To the editor:

Dean Meckling, for all that he is a sports enthusiast, has not given the baseball business a fair "shake" . . . in his "Economics and the World of Sports" in your March-April 1965 issue.

If a firm of engineers financed a large group of boys through school (as baseball does) with the view of employing the one or two who would be strong enough to make their "team" how smart would the firm be if the boys, after graduation, were free to join a competitor?

The United States Congress has recognized baseball's peculiar problem even if Dean Meckling has not, and has continued to grant to baseball exemption from certain features of the Anti-Trust Laws.

HENRY SIMMONS
Secretary, International League of Professional Baseball Clubs

Dean Meckling replies:

I would like to make two points—(a) it is not true that baseball will have any investment in the players when they are drafted under the new system, and (b) firms of engineers, indeed all firms, have investments in their employees both in formal training and in on-the-job training.

Any personnel manager will tell you that with new employees, it takes many months, sometimes two years, before the employee's productivity is high enough to cover his costs—even aside from formal training programs. In addition, most firms do have formal training programs which employees participate in intermittently over practically all of their working lives. Finally, most firms nowadays also pay for collegiate course work taken by their employees. The University of Rochester has some 3,000 students enrolled in its evening division and most of the tuition costs of that program are borne by local firms.

While I do not have data, I am willing to bet that the loss which major league teams suffer in the operation of their farm systems per employee is no greater than the investment made by most firms in the education of their employees. What the United States Congress has recognized is not that baseball has a peculiar problem, but that baseball players are a minority who won't get much sympathy from the general public about being exploited.
A
Long Step
Toward Wisdom
A Long Step Toward Wisdom

Last spring the editors of Campus-Times dedicated their final issue of the year to this fall’s entering class. One article—an affectionate and perceptive preview of campus life—was written by Caro FitzSimons Spencer, ’27, Associate Director of Admissions and Student Aid on the River Campus. Some of Mrs. Spencer’s comments (excerpted below) have already been reprinted in The New York Herald Tribune and other publications.

WHAT DO YOU TELL a prospective college freshman in May that he can hold to until September? What should he know of college life before he is actually caught up in its kaleidoscopic pattern? Can its enduring values be handed him as talismans? Can you simply urge him to seek truth through knowledge? And must he view this preparation as all seriousness or may he contemplate the fun which is abundant in those four years, recognizing that involvement builds loyalty and participation deepens enjoyment?

The most persistent memory of my own college days is of the fun I had, and the fun was compounded of many ingredients: acting in a play, finishing a term paper, going to the sorority formal, hearing an inspiring lecture, working on the C-T till midnight, walking in the Moving-Up Day procession, enjoying flashes of humor from a favorite professor, playing bridge in the lounge, singing the Commencement Hymn in Latin.

I remember, too, the wonderful advice the dean gave us on how to choose courses.

The reasons are still valid: Select a course for its content. Select a course because of a great teacher. Or, elect a course for pure delight; for the sheer joy of learning.

Freshmen! Ye members of the great class of 1969 (it will be great, you know)! You will find an embarrassment of riches awaiting you at UR. As new students you will be in great demand. You will receive this summer, on the average, a letter a week from someone at the UR who has your—and his—best interests at heart. You will be invited to join or support the CC, the C-T, Ugh, UMOC, Jesters, Contrast, Stagers, Doll-Fins, Co-Kast, AWS, WUS, WRUR, SNCC, and CORE.

Even your local department store will now take notice of your stature as a college student and will invite you to consult its college board for clothes guaranteed to produce instant popularity on the campus of your choice.
You'll hear from the Dean of Students, who hopes you are clean-living and well-adjusted and may never need T.L.C., but if you do the door is open. There'll be a letter from your big sister (girl frosh only) to tell you to bring bermudas and other valuables to college. The editor of the C-T will extol the virtues of working on the staff. Then one day you'll open the notice from the Freshman Week Committee which will tell you to report on September 15! Your pulse will throw into high gear as you try not to let that feeling of ecstasy interfere with your digestion or June exams. Suddenly Frosh Week is here—and so are you. . . . Upperclassmen vie with one another to introduce you to campus life. It's a mark of distinction (and a lot of work) to be on the Planning Committee and those students who make it over the years are among those who have helped build the college into what it is. They know tradition provides the link with all that has gone before. You will have a great deal thrown at you in a few days and you'll not only survive it but you'll be caught up in its merry pace. The dust will settle and you'll go off to classes on the following Monday and your college career will have begun. After a while things will fall into place and take on meaning. You will sort out those that seem right for you and wisely let the rest alone. You will work hard, play hard, and learn to sleep while your roommate types a term paper. The star to which you'll hitch your wagon is your capacity to deal with your environment and your commitment to your goal. You are coming to learn, and although precise knowledge is not what you will remember, the process of acquiring it will build habits of thought, attitudes towards others, self-discipline, a sense of discrimination, and a disciplined mind, capable of dealing with ideas beyond your immediate experience. In short, you will take a long step toward wisdom.
Campus cop or parent-by-proxy? Educator or Big Brother? What is—or should be—the role of the dean of students on a residential campus?

