.

It is an accepted truism that man is swayed by his moods, believing now one thing, now another, depending on his predominant feelings at the moment. Yet, we all strive to avoid the fickleness, the wavering, the confusion that mood seems to impose because some self-consistency in belief is a necessary virtue. But, we frequently find it necessary to re-examine our convictions on the basis of the relation of our inner feelings to new external facts simply in order to comprehend current events. Since feelings respond more immediately to both minor and major changes in the world than do convictions, we are faced with a dilemma involving the relative contribution to human behavior of thought and feeling, of enduring character structure and moment-to-moment adaptability. This dichotomy is identified in the contrasting positions taken by modern students of human personality.

An objective definition of mood and the dimensions of mood changes is the problem being investigated by Dr. Vincent Nowlis, Professor of Psychology. Assisting him is his wife, Dr. Helen Nowlis, Visiting Research Professor of Psychology, and Dr. Russel Green, Associate Professor of Psychology. Their work at the University is supported by a contract with the Group Psychology Branch of the Office of Naval Research.

Note, however, that both positions assume that mood or feeling does influence belief, and that mood, in turn, can be influenced by events.

As a matter of fact, mood is changed by at least three general kinds of events. First, by changes in the physiological status of the person, as by fatigue, illness or endocrine condition, or as by drugs, including the commonly used nicotine, caffeine and alcohol. Second, by habitability factors, such as the comfort, appearance, temperature, humidity and sound characteristics of the home, office or shop. Third, by emotional events that include the entire gamut of pleasures and frustrations. Communications of every sort, from personal letters to radio and television, are potential emotional factors.

Persuasion on the basis of emotional appeals is one of the oldest arts. Aristotle’s “Rhetoric” is still a lively manual with abundant and frank detail on how to frame a speech without letting the members of the audience know that they too are being framed.

In our own era, results of research on persuasion by eminent scientists at many universities are being vigorously disseminated to the general public as well as to the many institutions which find these facts useful in their attempt to mold opinion.

For several years psychologists at The University of Rochester have been studying one aspect of the impact of mood on belief and can now add a modicum of fact to the general intelligence. Our research has been primarily concerned with investigating mood itself, especially the different psychological aspects. My own work has tried to define mood in a significant way and to identify what we call the main dimensions of mood.

Whereas former investigators of mood usually assumed one dimension of mood—the familiar elation versus depression scale—we have looked for and identified a more complex set of moods.

In an experiment already known to many UR alumni, we invited the fraternity men on the campus to a series of motion pictures. Just before and after a film was presented each man reported how he felt at the moment on a test we call the Adjective Check List of Mood. It consists of a large number of adjectives which describe feelings such as light-hearted, annoyed, sad. The motion pictures consisted of a documentary film on the Nuremberg trials, showing scenes from concentration camps and the denial of guilt by Nazi leaders; the clever Harold Lloyd comedy, “The Freshman”; a color film of a major surgical operation; a beautiful film on the face of Lincoln, and so forth. The resulting 60,000 bits of data were analyzed on a computer.

This experiment, together with ongoing work on such populations as students before and after final exams, industrial workers, alumni at alumni club meetings, navy personnel on submarine duty, and aged veterans in a domiciliary, clearly shows that there is more to mood than simply some degree of elation or depression. The statistical method of factor analysis, originally developed to identify the components of intelligence, yields the following independent dimensions of mood.

1. Concentration. This measures the degree to which the person reports he is attentive, concentrating, earnest, serious and contemplative. It represents the degree to which he is ready to attend to and process information from a variety of sources, including his own memory and thought. It is a mood in so far as it describes a general functional and orienting characteristic of the person.

2. Activation. This measures the degree to which the person reports he is active, energetic and vigorous. It represents the readiness to engage in activity.

3. Deactivation, represented by a report of feeling tired, drowsy or sluggish.
4. Social Affection. This measures a positive social orientation, represented by such words as kindly, affectionate, forgiving.

5. Hostility. This measures a general negative social orientation, reported by checking such words as angry, defiant, belligerent and rebellious.

6. Egotism. Self-centered, boastful egotistic, cocky are key words.

7. Pleasantness. This measures the degree of elation, as represented by reports of feeling light-hearted, cheerful, elated, refreshed.

8. Depression, represented by reports of feeling sad, blue, depressed, lonely.

9. Anxiety. This measures a general state of loss of control, represented by reports of feeling apprehensive, fearful, jittery and clutched-up.

We have been surprised by the clarity with which so many dimensions of mood emerge in many populations and in many experimentally induced states. More surprising is the functional independence of each mood. For example, an individual's report of feeling affectionate does not tell us much about how hostile he feels, for one can feel both affectionate and hostile simultaneously.

Since this work supplies us with measures of mood changes, however induced, we can now examine more carefully the relation of mood to belief or attitude. One of the problems in the psychology of persuasion is the relation of the amount of emotional appeal in a message to its acceptance. It appears, for example, that the adage that nothing sells like fear itself is true under extremely limited conditions—which is fortunate for us all. Dr. Don Haeffner tested this experimentally. He prepared four 15-minute tape recorded messages on thermonuclear weapons. Each concluded with an identical recommendation that reasonable steps be taken to establish an international ban on nuclear weapons. The first 12-minutes of one tape included accurate information vividly presented to produce a high degree of anxiety in the audience. It did just that; but, this fearful audience rejected the concluding recommendation while another, hearing the same information presented with a less emotional appeal, tended strongly to accept the recommendation. Similarly, of the two tapes successfully designed to produce two levels of guilt and depression, the one producing the greater emotional change was the less persuasive. It appears that induction of strong negative moods can interfere with the attention, comprehension and acceptance an audience gives to the communicator and his message.

There is a more general question, however, involving the relation of any mood change to any belief. In the study mentioned above, the communicator induced feelings directly related to the issue on which he was about to make a reassuring recommendation. But, how does an extraneously induced mood influence belief? Do moods induced by poor health influence aesthetic beliefs? Does a lasting mood induced by a symphonic concert influence your attitudes toward consumer products as you stop in a neighborhood store on your way home? Does the momentary mood induced by a TV comedian influence your attitudes towards his sponsors' cigarettes and soaps and—more significantly—toward a great variety of products in no way connected with the particular show? Can change in mood momentarily affect in some way one's whole system of personal beliefs?

We have a tentative affirmative answer to the question based on work in our laboratory under a Charles Rumrill Fellowship by Dr. Joel Axelrod. He measured the attitudes of several hundred undergraduate women toward a large variety of consumer products before and after showing the film on the Nuremberg trials. Although nothing in the film was directly related to such products, the women showed large changes in their attitudes toward such things as United States Savings Bonds, and a daiquiri.