One dean’s opinion—that of Professor Joseph W. Cole, University Dean of Student Affairs—comes through loud and clear in the following article, which is adapted from a talk given by Dean Cole at a conference of college deans and student advisors.

Professor Cole, whose academic degrees include the M.Ed. from Rochester, has been a member of the University faculty and staff since 1954.

THE COMMONLY HELD STEREOTYPE of deans of students casts them in the role of disciplinarian, charged with maintaining law and order and keeping students occupied in order that professors can get along with “the important matters of a university.”

Needless to say, in many of today’s universities, research, scholarship, and teaching are thought of as “the important matters of the university.” Usually teaching is narrowly defined to include only the direction of those curricular activities which carry credit toward graduation.

I propose that we reject the “disciplinarian, keep-the-house-in-order” role for the dean of students. Instead, I would cast him as an educator, administratively responsible for important aspects of the university’s teaching, research, and service function—with teaching defined in broader terms than described above.

To defend this position I must define teaching as at least a two-part process. A commonly accepted aspect of this process involves the transmission of man’s accumulated knowledge. The curriculum, packaged in the form of courses and measured in terms of “units of credit” and formal classroom instruction, provides the main vehicle by which the university discharges this part of its educational responsibility. The second aspect of the process is less commonly accepted but, in my judgment, is of at least equal, and probably greater, importance.

This aspect provides an integrative force through which man applies his accumulated knowledge to the problems of self and society, and acquires a value system that guides his behavior in the realm of political, social, moral, ethical, and personal decisions.

W. H. Cowley of Stanford, in discussing the role of the university (and of student personnel people), maintains that our purpose “is to help college students to become mature human beings; and a mature human being is a person who is, above all else, integrated, who has made his peace with the stubborn facts of nature (including his own personal limitations) and with the laws of men, but who has chosen some focus of integration for his life—some coign of vantage which will lead him to seek greater control over nature and some improvement in the relationships of humans. The essence of maturity is the finding of such a focal integration, and the job of personnel people is not to ‘adjust’ students to the world around them but to assist them in discovering their points of integration.”

This integrative, value-seeking process was clearly accepted as a responsibility of our early colleges and universities. And so it should be today—especially in the residential college, whose prime reason for existence is the fostering of a community-of-scholars’ spirit in which the educational process is maintained both in and out of the classroom. The University of Rochester has at least $15 million invested in residence, dining, and student life
The concept of a residential college must spring from a foundation of educational value—or we should scrap the whole idea.

Facilities. To justify this expenditure solely on the grounds of service and convenience is both shortsighted and impractical. The concept of a residential college must spring from a foundation of educational value—or we should scrap the whole idea.

Personally, I have a deep commitment to this aspect of higher education. Consequently, I suggest that the primary need in American higher education is to provide an out-of-class environment in which frequent and meaningful interaction between students and faculty will be commonplace, rather than accidental.

Skeptics will say that today's faculty member is not interested in the problems that beset students beyond his classroom. In many cases they are correct. Faculty are not—or should they be—interested in the mundane aspects of student life which deans and students frequently expect them to be (i.e., chaperoning social events, supervising activities that are primarily recreational, entertaining students in their homes only for the sake of entertaining, etc.). However, faculty are vitally interested in problems of mutual concern, as illustrated by the following list of events involving UR students and faculty, as reported in a single issue of the Campus-Times: "Monas Discusses Russia and China in the Towers Group" . . . "Tutorial Service, Exchange Plan Head Civil Rights Program" . . . "Lindley Discusses Paradoxical Views of Free Choice" . . . "Hamilton Talks on Moral Decisions: Questions Premarital Sex Relations."

The dilemma of today's university is that the faculty member is confronted with so many pressures and so many activities (classes, research and publishing, outside lectures, committee assignments, community service, family obligations, etc.) that it is almost impossible for him to take the initiative in directing the integrative aspect of the educative process. However, I could cite innumerable cases illustrating his willingness to help students resolve the important value questions confronting them. This work with students must be recognized as important, and administrative coordination must be provided to insure easy and relevant opportunities for faculty-student interaction. And, just as an administrative officer coordinates the faculty program of classroom teaching, so an administrative officer must assume responsibility for insuring meaningful student-faculty interaction outside the classroom. Thus, I maintain that the chief student personnel officer and his entire staff must view their primary function as educational in nature and requiring heavy faculty involvement.

A dean of students can contribute to the educational goals of a university only if certain conditions exist. First, the university must recognize the importance of the student personnel program in fulfilling the institution's aims. Such recognition is best reflected by the status that student personnel people enjoy in the university's administrative hierarchy. For example, a voice on important policy-making groups is essential. Such privileges must initially be granted by the president or faculty; their perpetuation depends upon the quality of a dean's contribution to the policy-making function of the various bodies. (At Rochester, the dean of students currently enjoys faculty privileges—and is a permanent member of the academic policy committee—in each River Campus college; he sits on the President's Advisory Council, the Cabinet of Deans and Directors, and the River Campus Administrative Committee.)

Clearly, the university's definition of the faculty's role is crucial to the dean of students in his role as educator. During the late 1950's a number of authors wrote about the impact of colleges and universities in shaping student values. Their findings suggested that those colleges which appeared to influence values had a sense of purpose (commonly shared and understood by administration, faculty, and students), a spirit of involvement at all levels.

At Rochester I see many encouraging signs. President Wallis addressed himself to undergraduate education in his 1963 inaugural speech:

"At the University of Rochester, our undergraduates are an elite group... Given such students our over-riding objective ought to be to develop individuality. 'To Each His Farthest Star' might well be our motto if a fine one had not already been adopted by the faculty in 1851: Meliora, signifying devotion to perpetual processes of improvement rather than any absolute goals. Of course we want our graduates to 'fit in,' to do what is expected..."
... to have
the courage to permit
error and the wisdom to help
students to analyze and learn
from their errors is of
prime importance.

of them, to contribute to social welfare and national
security (not to mention the gross national product).
But we want them to stand out as well as 'fit in.' We want
them to do more and different things than is expected of
them, to be driven by their own inner expectations and
standards. There is no better way to plant such sparks
(of inner fire) in our students and to fan them into flames
of individual strength than to cultivate the special per­
sonal qualities for which our students are selected, to
transmit to them some of the accumulated knowledge
of the past, and to convey to them an understanding of
the methods and—above all—the spirit of inquiry of
science, of scholarship, of learning.”

Obviously, President Wallis was speaking to his fac­
ulty and reminding them that the fruits of their research,
scholarship, inquiry, and learning must be stimulatingly
shared with the undergraduate—and hopefully, both in
and out of the classroom.

It is significant, I think, that at Rochester
there is a faculty—not a graduate faculty and
an undergraduate faculty. During the past year
six department chairmen, sixteen full profes­
sors and eight associate professors were teaching fresh­
man courses. As long as a university recruits top-flight
faculty and puts them in the classroom, the transmission
of man’s accumulated knowledge will occur at a high
level and will occasionally include the first transmission
of a brand new piece of knowledge. Moreover, to the
extent that deans of students, working with students, are
able to create meaningful opportunities for interaction
with these same professors—in the residence halls, in the
university center, in the chapel, in the conference hall,
the integrative aspect of the educative process will be
furthered.

It has been proposed above that a major goal of the
university is “to help college students become mature
human beings.” In my judgment the best way to hasten
this task is to treat students as mature, intelligent human
beings and to give them ample opportunity to demon­
strate their maturity—or lack of it, as will occasionally be
the case. But to have the courage to permit error and the
wisdom to help students to analyze and learn from their
errors is of prime importance. By implication, this means
that we express our interest in their maturation by mini­
mizing the regulatory, authoritarian role of the university
and by maximizing the “trust-and-freedom-to-grow-with­
help” spirit. It is the classical error of history that each
generation of adults suspects that the youth are on the
road to ruin.

The adult world continually struggles with the prob­
lems of giving young people proper guidance and con­
trols at the same time that it provides them with freedom
to learn and grow. A university must continually work
with students to help them acquire a sense of purpose
and a value system that serves as a basis for intelligent
living.

I have a very high regard for the ability and integrity
of our young people and a strong, almost fanatical con­
viction that, given the freedom to do so, they will suc­
cessfully resolve the important integrative problems of
their private and community life. For this reason I am
an anti-“pronounce the moral code of society by a state­
ment” man. Indeed, I feel that today’s young people are
being overwhelmed with warnings, criticism, and ulti­
mats.

In my judgment, the statement we need to make to
students would say: “We do trust you. We recognize
your problems as the same ones that we faced. The time
is later, but the problem is basic: the search for the
‘Why’ of life . . . the quest for a system of values that
guides daily behavior in the realm of politics, of family,
one of our major tasks is to avoid the impression that the lack of authoritarian, regulatory control indicates a lack of concern and a license for uncontrolled behavior.

It seems to me that a university (or a dean of students) taking this position provides the best possible environment for true learning, and at the same time, creates unlimited opportunity for public criticism. The traditional institutional regulatory controls, which seem to provide adult security and youthful resentment, will be missing. Operating in their stead will be individual internal control and respect for the welfare of the overall community.

At the same time a student who seeks membership in such a university must realize the full responsibilities entrusted to him. No longer is he protected from himself. No longer is his student community protected for him.

His behavior may endanger—or strengthen—both self and community. He must realize that the freedom he enjoys today may be removed tomorrow. His rights as an individual are important; but they are no less important than his responsibilities to a community. He cannot isolate himself from his student community, his university community, or the world at large.

Conflicts between individual rights and community responsibilities, between student interests and university goals, between student values and adult expectations—all of these conflicts are practical problems with which he must deal. Deans must resist the temptation to provide solutions, but must make adult counsel available through daily interaction among faculty, staff, and students.

In such a setting, of course, one of our major tasks is to avoid the impression that the lack of authoritarian regulatory control indicates a lack of concern and a license for uncontrolled behavior.

To be successful such a program must be thoroughly understood by all members of the dean’s staff. Instinctively, they must turn problems back to students rather than provide the solutions that, to them, are so apparent as a result of their years of experience. They must help students to identify alternatives, to weigh the evidence. They must involve faculty in the important areas of student welfare. And they must encourage frequent evaluation of student programs and activities.