Before the experiment began, Dr. Axelrod and I tried to delineate how we might account for such changes if they occurred. The resulting hypothesis stated that since an attitude toward a particular product is dependent on how the individual perceives its utility with respect to various goals of varying importance to himself, then any change in these goals would in turn influence the attitude. In other words, if the ultimate values associated with a product change, the perceived value of the product should also change. It occurred to us that moods themselves are often goals or values since we do things, make things, buy things in order to achieve a state of concentration or activation, or affection or to avoid depression and hostility. Indeed, the pursuit of happiness is not only a fundamental right of all Americans, but is often thrust upon us from all sides as a basic duty. Then, what could be more reasonable than to assume that a change in mood induces a change in value of that mood as a goal?

If, at the present moment, you the reader were asked to evaluate the state of being depressed or the state of being hostile as goals, you would quite likely put low or even negative values on them. Thus, you would signify they have little or no value for you and are to be avoided. However, if now a great thinker or respected journalist presented you with a vivid account of selected events of the 20th century, you would not only feel a certain amount of depression and hostility, but you would also momentarily change your evaluation of such moods as goals. Perhaps you would tell yourself that at such times a person should and ought to be hostile and depressed. With such a shift in personal values, gentle reader, your momentary attitudes toward a dozen long-stemmed roses, a Caribbean cruise, a new refrigerator, and perhaps even toward a cigarette would also change. Ten minutes of documentary evidence of post-war pestilence in Europe and Asia can induce a mood that temporarily changes attitudes not only with respect to the trivial and luxuries of life, but also with respect to one's self.

I have repeatedly emphasized temporary changes; such emphasis may be gratuitous once we have learned to measure all the important consequences of the fact that the activity in which Americans spend more time than any other except sleeping is watching television—most of which definitely induces moods ranging through the whole known gamut.

So far we have found the greatest general influence on attitude with essentially negative mood treatments. How the induction of such positive states as elation, affection and concentration influence belief is a question for further work. Still more basic is the problem of identifying the events and program factors and meanings which induce each of these moods. What can the teacher do, for example, whether in the classroom or in the TV studio, to induce the state of concentration, other than through showmanship, initiation of do-it-yourself projects or appeals to fear? The practical goal of all such research is, I believe, two-fold: first, the discovery and dissemination of information which may assist the individual in self-control of mood; second, some increase in the understanding and personal utilization of two interdependent human resources—thinking and feeling.
George F. Bowerman, '92, voices concern over the importance of sports at the University of Rochester. For him, and all alumni who have wondered about the athletic policy, we reprint the following statement from a special newsletter sent to parents of undergraduate students of River Campus colleges.

To the Editor:

I have been reading with interest and satisfaction the article "College Athletics: Their Pressure on the High School" by Eugene Younget in the October Atlantic Monthly. I commend it to faculty and students of the University of Rochester. In view of the fact that I am 90 and was graduated 66 years ago, my suggestions, may, I suppose, be scorned as those of an old fogey. Of course, I realize that in my last year the student body numbered only 153, all males, and that Rochester has many times that number of students including women, and that the whole picture of American life, including life in college, has changed. But has it changed for the better?

The article painted a rather black picture of college life. I hope things are better at Rochester. I came to commence­ment a year ago, but that brief stay gave me no opportunity to observe the everyday life of the college.

In my day we did have some athletics. My only campus activity was playing tennis. There was, I believe, a football team, but it didn't rank high among the colleges and didn't absorb much college interest. In other words, we then had athletics in moderation, which is, I believe, as things should be. I should like to be reassured that this is still true at Rochester. I hope so.

George F. Bowerman, '92

Studies and

Members of "the finest football team in University of Rochester history"—unbeaten, untied, and rated among the top small-college squads in the nation—are still winning plaudits for their performance this year. The second undefeated and untied team in the University's seventy-year history of intercollegiate football, the Yellowjackets finished the season with an 8-0 record, and a fourth place in the Lambert Cup ratings for Eastern, small-college football teams. Captain Larry Palvino was named to the Associated Press 1958 Little All-American second team.

The general rejoicing over the impressive record of this year's football team, and that of the soccer squad, which won seven of its eight games, is heightened by the fact that these victories were achieved by students who are unsubsidized, unprofessionalized, and unfavored by any form of academic privilege designed to ease either their admission to the University or their academic progress here.

The University's policy on intercollegiate athletics, which has been in effect for nearly fifty years, is predicated on the belief that a college athletic program should further the best interests both of the participating students and of the student body as a whole. Specifically, the objectives of Rochester's policy are:

1. To afford as many students as possible experience in intercollegiate sports.

2. To devote only as much time to athletics as is necessary to give participants all the worthwhile values to be derived from such participation, with as little interference with studies as is possible.

3. To arrange schedules, the playing of which entails only a minimum loss of time from classes; to play teams of approximately the same caliber, representing institutions with comparable enrollment, educational standards, and athletic ideals.

4. To have the membership of all varsity teams composed of students who are successfully carrying full programs of academic work.

To these ends, the University does not subsidize its teams. Members of all athletic squads must meet the same entrance
Sports: Some Serious Considerations

requirements and the same academic standards while in college as the student body in general.

Rochester's policy on intercollegiate sports is guided by a Committee on Intercollegiate Athletics appointed by the President of the University. Serving on the Committee, in addition to the Director of Intercollegiate Athletics, are representatives of the faculty, the Dean of Students' Office, the University Administration, the men's and women's undergraduate bodies, and the alumni. The group meets as needed to determine general policy and to approve athletic budgets, game schedules, and athletic awards.

That the above tenets are rigorously adhered to is indicated by a few statistics on this year's football team. The squad numbered twenty-seven men, of whom fourteen did most of the playing throughout the season. Because of academic demands, the average player spent only slightly more than one hour a day at football practice sessions.

Collectively, the team entered the University with a high school average of 88.7 per cent. Its members hold eighteen academic scholarships, including four Naval Reserve Officers Training Corps Scholarships won in national competition, one General Motors College Scholarship, eight competitive New York State Regents Scholarships, and five University of Rochester academic scholarships.

With eleven members majoring in the sciences, two in mathematics, four in business courses, and ten in liberal arts studies, the team has a college academic average of C plus. The captain, who is also president of his fraternity, was on the Dean's list last year; the only sophomore on the starting line is an engineering major and New York State Scholarship winner who is maintaining a B average in his courses.

Physical education has an important place in the University's total program. This fact is attested by the requirement that each student complete two years of physical education prior to graduation. Both this basic requirement and the optional intramural athletic program which supplements it are the responsibility of the Department of Physical Education, whose chairman is also Director of Intercollegiate Athletics. Members of the Department serve primarily as physical education instructors, with direction of intramural sports and coaching of intercollegiate athletics as additional functions.

The excellence of Rochester's athletic facilities makes possible a wide range of sports for both men and women. Intercollegiate athletics for men include football, soccer, basketball, swimming, baseball, track, tennis, and golf, in addition to squash and wrestling, which were added this year. Both men and women participate in intercollegiate sailing competition. Intramural sports for men include both individual games—tennis, golf, squash, badminton, swimming, and handball—and group sports such as basketball, speedball, volleyball, softball, and touch football.

Women's sports are sponsored by the Women's Athletic Association and include archery, badminton, softball, basketball, dancing, field hockey, golf, swimming and diving, tennis, and volleyball. The Women's Athletic Association sponsors covers both an intramural program and special Sports Days, when Rochester's undergraduate women engage women from comparable colleges in a variety of athletic events.

In both the required physical education courses and the optional sports activities, the University of Rochester encourages optimum development of its students' physical capacities, insofar as such development is consistent with the University's educational goals. Dr. McCrea Hazlett, Dean of the College of Arts and Science, has summed up the Rochester philosophy on athletics in this way:

"A university has many obligations to society, including, as the most important one, the education of its students in the classroom. At the University of Rochester we are proud of our sports program because it is widely participated in by our students and because these men are students first and players afterwards. We enjoy watching our men play games now; we look forward to their contributions to society later. As you watch a Rochester team, please remember that each player is a future teacher, physician, scientist, or engineer for whom the game is an exciting and valuable extracurricular activity, not a job."

It is the University's firm intention that this philosophy shall continue to undergird Rochester's athletic program.
The College of Engineering

... development in four years under the appointment of Dr. John W. Graham.

A New Era...

"Our emphasis will be on motivating and preparing the engineering student for continued learning—for educating him to become rather than training him to be—so that he may ultimately reach his maximum competence as a professional man, as a citizen, and as a person."

This statement by Dr. John W. Graham, Jr., sums up the philosophy underlying his approach to the duties of the College of Engineering deanship which he will assume on July 1, 1959.

In announcing Dr. Graham's appointment, President Cornelis W. de Kiewiet described it as "... another major step in enabling this University to meet its multiple responsibilities to our industrial society. Specifically," he noted, "our mission will be three-fold. We will seek to train an increasing number of highly qualified engineers, to help assure an adequate supply of engineering teachers and research specialists, and to provide the campus environment wherein teaching, learning, and research can flourish."

The establishment in 1958 of the College of Engineering as an autonomous educational unit was accompanied by plans envisaging increases in the undergraduate and graduate student bodies and in the faculty of the College, extension of the graduate program, and increased emphasis on research and consultation. These plans may be briefly summarized as follows:

**Undergraduate Program.** The College will continue to concentrate its efforts on offering a program of superior quality to a relatively small, carefully selected, high-quality student body. Its aim will be to provide a strong foundation in the humanities, the social sciences, and mathematics and the physical sciences, in combination with a well-integrated program of scientifically-oriented, technological studies in the fields of mechanical engineering, chemical engineering, and electrical engineering.

As in the past, engineering students will receive their initial two years of basic instruction in the College of Arts and Science. Such a policy guarantees, for example, that engineering students receive their basic training in physics and chemistry from especially strong science departments — departments staffed with teachers of national and international reputation. Similarly, it assures engineering majors that their work in the humanities and the social sciences will have the same flavor and strength for them as for their liberal arts counterparts.

A moderate increase in the College's enrollment will be undertaken, whereby the undergraduate student body will total about 500 by 1965. This compares with the present enrollment of 271.

**Graduate Program.** The same educational values will be sought at the graduate level as at the undergraduate. The student body will be even more highly selected and will treat more fundamental problems of a less well-defined nature, problems which call for highly specialized talents in their solution, and in which the student himself is given larger responsibilities for self-education. A significant aspect of the graduate program will be the effort to stimulate an increasing number of selected students to prepare for careers in teaching. The engineering teacher, for whom the nation's need is becoming acute, occupies the most strategic position from which to make a continuing contribution to the advancement of the engineering profession and to the welfare of our industrial society.

Graduate work leading to master's and doctor's degrees will be offered in all three branches of the engineering program; currently, the Ph.D. degree is offered only in chemical engineering. The projected enrollment for 1965 calls for 60 full-time graduate students, of whom about one-third will be working for the doctorate.

**Research.** If the sole functions of an active research program were to add to man's storehouse of knowledge, this alone would be sufficient reason for the ambitious plans for research at the College. However, the benefits will be substantially greater, since the program will provide important research opportunities for graduate students, and faculty, and in so doing will also help to produce the stimulating environment needed to keep each staff member intellectually alive and thus to make him a better teacher.

**Service to Industry and the Community.** So far as industry is concerned, the College's principal aim, of course, will be to educate men who are both good engineers and good citizens. In addition, however, industry and the community will benefit from special conferences and short courses on technical subjects, and from increased opportunities for those in industry to consult with members of the engineering faculty.

The New Dean...

Professional engineer ... Major, Corps of Engineers, U. S. Army ... teacher ... administrator—this is the wealth of experience that Dr. John W. Graham, Jr., brings to the deanship of the College of Engineering.

Born in Dayton, Ohio, the son of a civil engineer, Jack Graham's dedication to engineering has brought him a full measure of success and recognition. Since 1956 he has been Vice President of The Cooper Union for the Advancement of Science and Art, New York City.

Dr. Graham received the degree of Bachelor of Civil Engineering from Ohio State University in 1939; he followed this with graduate study at Princeton University. In 1946 he joined...
the faculty of Carnegie Institute of Technology as an instructor in Civil Engineering; the next year he was promoted to associate professor. Two years later he assumed the responsibilities of Assistant Dean of the College of Engineering as well as continuing with teaching; he held both positions until 1955 when he was named Dean of Students. Carnegie Institute of Technology conferred the degree of Doctor of Science on Dr. Graham in 1950.

Except for a four-year interruption to serve in the Corps of Engineers, U.S. Army, during World War II, Dr. Graham was employed as a civil engineer by the Fabricated Steel Construction Division of Bethlehem Steel Corp. during the time between receiving his C.E. degree at Princeton and joining the faculty at Carnegie Tech. His Army career was marked by promotion from 2nd Lieutenant to Major, and he was awarded the Bronze Star and was made an Honorary Member of the Order of the British Empire. He served for 39 months in the European Theatre.

The engineering profession has come to know Dr. Graham through his research work, primarily on the properties of reinforced concrete. He has contributed numerous articles on the subject to professional journals and reference books. His views on "reinforced education" have also found their way into print: The *Journal of Engineering Education* published his article "What Some Colleges are Doing About Ethics" in the December, 1957, issue.

In spite of his busy schedule, Dr. Graham finds time to participate in many organizations, among them the American Society of Civil Engineers, the American Society for Engineering Education—he is a member of the Committee on Ethics—the Pennsylvania Society of Professional Engineers, and the Inspection Committees of the Engineers Council for Professional Development. He is also a member of Tau Beta Pi, Sigma Xi, Phi Beta Kappa, and Chi Epsilon.

In 1953 Dr. Graham was chosen as one of "Pittsburgh's Hundred Leaders of Tomorrow" by *Time* Magazine and the Pittsburgh Chamber of Commerce. Last year Ohio State University's College of Engineering chose him for its Distinguished Alumnus Award.

Dr. Graham is married to the former Ruth Orr; they have three daughters, Judith Ann, 16, Kathleen, 12, and Margaret Louise, 3, and a son, John W. III, 7. Their home at present is in Upper Montclair, New Jersey, where Dr. Graham is an Elder in the Presbyterian Church. The Graham family will move to Rochester in July.