Moreover, the university community at large must accept students as important members of the community and help them to identify with the overall purposes of the university. Involvement and the democratic process are critical factors—important to students, faculty, and administrative officers alike. By involvement and the democratic process I am not pleading for policy making by majority vote. I am speaking for the creation of an environment in which students, faculty, and administrative officers are made to feel that their thinking and interest are important to the overall welfare of the university, and in which they can express their views on pertinent problems.

Historically, this kind of “operative power,” as distinguished from “legal power,” has been transmitted to faculties and administrative officers. More recently, some campuses have begun to involve students in university planning and policy-making. At Rochester, we believe our efforts to so involve students have been beneficial both to students and the University.

The point of view that I have expressed has had profound influence on the environment that exists today at Rochester. I can think of no problem—from academic integrity to use of alcohol to premarital sex relations—that is not actively under discussion here and is not being resolved in accord with the value standard of the individual and its impact on the total community.
The Feminine Mystique: 
New Stereotype for Old?

Helen H. Nowlis

In the sixty-five years since women were officially admitted to the University, the subject of woman's changing role in society has provided fodder for many a tired cliche—often of book length. Among the spate of recent works on this perpetually provocative theme, Betty Friedan's best-selling The Feminine Mystique has aroused the most—or at least the most vocal—controversy.

A thoughtful appraisal of Mrs. Friedan's opus is offered by Professor Helen H. Nowlis, Dean of Students on the River Campus. A specialist in adolescent psychology, Dean Nowlis has been associated with the University since 1951. She and her husband, Professor Vincent Nowlis, have worked together for many years on research on aspects of human behavior.

Almost a hundred years ago Ibsen shocked the nineteenth century world when, in A Doll's House, Helmer responded to Nora's announcement that she was leaving him, not with a question but with a statement: "It's shocking. This is how you would neglect your most sacred duties." Nora asks: "What do you consider my most sacred duties?" and Helmer replies: "Are they not your duties to your husband and children?"

Nora's answer: "I have other duties just as sacred" brings forth an almost reflex "That you have not. What duties could those be?" "Duties to myself." Helmer, reflecting the nineteenth century concept of women, replies: "Before all else you are a wife and a mother." Nora's answer: "I don't believe that any longer. I believe that before all else I am a reasonable human being—or at all events I must try to become one."

This is the main thesis of Betty Friedan's The Feminine Mystique: that the core of the problem for women today is a problem of identity, a stunting or evasion of growth that is perpetuated by the feminine mystique. It is Mrs. Friedan's thesis that, much as the Victorian culture did not permit women to accept or gratify their basic sexual needs, our culture today does not permit women to accept or gratify their basic need to grow and fulfill their potentialities as human beings—a need not solely defined by their sexual role. As she proceeds through chapter after chapter of her angry indictment of the pressures which have perpetuated, if not caused, the discrepancy between what women really are and what they are told they should be, it is not difficult to lose sight of the thesis and its corollary: that no woman can
adequately fulfill the roles of wife and mother, or for that matter, any other role, unless she is first of all an adequate person, in Nora's words, a reasonable human being.

That there is a strange discrepancy between women as human beings and the image to which women are asked to conform has not gone unrecognized and undiscussed. Perhaps what Mrs. Friedan has contributed is to give this image a haunting label and to put a discussion of it on the bestseller list. It might be suggested that this has been done at the cost of drawing the wrong battle lines between the forces which she describes as responsible for the origins and perpetuation of the feminine mystique, and those social scientists, educators, and therapists who, at the cost of being accused of contributing to the delinquency of the human race, have been trying to persuade society at large and women in particular not that women should not be wives and mothers, but that women must be mature human beings before they can be successful wives and mothers—and that they must solve their own problems before they can help children solve theirs.

Having defined the problem of women as the evasion of or stunting of growth, the adopting of a public image rather than the fashioning of a private one, Mrs. Friedan unravels a plot worthy of a whodunit—a plot to keep women in the home, "devoted to their own beauty and their ability to bear and nurture children . . . interested only in romance, pregnancy, nursing, home furnishings, clothes" . . . and, it would seem, undertaking to buy up the ever-increasing national product.

According to Mrs. Friedan, the rascals in this plot are the magazine editors and writers who accompany with fiction and feature the motivational-research-inspired song of their advertisers. They are the followers of Sigmund Freud who see woman only in the image defined by Freud—inferior, childish, helpless, with no possibility of happiness unless she adjusted to being man's passive object. They are the social scientists who, in the name of functionalism, "give an absolute meaning and a sanctimonious value to the generic term 'woman's role' and put the American woman into a kind of deep-freeze while all the world moves on." They are the sex-directed educators who reinforce girls' rigid conception of a woman's role and thus contribute to the evasion of growth and of becoming a reasonable human being. And perhaps the worst villain, in Mrs. Friedan's view, is the motivational researcher, or the client he serves, who counseled the ad man to "capitalize on the housewife's guilt over hidden dirt so she will rip her house to shreds in a deepcleaning operation, during which she will be willing to try new products and which will give her a sense of completeness for a few weeks. . . ."

Although she exonerates the manipulators and their clients of creating this image of women, Mrs. Friedan points to them as the most powerful of its perpetuators. "They have seared it deep into every woman's mind and into the minds of her husband, her children, her neighbors. They have made it part of the fabric of her every-day life, taunting her because she is not a better housewife (can a woman ever feel right cooking on a dirty range?), because she does not love her family enough (does she use the safest toilet tissue—in white and four colors), because she is growing old (does she . . . or doesn't she?)."

It is tempting to continue in this vein, as Mrs. Friedan does for a major part of her book. But while guaranteed, at least in small doses, to pique interest and raise or lower blood pressure, this approach tends to cloud the real issues. It tends to divert attention from what most serious people who work with young women or with young men see as a tendency to seek—whether in early marriage and the homemaker's role or the role of the organization man—a retreat from the challenging and sometimes painful process of fashioning a self, an individuality that will serve self and society for the forty or fifty years of adult life.

In her calmer moments, Mrs. Friedan does state the problem. "Encouraged by the mystique to evade their identity crisis, permitted to escape identity altogether in the name of sexual fulfillment, women once again are living with their feet bound in the old image of glorified femininity. And it is the same old image, despite its shiny new clothes, that trapped women for centuries and made the feminists rebel. Why should a woman bother, exert the effort, suffer the pangs and the loneliness of being anything more than a wife and mother, if all the forces of her culture tell her she doesn't have to, will be better off not to, grow up? So she runs back home again to live by sex alone, trading her individuality for security. . . . For the woman who lives according to the feminine mystique there is no road to achievement, or status, or identity except the sexual one: the achievement of sexual conquest, status as a desirable sex object, identity as a sexually successful wife and mother."

Even if one were to agree, for the sake of argument, that this is a desirable state of affairs, it presents the gloomiest prospect for most women. Many do achieve sexual conquest, if marriage attests to that. However, for most women, the search for status as a desirable sexual object is seldom satisfied in reality, Mrs. Friedan suggests; at best, most of us can only try to look like Elizabeth Taylor. And even those who are fortunately endowed in this respect can preserve it only with a struggle for more than half of their expected life span. Moreover, one cannot go on having children forever, even if one could afford it; children do grow up and seek lives and families of their own, thus creating the "empty years." It is the most unusual woman who, after years
of exclusive immersion in the role of wife and mother, can begin at the age of 35 or 45 to fashion an identity, to create a satisfying life for the next twenty to thirty years.

In place of the feminine mystique, Mrs. Friedan offers a "new life plan" which does not require that she choose between marriage and a career. The first step in this plan is "to see housework for what it is—not a career, but something that must be done as quickly and efficiently as possible." (Mrs. Friedan has her own version of Parkinson's law for housewives: "For any given woman the time required to do housework varies inversely with the challenge of other work to which she is committed.") The second step is to "see marriage as it really is, brushing aside the veil of over-glorification imposed by the feminine mystique. . . . The only way for a woman, as for a man, to find herself, to know herself as a person, is by creative work of her own." But just any job is not enough. It must be one commensurate with ability and talents, one that involves lifetime interests and goals, one that permits growth, one that involves commitment. And education is the key to this new life plan—education meant for serious use in society, amateur or professional.

What Mrs. Friedan has done, when she finally finishes her definition of, explication of, and excoriation of the feminine mystique, is to select from the theories of a number of behavioral scientists, notably Maslow, Erikson, Angyal, and Goldstein, to define personal fulfillment in these terms, and then to show that this definition is equally valid for both women and men—a suggestion that should not be untenable to most thinking men (I use the term generically) or at least to all who are not still trapped by the feminine mystique.

Her composite "theory" offers the following propositions: There is in man a basic need to grow, to be all that is in him to be. Man is happy, self-accepting, healthy, without guilt, only when he is fulfilling himself and becoming what he can be. It is not enough for an individual to be loved and accepted by others, to be adjusted to his culture. He must make his own commitment to life and to the future. There is a hierarchy of needs in man, ranging from the needs usually called instincts (because they are shared with animals) to needs that come later in human development—needs for knowledge, for self-realization, for new experience. As physiological needs which depend on the material environment are satisfied, needs relatively independent of the environment and more and more self-determined emerge—for self-esteem, achievement, competence, freedom, the search for truth. Even capacities may become needs that clamor to be used and that cease their clamor only when they are well used. There are two key requirements for growth: commitment—the full utilization of talents, capacities, potentialities in the interest of some task, some problem outside one's self; and acceptance and expression of one's self, a life of one's own. Accepting this, it is not difficult to see why she is so passionate in her mission to free women—and men—from the chains of the feminine mystique.

Although there is much of value in what Mrs. Friedan has to say, it tends to be overstated and overgeneralized. It might be suggested that in her efforts to destroy one mystique she may be guilty of creating another which could be just as crippling and just as guilt and anxiety producing—but to a different segment of those individuals who happen to have as their most visible trait sex which is female. She is still talking
to and about women instead of talking to and about a vast group of individuals who happen, among other things, to be female. It is important to recognize that any forces in our society that offer a quick, ready-made identity in place of slow and sometimes painful and lonely growth and self-knowledge—that present stereotypes to any large group of individuals—are destructive. Could there also be a male mystique that is equally crippling to growth and equally uncomfortable for many in the vast group of individuals who happen to have, as their most visible trait, sex—which-is-male?