**Background...**

It was June, 1914. Millard Ernberger, Professor of Mechanical Engineering, Melvin Price, Assistant Professor of Mechanical Drawing and Machine Design, and Frederick Hinrichs, Jr., Assistant Professor of Applied Mechanics, had been holding classes in Carnegie Building, opened just three years earlier on the old Prince Street Campus. At graduation ceremonies that month three members of the Class of '14 were awarded bachelor's degrees in mechanical engineering, the first such degrees to be given by the University of Rochester.

In the almost fifty years since courses in engineering were first offered at the UR, some 1,600 students have received degrees in mechanical, electrical, and chemical engineering. At present almost 25 per cent of the undergraduate men students are enrolled in engineering courses. On the graduate level, ten full-time students are working towards their master's degree and six students are candidates for the Ph.D. degree in Chemical Engineering (the only department in Engineering to offer the Ph.D. degree at present). And under the Evening Session program, 65 students are pursuing their master's degree on a part-time basis.

A recent occupational survey of UR engineering alumni indicates that 74 per cent are employed as engineers in industry while 4.2 per cent listed themselves as engineers in small businesses or self-employed in the engineering field. A little over 8 per cent are employed by local, state, or federal governments; included in this figure are members of the armed forces. Teaching and/or research was listed by 7 per cent of the respondents to the questionnaire. Only 5 per cent are employed in fields other than engineering.

Indicative of the stature achieved by many of its engineering alumni is the fact that the UR was listed as third in the nation's schools with regard to the percentage of its graduates among the total of all engineers listed in the 1954 edition of "Who's Who in Engineering."

In recent years several major steps have been taken in the development of the engineering program. University School began offering a master's degree in electrical engineering in 1956. In 1957 electrical engineering was introduced into the curriculum of the College of Arts and Science. And with the major reorganization effective in September, 1958, the Division of Engineering (heretofore in the College of Arts and Science) assumed independent status as a college with separate departments of mechanical, chemical and electrical engineering. Today this college has a faculty of 16 full-time and one part-time members.

Dr. Daniel W. Healy, Jr., Horace W. Leet, and Dr. Shelby A. Miller head the electrical, mechanical, and chemical engineering departments, respectively. Dr. Lewis Conta will continue as acting dean of the College until the arrival of Dr. Graham in July.
To Err is Human...

Although every effort is made to publish only factual news, an error occasionally creeps in. For example, in the January issue of the Review it was reported that "ALFIO MICCI, Eastman School graduate in 1940, is the new concertmaster of the New York Philharmonic Orchestra." This information was obtained from a newspaper article. Mr. Micci has informed the editors of the Review that this information is in error; he is a member of the violin section (first) of the New York Philharmonic Orchestra.

The editors of the Review wish to apologize to Mr. Micci for any embarrassment which this error may have caused him.
JOHN N. CREED has joined the consumer products division of the Bausch & Lomb Optical Company, Rochester.

RAYMOND C. ETTINGTON is now residing in Caracas, Venezuela, where he is in data processing sales representative for IBM de Venezuela, a subsidiary of IBM World Trade Corporation.

DONALD E. ROSS was recently appointed sales manager of the Rochester Division, Consolidated Electrodynamics Corporation.

JOHN E. RODWELL has been named copy supervisor of the Rundell Company, advertising agency, in Rochester.

GERALD E. MANCE was awarded a master of science degree on December 19 by Ohio State University.

1952
JOHN A. DEETZ has opened a law office at 550 Main Street East, Rochester.

RICHARD A. APPRAT has been awarded a degree of Doctor of Philosophy by Cornell University.

RALPH A. HYMAN has been named executive sports editor of the Rochester Times-Union.

Dr. ARNOLD BRENNER was discharged from the U.S. Army in July and is now training in otolaryngology at Temple University, Philadelphia.

STUART B. BOLGER has been named executive director of the Annie Kenner Museum and Historic Bethlehem, Inc. He will be engaged in architectural restoration on the site of the old Moravian settlement at Bethlehem, Pa.

Dr. RICHARD J. BARKER has been appointed assistant professor in the department of social studies at Montclair (N.J.) State College.

ROBERT P. FRANKENTHAL and Tibie Slifkin were married in the fall and are residing at 3245 Beechwood Boulevard, Pittsburgh, Pa.

A second son, William Scott, was born on August 14 to Mr. and Mrs. Edward Pressey.

A. Roger Houghton and Bonnie Lee were married on December 6 in Oak Park, Ill. They are residing at 805 Randolph Street, Oak Park, Ill.

1953
ROGERS ALEXANDER has been named youth work secretary for the Monroe Branch YMCA in Rochester.

STEPHEN B. FREEMAN is one of the authors of an article on "Factors Influencing the Loss of Virulence in Pasteurella Petstis" which appeared in the August, 1958, issue of the Journal of Bacteriology. He is currently working toward his doctorate while teaching in the department of bacteriology at the University of Illinois, Urbana.

WILLIAM D. HURBELL has been named manager of the Batavia (N.Y.) office of the John Hancock Mutual Life Insurance Company.

PETER J. GENGA is a partner in the firm of Lorscheider, Holt and Genga, architects and engineers, with offices at 704-706 Terminal Building, Rochester.

CARL ANGELOFF has been elected to the editorial board of the Harvard Law Review, a publication of Harvard Law School.

HAROLD J. TABACK was awarded the degree Master of Science in engineering by Princeton University in October.

ALLEN H. BROWN and his family have recently moved to Buffalo, N. Y., where he is an engineer with Sylvania Electronics Products, Inc.

1954
5th Class Reunion, June 5, 6, 7, 1959.

GEORGE H. EASTMAN and Eleanor Northfleet were married in Pittsford, N. Y., in July.

JEREMY J. PINGLETON and Nancy Connor were married in Rochester in October.

Hugh Erenske has been elected treasurer of the Christian Science Organization at George Washington University, where he is working for a master's degree in business administration. He and Diane C. Skinner were married in the Canal Zone on December 28, 1957.

DR. ROSS J. CASSATA was awarded the degree of dental surgery by the University of Buffalo (N.Y.) School of Dentistry in June. He is presently associated with another dentist in private practice in Rochester.

CHARLES M. ROWLAND, Jr., was promoted in October to Lieutenant, United States Navy. He is serving on the commanding officer's staff, New Orleans Naval Station.

A son, Joseph, was born on August 20 to Lt. and Mrs. John S. Eppolito. They are residing at Pearl Harbor, Hawaii, where Lieutenant Eppolito is with the Naval Dental Corps.

JOSEPH T. MULLHAUS recently joined the Tonawanda (N.Y.) Laboratories of The Linde Company, a division of Union Carbide Corporation, where he is working in the gas separation section of the research laboratory.

1955
GEORGE H. STONE and Diana McGrath were married in Hobbs, N. M., on September 14. They are residing at 1644 Lincoln Street, Denver, Colo.

JOSEPH TOMAIANO and Nancy D. Mezines were married in Perth Amboy, N. J., on November 29. He is with the Texas Oil Company in Buffalo.

WILLIAM B. PITT and Jean Leary were married in Rochester on November 1, 1956.

G. RUSSELL WEST has recently joined the Horace D. Olsonhead Agency, Rochester, a division of the New England Life Insurance Company.

LT. (j.g.) RALPH LEWIS BUTTON and Dianne Byers were married at Moffett Field, Calif., on September 27.

TENNY R. SPOFFORD was commissioned a Second Lieutenant in the U. S. Marine Corps on December 6.

ENS. WALTER L. TURLE, USN, is serving aboard the USS Gregory with the Seventh Fleet in the western Pacific.

1958
EDWARD KAPLAN is studying at Washington University, St. Louis.

BRUCE F. FAGAN and Joan Glueiter were married in Rochester on November 1.

JOHN E. KAMPF received a special greeting from the head of the U. S. Army in October when he was the 5,000th Army enlistee since the Army began recruiting independently of the Air Force in 1954.

ENSIGNS FRANK A. NELSON, BENJAMIN G. BALDWIN, PHILIP T. HOFFMAN, RONALD A. HESS, JERE S. CARTER, and ROBERT V. REED, USN, completed their first solo flights at Pensacola, Fla., in October.

JOHN P. LOWE received a fellowship in the Master of Arts teaching program of the department of education at Johns Hopkins University for the academic year 1958-59.

GRADUATE DEGREES
1940
Dr. J. WILLIAM ZABOR has been promoted to director of the research division of the Wyandotte Chemicals Corporation, a major producer of industrial and specialty chemicals.

1941
RAY L. WATTERSON is now serving as chairman of the department of biology at Northwestern University, Evanston, Ill.

1944
Dr. HAROLD F. BRIGHT was appointed professor of statistics at George Washington University, Washington, D. C., in September.

1947
Dr. NORMAN J. ROTH is a research associate with the new Youth Development at Syracuse University.

1950
DR. WILLIAM E. LANGLEY, formerly senior development representative for the technical division of Pennsalt Chemicals Corporation, has joined the project coordination division of Wyeth Laboratories.

1952
Dr. PAUL WAGNER, a member of the University of California's Los Alamos Scientific Laboratory, addressed the Electro-Chemical Society in Ottawa, Canada, in October.

1956
Dr. ROBERT KIRKWOOD was appointed dean of Washington College, Chestertown, Md., in October. He assumed his duties February 1.

1958
Dr. JAMES C. MANCUSO has been appointed a counselor in the placement and counseling service at Lehigh University, Bethlehem, Pa.

FREDERICK W. BRUNDAGE is a graduate student in mathematics at the University of Kansas, Lawrence.

ARTS AND SCIENCE—WOMEN
1909
5th Class Reunion, June 5, 6, 7, 1959.

1910
RUTH E. GOODWIN, a medical librarian at R相爱uoc Sanitarium, has retired and is now residing at 72 Park Avenue, Saranac, N. Y.

1914
45th Class Reunion, June 5, 6, 7, 1959.

1919
40th Class Reunion, June 5, 6, 7; 1959.

1924
35th Class Reunion, June 5, 6, 7, 1959.

1927
ELIZABETH A. ROBIN was honored at a tea in October in celebration of twenty-five years as head resident of Westminster Community House, Buffalo.

1928
HAZEL HELFINKER LA LONGE was appointed chairman of the language department of the new East Ridge High School, Rochester, in August.

MARJORIE HECKEL BEATY is teaching mathematics at the University of South Dakota.
1929
30th Class Reunion, June 5, 6, 7, 1959.
1932
DOROTHY EHRHART KANWISCHER is li- brarian at the Rochester Academy of Medi- cine.
1933
JANE CLAPP CATALFANO, formerly an English teacher at Boynton Junior High School, has been appointed sophomore guid- ance counselor at Ithaca (N.Y.) High School.
1934
25th Class Reunion, June 5, 6, 7, 1959.
1938
Electa Tich Java is teaching English at the Lockport (N.Y.) Senior High School.
1939
20th Class Reunion, June 5, 6, 7, 1959.
Dr. SYLVIA FRANK, research reports co- ordinator for the American Cancer Society, was one of five distinguished scientists who participated in the Riverdale (N.Y.) Neighborhood House forum on November 19.
1944
16th Class Reunion, June 5, 6, 7, 1959.
ROSEMARIE D'AMICO SELLMANN is teaching music in the Sherman (Conn.) Consolidated School. Among her pupils are her four children.
1947
MILDRED A. TAUSCH and George M. Oen- ken were married in New York City on December 15.
1948
DOROTHY ROSENBERG PASSER, coordi- nator of auxiliary services with the St. Louis County Welfare Board in Duluth, Minn., spoke at the Governor's Conference on Aging in St. Paul on November 21. An article by Mrs. Passer entitled "County Volunteer Serv- ice Bureau" appeared in a recent issue of Minnesota Welfare.
1949
10th Class Reunion, June 5, 6, 7, 1959.
A second child and daughter, Estier, was born on February 27, 1958, in Rochester to Dr. Avrum and SUSANNE BEHRENDT ESAN. A second child, Stephen Louis, was born on October 1 in Rochester to Albert and MILDRED D'AMICO SELLMANN.
1951
VIRGINIA DREWHERST and Paul M. Cas- well were married in Shaker Heights, Ohio, on September 27. They are residing at 9160 Brianwood Road, Shepard Hills, Northfield, Ohio.
DIANE RATHJEN ROCK and her husband, Thomas, have announced the opening of the Pittsord (N.Y.) Travel Agency offering air, steamship, hotel, resort, and rental car res- eervations.
1952
BARBARA JOHNSON MURPHY is teaching French in the school at Tappahannock, Va. A daughter, Elaine Carol, was born on August 9 to Harry, 52, and MARJORIE SCHMALTZ LIGHTWELL.
CHELSEY KAHMANN is teaching music at the Brooklyn Friends School.
1954
5th Class Reunion, June 5, 6, 7, 1959.
A second son, Eric Anthony, was born on August 5 to Anthony and KATHERINE GERTRUDE SAPERSTONE SHEINFELD.
1955
SYLVIA BUDDENHAGEN and James E. Nel- son were married on April 26. They are re- siding at 56 Leln Springs Drive, Williams- ville, N. Y.
1956
DONALD SAYLES NASH has been appointed obstetrical nursing supervisor at the W. W. Backus Hospital, Norwich, Conn.
1957
CONSTANCE R. NUSBAUM and Harry Mayer were married in Rochester on No- vember 2.
KATHERINE DE LORENZO and Anthony Bonanno were married on August 3. They are residing in Seattle, Wash., where he is a testing engineer for Boeing Aircraft.
A son, Leslie Stewart, was born on Oc- tober 4 to Dr. Leslie, '55, 58M, and MARY KOMORUKI MASSAD. They are residing in Chapel Hill, N. C., where Dr. Massad is interning at the University of North Caro- lina Memorial Hospital.
1958
SUSAN E. WILCOX and James W. Hagan were married in Boston on November 22.
MARIAN BURKE CASTORINA appeared as guest pianist with the U. S. Department of Commerce Symphony Orchestra on December 15 at a concert in Washington, D. C. MARYLIN P. KATES and John M. Heuler were married in Rochester on December 27. MARYLIN J. SHEPARD and Robert W. CUNY were married in Rochester on De- cember 20.
JANE B. BREESE and Pvt. Ethan Z. Kap- lan, USA, were married in Rochester on December 23.
1959
NANCY FESTA is teaching fifth grade in the Chappaqua (N.Y.) school.
LOUISE WINKLER-PRINS and Ens. Albert J. James, USNR, '58, were married in Pel- ham Manor, N. Y., on August 25. They are residing in San Diego, Calif.
GRADUATE DEGREES
1944
ISABEL H. DILL, first director of Roches- ter's pioneer School of Practical Nursing, retired in January.
1955
A son, Steven Keith, was born on No- vember 13 in Newfoundland, N. J., to Jus- tin and ANNETTE NEUMANN JEGGER.
1958
ANN SANFORD and Dr. Donald R. Lombard were married in Kennebunkport, Me., on September 1. They are residing in Roch- ester where Mrs. Lombard is teaching gen- eral science and biology at Harley School, and her husband is interning at Highland Hospital.