Sex, in the sense of being male or female, is only one of many characteristics in the complex of traits that makes a person; only one, though admittedly an important one, of the many threads from which the unique fabric of a personality is fashioned. But it is a very visible thread, not unlike the color of a person’s skin. And we know that highly visible traits tend to become the basis for stereotypes that are among the most powerful levelers of individuality.

Large groups of people (in the case of sex, almost half the human race) tend to be labeled by a single visible trait—Negro, on the basis of a dark skin; woman, on the basis of physical characteristics of varying degrees of distinctiveness and on related functional characteristics. Once labeled, it is as if all of the threads available to be woven into the fabric except this one are bleached and faded into the background or are dyed to uniformity and no longer available to enrich the pattern. Thus, all other characteristics—intelligence, level of energy, temperament, talent, creativity—in all their infinite variation tend to be ignored.

By invoking stereotypes, we tend to assume that all individuals so labeled have more characteristics in common than the visible trait that inspires the label; we tend to assume that since there are persons who do not have this trait, the persons whom we have labeled lack traits which the others have. Carried to an extreme, we forget that male and female, white and Negro, Russian and American, Jew and Gentile are human beings with the same basic needs, and that within each group are individuals who are equally tall or short, smart or dumb, creative or unimaginative, sad or happy, dominant or submissive, aggressive or retiring, idealistic or materialistic, conservative or liberal. Any circumstance that negates their total humanity and their individuality—whether the feminine mystique, a masculine mystique, or racial or social inferiority—is to be decried.

The present attitude of women and toward women is a retreat to stereotypes and oversimplified generalizations, a suspension of critical thought. But let me not make the error I have been decrying. There are many women and men who have successfully ignored the feminine mystique—and fortunate is the woman who has, who finds the man who has.

The feminine mystique is a stereotype. And the grip that it and other stereotypes seem to have on large segments of our society, particularly on many young men and young women, is disturbing. Growing up, knowing and accepting one’s self, maximizing talents and abilities, developing a set of values that will guide one’s interaction with one’s fellow man, is a slow and often painful process. Adopting a ready-made image, a stereotype, cannot serve as a substitute for growth, and must, in fact, inhibit growth.

In the increasingly complex, expanding, fast-moving world of today it is even more tempting to reach for easy solutions, to be impatient, to cut the world and its problems down to more easily manageable size by retreating to stereotypes. After all, one can cut one’s social universe considerably by labeling everyone as either male or female, and by defining female merely as not-male; as either conservative or liberal, and defining conservative as not-liberal; as either good or bad, and defining good as not-bad. This is neither more sensible nor more conducive to growth than settling for half-a-dozen standard shoe sizes to fit all feet: it might simplify the process of acquiring, but it can be guaranteed to complicate the wearing!

Women are, first of all, human beings with a great variety and wealth of capacities and potentialities. The unique capacity they have in common does not negate all others nor is it to be negated. It is an important thread among many to be woven into the total fabric of self and its contribution to the total pattern must depend largely on the other threads available in a given individual. The final patterns can and should differ, but each pattern should use all of the resources available for the health of the individual, the health of his or her children, and the health of a society increasingly in need of the best each one of us can offer.
What is the earth's core made of?

Some new answers to an old and tantalizing question have been suggested by Taro Takahashi and William A. Bassett, assistant professors in the University's Department of Geology and Geography. The Rochester scientists described their findings in a recent report in Scientific American, from which the following article is excerpted with the permission of that publication.

Geophysicists have inferred from earthquake waves that the solid earth consists of three principal zones: a thin crust varying from a little over 3 miles to about 35 miles in thickness; a mantle about 1,800 miles thick; and a large core, divided into an inner and outer region, that accounts for about half of the earth's diameter and nearly a third of its mass. The composition of the crust varies from granite in continental areas to basalt in ocean basins. It is generally accepted that the mantle is made up of denser silicate minerals, which are rich in magnesium and iron.

Although it seems unlikely that a sample of the core can ever be examined at first hand, there is considerable evidence that it is composed chiefly of iron. Whether any other elements are present (and, if present, which elements they are) is much debated. We believe experiments in our laboratory at the University of Rochester have cast some fresh light on the matter.

Heretofore, hypotheses about the composition of the earth's core have been based primarily on two lines of reasoning. The first involves seismic (earthquake) and other geophysical measurements that indicate that the core has a density consistent with that of metallic iron. The second involves the composition of certain kinds of meteorites that are believed to be fragments of a shattered planet. Since these objects consist mostly of iron-nickel alloys, they suggest that the earth's core may have a similar composition.

Within the past fifteen years still another approach has been explored. Here the scientist attempts to reproduce temperatures and pressures resembling those inside the earth and to observe the changes that take place in various substances. One way to do this is to use explosives. At the Los Alamos Scientific Laboratory, for example, ingenious recording instruments have been devised to measure fleeting changes in samples subjected to explosive shock waves.

In our laboratory at Rochester, we have studied samples in a small but powerful press. This press is so de-
signed that we can use X-ray diffraction to determine the effects of pressure and temperature on the arrangement of atoms and the density of the material under examination. From our measurements we have obtained information pertinent to questions about the composition of the core.