Eastman
School of
Music

2024
35th Class Reunion, June 5, 6, 7, 1959.
1928
LANSION DEMING is minister of music at St. Paul's Methodist Church, Houston, Tex. He is also teaching organ at the University of Houston.
1929
30th Class Reunion, June 5, 6, 7, 1959.
1934
25th Class Reunion, June 5, 6, 7, 1959.
JOSEPH MULVEY was named music chair- man of the Mercer (Pa.) County Council of Parent-Teachers Association last fall.
FREDERICK TOOLEY is assistant professor of music at McNeese State College, Lake Charles, La. On December 2, he gave a voice recital in the college recital hall.
DR. W. THOMAS MARRECO was awarded a grant-in-aid from the American Philosophical Society to write a book on instrumental music of contemporary Italy. He and his wife, the former AUDREY GREEN, '35E, sail March 21 for Italy where they will spend the major portion of their time interviewing composers and studying their works. He is an associate professor in the music depart- ment of the University of California and a member of the Roth String Quartet. The quartet recorded Vernon Dake's quartet (which was dedicated to the Roth Quartet) last spring on Contemporary Records. Dr. Marreco received his Ph.D. from the Uni- versity of California.
1937
HOMER T. KELLER is associate professor of theory and composition at the University of Oregon, Eugene.
1940
ULYSSES KAY was one of four American composers who visited Russia this fall un- der State Department auspices. He is cur- rently adviser on contemporary music to Brooklyn Music Institute and is working on a cantata for the Inter-Racial Chorus of New York.
1941
DONALD L. ENGLE, who is business man-ager of the Philadelphia Orchestra, accom- panied the orchestra on a tour which ended at the Brussels Fair last fall.
MARIE JEFFERSON WOLLERSHEIM has had the "Story of Silent Night," a Christmas choir program for treble voices with des- cants, published by Elkan Vogel Company, Inc.
1943
MARIAN HORN SETTLE is organist and choir director at the Lutheran Church in St. Johnsville, N. Y.
WILLIAM E. WHYBRETH is chairman of the music department of the State Teachers College in Edinboro, Pa. This fall he con- ducted the Sectional All-State High School Band at Hilton, N. Y.
1944
15th Class Reunion, June 5, 6, 7, 1959.
DR. DONALD BUTTERWORTH is director of the music department at Daytona Beach (Fla.) Junior College.
1945
PETER MENNIN was one of the four Amer- ican composers selected by the State Depart- ment to visit Russia last fall. The trip was arranged by the State Department under an agreement for cultural, technical, and educa- tional exchanges between the U.S.S.R. and the United States.
GERARD SAMUEL, associate conductor of the Minneapolis Symphony, was chairman of the Minnesota Centennial Music Festival, October 16 through November 8.
FOSTER is a member of the Oxford Flute Quartet of Miami (Ohio) University. ILENE GOODRICH BOTHFIELD presented a musical program, "A Dash of Yuletide," at the December 3 meeting of the Montpelier (Vt.) Women's Club.

1948

DOROTHY MEREDITH HAPPEL was violin soloist at the all-Mendelssohn concert of the Calvary Choristers in Calvary Baptist Church, Rochester, on November 23.

HOWARD TAPPAN is vocal supervisor in Canandaigua, N.Y.

1949

10th Class Reunion, June 5, 6, 7, 1959.

ROBERT E. WATERSTEDE was married to Margaret F. Straley in Flint, Mich., on February 16, 1958.

STEPHEN ROMANO played Beethoven's Emperor Concerto with the University of Idaho's symphony orchestra at its opening concert on November 23 in the university auditorium at Moscow, Idaho. He is in his second year of teaching at the university, and is working on a Doctor of Music in Performance degree at Indiana University. Last summer, he served as guest conductor and recitalist for the Chautauqua Summer Festival.

1951

IGOR HUDOFF is band director at Parkside Junior High School, Massapequa, N.Y. Belwin, Inc., has recently published his method, "Just For Counting," designed to help in teaching rhythmic counting either individually or in groups.

SALVATORE SITIPOPINI has been promoted to assistant professor of music at Ball State College, Muncie, Ind.

HOWARD S. VOOGT presented a voice recital at Northern Illinois State College, DeKalb, on November 24.

ALAN ABEL is playing in the percussion section of the Oklahoma City Symphony.

RICHARD GILLEY was tenor soloist at a pops concert in Whitman, Mass., on October 26.

1952

The thirty-first annual presentation of "The Messiah" was given in the Chicago Orchestra Hall by the Indianapolis Choral Society, conducted by EMMETT STEFFL. The proceeds of the concert were donated to Our Lady of the Angels School Fund to assist victims of the tragic Chicago fire.

MARY LOUISE MEADE is teaching organ at Alma (Mich.) College.

J. KENNETH WILSON is director of music at Yakima Valley (Wash.) Junior College. MARJORIE SMITH, pianist, presented a recital in the College of Wooster 1958-59 faculty series, on October 26. She joined the faculty as instructor in music last September. A son, James Frederick, was born on October 15 to William, '54E, and MARGARET SCHEIMAN BROWER.

FRANK SHAULIS was discharged from the Army on September 28. While in the Army, he served as interrogator and interpreter, specializing in Russian.

DONALD YAP is the musical director of "Music Man," a current hit in Honolulu.

1954

5th Class Reunion, June 5, 6, 7, 1959.

A daughter, Natalie, was born in Buffalo, N.Y., on September 28 to Allen, '53, and SUZANNE HOFFMAN BROWN.