Our investigations grew out of some interesting findings by the Los Alamos group on the effects of pressure on the density of iron. They found that at pressures comparable to those in the earth's interior the density of pure iron is 10 to 15 per cent greater than the density of the earth's core as determined by geophysical measurements. This implied that the core could not be composed of pure iron; if it were, the core should be 10 to 15 per cent denser than it is found to be.

Could the discrepancy be explained by supposing that lighter elements, such as silicon, are alloyed with iron in the core? That seemed unlikely, because no such alloys have been found in iron-nickel meteorites. Moreover, nickel itself should presumably make the alloy denser, since it is heavier than iron. These problems led us to initiate a series of studies of iron and its alloys using our high-pressure equipment.

Two kinds of change in density take place with increasing pressure. One is simple compression, which gradually reduces the distance between atoms and thereby increases the density of the solid. The other type of change, called polymorphism, is an abrupt transformation through either a sharp decrease in the size of atoms or a radical rearrangement of their geometry.

The effect of temperature, on the other hand, is usually to increase the distance between atoms, resulting in expansion; however, a change in temperature can also give rise to polymorphism. In other words, the atoms of a substance always tend to arrange themselves in the configuration that will be most stable under given conditions of pressure and temperature.

It is such changes in configuration that can be examined by X-ray diffraction. When a beam of X-rays is directed through a crystal, the rays are reflected from the layers of atoms, and these rays form a pattern that indicates the spacing and arrangement of the atoms. Recorded on photographic film, the reflected rays produce a set of diffraction rings. From the diameter of the rings one can calculate the distance between the layers of atoms in the crystal. With simple crystals this is usually enough information for obtaining the arrangement of the atoms as well as the distances between them.

With the aid of a grant from the National Science Foundation we have built an instrument that has enabled us to study changes in various materials at pressures up to 300 kilobars (approximately 4.5 million pounds per square inch) and temperatures up to 300 degrees C.

In our experiments with iron and iron-nickel alloys, we knew that at ordinary pressure iron has three forms, depending on temperature. At temperatures up to about 906 degrees C. the atoms in the crystal are arranged in a "body-centered" cubic structure called the alpha form; on up to about 1401 degrees C., it is characterized by a "face-centered" cubic structure, the gamma form; and up to 1530 degrees C. (the melting point of iron), the structure is again body-centered cubic (the delta form). These various forms are shown on Page 16.

In order to explore the effects of pressure alone, we subjected iron samples to various pressures while keeping the temperature constant at room temperature. When the pressure reached 130 kilobars, the iron began to exhibit a visible change; it became more strongly reflecting. When we examined our compressed samples by X-ray diffraction, we found that the iron had indeed been transformed into a new structure: a more compact hexagonal arrangement. We named this new form epsilon.

From the X-ray studies we were able to calculate how the density of iron responded to increasing pressure. At ordinary temperature and pressure, the density of iron is 7.86 grams per cubic centimeter. At pressures up to 130 kilobars, compression reduced the distances between atoms, so that the density rose steadily to 8.46 grams per cubic centimeter. But at 130 kilobars, where the iron changed to the new form, the density abruptly jumped to 8.81 grams per cubic centimeter. Thereafter, as the pressure was increased further, the density increased at a uniform rate. At 300 kilobars, the limit of our equipment, the density of pure iron was 9.49 grams per cubic centimeter.

We then tested an alloy consisting of 95 per cent iron and 5 per cent nickel. Like iron itself, the alloy normally crystallizes in the body-centered alpha arrangement. Up
to 115 kilobars it increased in density at almost the same rate as iron. Then it changed to the \textit{epsilon} form and its density jumped from 8.40 to 8.87 grams per cubic centimeter. As we raised the pressure still higher, however, the alloy behaved differently from pure iron. To our surprise, at high pressure it showed substantially lower compressibility than pure iron; that is, its density rose at a slower rate. Whereas the alloy was denser than pure iron at a pressure of 115 kilobars, at 230 kilobars the density of both became equal, and at 300 kilobars the iron-nickel alloy was actually one per cent lighter than pure iron.

The final experiment was performed with an alloy of 90 per cent iron and 10 per cent nickel (the composition of the average iron-nickel meteorite). Again, the 90:10 alloy was less compressible than pure iron at high pressures. Extrapolating to pressures above the limit attainable with our instrument, we calculated that under the conditions in the earth's core (1,500 to 3,500 kilobars, and 3,000 degrees C.) the iron-nickel alloy would be about 10 per cent lighter than pure iron.

On the basis of various experiments it is possible to plot the joint effects of temperature and pressure within the limits of conditions attainable in the laboratory. The iron or iron-nickel alloy in the core cannot be in the \textit{alpha} form, because that form cannot exist at a temperature higher than about 906 degrees C. or a pressure higher than 130 kilobars. Under the conditions in the core, therefore, the metal must be in either the \textit{gamma} or the \textit{epsilon} state. Which is more likely? One can only try to extrapolate from the laboratory results to higher levels of the pressure-temperature curve representing the transition from the \textit{gamma} to the \textit{epsilon} form.