J. RICHARD SCHREEMANN is director of music at Bloomfield (N.J.) College and Seminary and minister of the Ampere Parkway Community Church, Bloomfield.

1955

JOHAN STOHL was awarded his B.A. degree from Oberlin (Ohio) College in 1957. He spent one year at Yale Divinity School and is now in his second year at the Andover-Newton Theological School in Newton Centre, Mass.

S/Sgt. JOHN BECK was marimba soloist with the United States Marine Band in a concert in Berrien Springs, Mich., on October 19.

A son, David Scott, was born in Bath, Me., on May 18 to Lt. Gordon, '55, and BARBARA DONALSON PETRI. Lieutenant Petri is a pilot stationed at the Naval Air Station in Brunswick, Me.

1956

ELWOOD SMITH is head of the music department at Pikesville (Ky.) College. He is also teaching piano and history, and is directing the chorus and choir.

DEBORAH HALLOCK GREEN was married to Rudolph Von Unruh, Jr., '52E, on August 16 in Westhampton, L. I.

BARBARA KITSCH SCHAEFER received a Master of Science degree in library science from the New York State College for Teachers, Albany, in 1957.

1957

DAVID MORSE is playing with the United States Army Field Band. He has toured all of the states with the band, and last spring was in Japan, Korea, Okinawa and Hawaii.

BARBARA KITSCH SCHAEFER received her M.M. degree, summa cum laude, in theory at Indiana University in 1958. She is now teaching piano at Akron, Ohio.

SYD HODKINSON is director of instrumental music at the University of Virginia in Charlottesville. He and his wife, BETTY DESCHER HODKINSON, are both playing with the Richmond Symphony Orchestra.

RUTH CORWIN and Martin Meyer were married June 29 in Woburn Friends Meeting, Wilton, Conn. They are living in Salzburg, Austria, and will be there until June, 1959. Mrs. Meyer was awarded a Fulbright grant to study in Salzburg during 1957-58.

On September 20, WILLIAM H. DUVALL received a diploma of merit from the organizers of the Spoleto (Italy) Experimental Lyric Theatre. Duvall and six other American singers were given these special awards during the intermission of a performance of Mascagni's opera, "L'Amico Fritz," in Spoleto. This winter, Duvall returns to the United States and will be singing with the Civic Music Program in El Paso, Tex., this season.

PAUL MAKARA is instructor in music at Bowling Green (Ohio) State University. Last year he was assistant concertmaster of the Rochester Civic Orchestra. On October 5, he presented a violin recital at the university, using a J.B. Guarneriusi violin made in Paducen, Italy, in 1724.

JESSICA KRAMER and Michael W. Friedlander were married on July 4, in Mount Vernon, N.Y. They are living in Ladue, Mo., where Mrs. Friedlander is teaching in the public schools.

GUY LUMIA presented a violin recital in Bay Shore, N.Y., on December 14.

ELIZABETH P. BRUNER is playing first flute with the Richmond (Va.) Symphony Orchestra and is working as a student employee at Petersburgh Hospital in Richmond.

NORMA JANE BAKER is playing flute with the Mobile (Ala.) Orchestra.

Sylvia Stone was soloist in Brahms' "Alto Rhapsody" on the first program in the Strong Auditorium Concert Series, November 7 at the University of Rochester.

"Mazo Brantline," a piano composition by HARRY VALANTE, was performed in Carnegie Hall on October 25.

GRADUATE DEGREES

1936

MARY STREET SCHOETTLE and her husband, Elmer, '51GE, played in a quartet composed of two pianos and two tympani at a concert sponsored by the Jewish Community Center music series on November 25 in Houston, Tex.

1938

Dr. CHARLES G. VAREDDE, Jr., dean of the School of Music at Flora Macdonald College, Red Springs, N. C., presented a piano recital at Presbyterian Junior College, Hamilton, N. C., on November 14.

1939

NORMAN RIAN directed the University of Hawaii Concert Choir during a concert tour of Japan sponsored by the newspaper, Asahi Shimbun, last summer.

1942

WILLIAM WARD is chairman of the music department at San Francisco State College.

MERRELL L. SHERBURN, assistant professor in the department of music at Michigan State University, was trombone soloist with the Flint (Mich.) Concert Band on October 26.

1943

BARBARA SMITH was in Europe during the summer on a grant from the Rockefeller
Foundation to observe work in comparative musicology. She presented a paper and tape recordings on folk music in Hawaii at the eleventh annual conference of the International Folk Music Council in Belgium in July, and is now busily working on developing teaching materials in Asian music on another Rockefeller grant.

1944

ARNOLD REUNION

Martha McCord was appointed manager of the Chattanooga (Tenn.) Symphony last fall. She also holds the post of manager, as well as faculty member, at the Sewanee (Tenn.) Summer Music Center. She is cellist teacher at the University of Chattanooga and the Cadek Conservatory of Music, and is a member of the Symphony String Quartet and Hegyi Trio in Chattanooga. Last season, she performed the "Rococo Variations" by Tschaikowsky with the symphony.

1945

Catherine Amy Murphy is teaching church music at Oklahoma City University.

1946

William S. Elliott is principal bassoonist with the Dallas (Tex.) Symphony Orchestra.

Raymond Vaught presented a trio recital at the Honolulu Academy of Arts with his wife, Kathryn Vaught, and Pat Hammond last fall. He and his family were on the mainland during the summer.

1947

Robert Crane of the University of Wisconsin School of Music has been commissioned by the Philharmonic Chorus of Madison, Wis., to write a choral work to be added to its repertoire.

1948

Dr. William Brandt, of the Washington State College music department, was speaker at the Spokane Association of Accredited Private Music Teachers convention, held in Spokane this fall. His topic was "Music, the Daughter of Mathematics.

1950

John Dieckens has been awarded a Southern Foundation Fellowship to complete doctoral work at the Eastman School. His "Allegro" for women's voices was published by Dow in September, and mixed chorus works are scheduled for release later this year.

"Symphony for Chamber Orchestra" by Carl Alette was performed by the Memphis (Tenn.) Sinfonietta in Memphis on November 25.

E. Katherine Crews is teaching at Maryville (Tenn.) College. She was on leave last year to study at Florida State University in Tallahassee toward a doctorate. A two-piano piece, "The North and the South," by Rosemary Clarke was published in September by Summy-Birchard. Last fall she appeared in piano concerts in South Carolina, North Carolina, Kentucky, Texas, Wisconsin, and Iowa, and in January she presented an organ recital at the University of Dubuque, Iowa. Active in another field, the study of mollusks, she wrote an article, "Fat Boy Was a Liguus," which appeared in the October issue of Nature Magazine, and presented a paper on the raising of liguus at a meeting at Yale University of the American Malacological Union.

1952

Robert Stangeland, who teaches piano at the University of Wyoming, was soloist in the Emperor Concerto of Beethoven with the Denver Symphony in January.

1955

Florence C. Adams spent the summer studying and traveling in Europe and the Middle East. She attended many music festivals and observed classroom teaching techniques at Oxford University in England and the Sorbonne in Paris.

1956

Elizabeth Russell Shuffley was organist for the twenty-fourth annual Bach Festival held February 26-28 at Knowles Memorial Chapel on the Rollins College campus, Orlando, Fla.

1957

Jack Jarrett has been appointed to the faculty of Emory College, Carlisle, Pa., where he teaches voice and is director of choral music.

John Sacaulsa was presented by the University of Hawaii on November 19 in a recital, in which he played Sonata No. 1 by Lewkovitch.

Arthur G. Bates is instructor in piano at Panhandle Agricultural and Mechanical College at Goodwell, Okla.

1958

Zaneta Richards, who teaches piano at the Punahou School in Honolulu, presented a recital last fall. Theo Paul Valjean has received a two-year scholarship for study and travel in Sweden.

Samuel L. Jones, Jr., conducted the Hillel Chamber Orchestra in the group's first performance of the season at the Memorial Art Gallery in Rochester.

Premiere of Violin Sonata No. 1 by Staelling A. Cumberworth was performed December 1 by Joseph Gingold, Cleveland Symphony Orchestra concertmaster. The work was a major part of his recital program at the Cleveland Institute of Music. The sonata was written last summer while Cumberworth was a guest at the artist's retreat, Yaddo, at Saratoga, N. Y.

1944

Dr. G. Kenneth De Hart was elected president of the medical staff of Montclair (N. J.) Community Hospital on December 1.

1938

Dr. Jean C. Sabine has been appointed associate professor of clinical medicine at the Medical Center of the University of California at San Francisco.

1944

Dr. John J. Butler, formerly director of medical education at St. Mary's Hospital, Rochester, has been appointed director of medical education at St. Michael's Hospital, Newark, N. J., and assistant professor of medicine at Seton Hall University Medical School.

1945

Dr. Robert B. Pender has been appointed chief of surgery at St. Luke's Memorial Hospital Center, Utica, N. Y. He is also associate medical director of the Utica Mutual Insurance Company.

Dr. Frances W. Masters has been appointed associate professor of plastic surgery at the University of Kansas Medical Center, Kansas City.

1947

Dr. Patrick E. Bray, assistant professor of pediatrics at the University of Utah Medical School in Salt Lake City, has received a special postgraduate fellowship for study at the New York Neurological Institute, Columbia University Medical Center. He is currently residing in West Englewood, N. J.

1948

Lt. Cmdr. Edward Bird is TV project officer at the National Naval Medical Center, Bethesda, Md.

1954

Dr. Robert Webster has opened an office at 190 South Avenue, Webster, N. Y., for the practice of obstetrics and gynecology.

1955

Capt. Walter J. Pories, USAF Medical Corps, and assistant resident at Strong Memorial Hospital, has been awarded the Air Force Commendation Medal for service at an Air Force hospital in France where he served from July, 1957, to May, 1958.

GRADUATE DEGREES

1942

Dr. Arnold V. Wolf was appointed
professor of physiology and head of the department of physiology at the University of Illinois College of Medicine beginning December 1, 1954.

Dr. Richard G. Taylor was named professor of oral surgery and chairman of the department at Tufts University School of Dental Medicine in October. In addition he was also named director of the department of dentistry and administrative head of dental services at the Boston City Hospital.

John W. Baum, formerly chief health physicist at Armour Research Foundation, has been named supervisor of health physics at Allis-Chalmers Manufacturing Company, Milwaukie.

Joseph M. Lo Giudice has been appointed radiological safety officer for Rensselaer Polytechnic Institute, Troy, N. Y.

Dr. Charles Montgomery, '95, died in Rochester on November 15.

Robert J. Barker, '03, died in Rochester on October 15. At the time of his death he was president and treasurer of Supreme Electric Products Corporation, a company he organized forty years ago.

Amy Hardick Howard, '07, died on July 28.

William E. House, '08, died in Gainesville, Fla., on August 6.

Edward C. O'Keefe, '13, died on November 8.

Louise Haines Riggs, '13, died on September 7.

Dr. Howard Lewis, '14, died in Rochester on December 27. Before his retirement in September, he had practiced dentistry for forty-three years.

Marion Hall De Long, '20, died in Gouverneur, N. Y., on August 7 after a long illness.

E. Blakey Geason, '25, died in New York City on November 21. At the time of his death he was president, treasurer and general manager of the Geason Works, Rochester.

Virginia Monaghan Attridge, '26, died on October 24 at the Roswell Park Cancer Hospital in Buffalo, N. Y., after a long illness.

Chester W. Keehley, '29E, died in Rochester on November 28 after a brief illness.

Dr. Charles F. Gay, '33, '36M, died in Brockport, N. Y., on November 9.

Dr. Charles C. Hecks, '33M, died in Syracuse, N. Y., on October 30. He was personal physician for boxer Carmen Basilio and had also served as medical director of the Syracuse University Athletic Department and as physician for the New York State Athletic Commission.

Mary Louise Banks Danforth, '35, died in White Plains, N. Y., on September 15.

Myrtle G. Jensen, '38G, died on September 8.

Dr. Clay Wev, '41G, died on September 7.

Eudora Fenner Mason, '42, and her two young daughters were killed in an automobile accident near Rochester on November 12.

Patricia Marton Griffith, '46, died in Fairport, N. Y., on September 25 after a long illness.

Rose Moukous, '49, died on November 29.

IN MEMORIAM
Philistinism is a terrible trouble, and you don't have to have very much to be Philistines. Philistinism is . . . the view that only those things which require no trouble to understand are important; if something is complicated, it can't be very important; if something is recondite, it can't be very important; if something is learned, it can't be very important. This is very easy at a time when you know that you are unable to catch up with more than a fraction of the wonderful things that it is your duty, your privilege, certainly, in a sense your responsibility to learn about. It's very nice to be able to say, 'That's too complicated for me; that cannot really go very deep.' It's very tempting to find reasons to close your eyes and ears to things and say, 'No, no, this cannot be the real stuff; the real stuff must be hidden.' We need, I think, to fight against that in the air, in the climate, in our whole lives—to insist that what is difficult, what is rectified, what is obscure, what is specialized is among the great part of the human treasure and we must make sure that we encourage people to learn and not to let them slide.

"Another obvious, practical thing is that the goal of education in a world as eclectic, as ignorant, as accidental, as disorganized as ours, needs very much to be rethought. . . . We in the colleges and in higher education . . . need to be sure that some genuine experience of discovery and rediscovery is a part of the life of everyone who is educated. We need to be sure that some genuine appreciation of the gulf which separates knowledge and ignorance is also part of it. I say this because only people who have been through this are intellectually prepared to live in a world in which they are surrounded by knowledge of which they will largely remain ignorant—and are prepared not to take the vulgar and superficial and journalistic account of knowledge for the reality."

...from a speech "Tradition and Discovery" by Dr. J. Robert Oppenheimer delivered at a public meeting of the American Council of Learned Societies at The University on January 22, 1939.