Experiments have shown that the temperature required for the transformation of iron from the \textit{gamma} to the \textit{epsilon} state goes up about two degrees C. with each increase of one kilobar in pressure. Our calculations indicate that for a 90:10 iron-nickel alloy the slope is nearly 7 degrees per kilobar. An extrapolation to the temperature-pressure conditions in the earth's core leads to the conclusion that the metal there is most likely in the \textit{epsilon} form. The conclusion is supported by the studies that have subjected iron to high temperatures and pressures by means of explosives.

Observations of seismic waves that have traveled through the core suggest that the outer portion of the core—between 1,800 and 3,100 miles below the earth's surface—is fluid. However, reflections from a surface within the core have led geophysicists to conclude that there may be a solid inner core. In any case we can reasonably assume that the density of the metal is about the same, whether molten or solid.

The present information on the probable composition of the earth's core—including that inferred from geophysical measurements, plus the extrapolations from our own laboratory findings and from experiments utilizing shock-wave techniques—indicates that the earth's core probably consists of iron-nickel alloys and is similar in composition to the iron-nickel meteorites. In all likelihood the inner core is solid and crystalline, with the atoms of the alloy packed in a hexagonal arrangement; the outer part of the core is fluid, with the atoms closely packed but in a less orderly configuration.

Our findings, though immediately applicable to the earth's interior, should eventually have more far-reaching implications to the investigations of other members of the solar system. ■

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{iron_crystals.png}
\caption{Iron crystals assume different atomic arrangements at different temperatures and pressures. The common low-temperature form is body-centered cubic (left); that is, it has an atom at the center of a cube formed by the eight surrounding atoms. A form found at intermediate temperatures has a face-centered cubic arrangement with atoms at the centers of the faces of the cube (center). At high pressures the atoms are arranged in a hexagonal form, closely packed (right). Illustrations above and on page 14 are based on drawings from \textit{Scientific American}.}
\end{figure}
Some months ago, representatives of area business, education, and government met on the River Campus for a conference on continuing education for engineers and scientists. Their discussions prompted Assistant Professor James Eyer to set down some observations on the hopes and hazards of continuing education in an era in which, as he notes below, "our crystal ball is hazy at ten years, fog-bound at twenty, and virtually opaque at thirty!"

A graduate of MIT, Eyer received his Ph.D. in optics and physics from Rochester and has been a member of the Institute of Optics faculty since 1957. In addition to serving as the assistant director of the Institute, he is editor of ION, its twice-a-year newsletter, which boasts a select—and highly enthusiastic—readership among Institute alumni and friends.

The "Extrapolations" that follow, according to their author, are his own and do not necessarily represent the views of the Institute or his fellow-conferees.

Educators can claim with some justice to be members of the second oldest profession. They have literally had millennia to study the learning process and to refine their teaching methods. Yet the profession today is still as much an art as a science. One can argue that our culture’s continued expansion depends critically upon our ability to reduce this art to a science.

Education in the broad sense involves three interdependent tasks: preservation of existing knowledge; transmittal of that knowledge to the next generation; addition to the store of knowledge. The first task is basically a library function. Recent study of the problems associated with information storage and retrieval indicates that the importance of this function is recognized; the problems are formidable, but one has some grounds for confidence that they will be solved. The third task can be succinctly categorized as "research"; here again, current attitudes appear healthy.
The situation is less encouraging with regard to the second (and perhaps primary) task of education—transmittal. Educators face three transmission problems which can quite properly be called crises. These crises are coupled through the population explosion, but deserve separate attention. For the moment I shall identify them simply as: numbers, content, and methods.

For the most part, proposals to meet these crises have been fairly limited probing actions—comparatively modest extensions of current educational practice. This is proper; educators too must be masters of the "art of the possible." Still, one cannot ignore the oft-voiced opinion that these are essentially linear responses to an exponential challenge.

IT HAS BEEN ESTIMATED that the population of the United States will increase by some 40,000,000 in the next ten years. A boom in enrollments is already straining educational facilities at all levels. Assuming an educational status quo (that is, education of the same percentages of students to the same levels), this prospect alone forecasts major investment for new facilities over the foreseeable future.

But, of course, there is ample evidence that even today society is not content with the status quo. Only a fraction of those students qualified—by present standards—complete a program of higher education. We are told that this fraction must be increased. In addition, an increasing percentage of individuals with undergraduate degrees seeks admission to graduate school. As now conceived, graduate education is much more expensive than undergraduate. Facility requirements per student are higher; the student-faculty ratio is lower; most graduate students require some form of financial assistance. Thus whole new dimensions are added to the funding problem.

Even this is not the end of the story. Industry and government are alert to the need of their personnel for advanced training and for retraining. In part this need can be met in existing facilities by expansion of evening and summer sessions. However, this is only a temporary expedient; well organized universities already use their facilities (and faculties) more completely than is generally recognized. A sizeable percentage of all returning students must simply be lumped with the regular student body when assessing the total educational burden.

The programs just mentioned add up to a monumental effort, but the goals which they imply are both reasonable and humane. Enrollment pressures could obviously be eased by allowing the intellectual standards for admission to higher education to rise. (Let us not confuse curriculum evolution with a rise in intellectual standards. The former results inevitably from progress in a given field; the latter represents a policy decision.) However, this would soon lead to formation of an oligarchy of the intellectually elite—a development completely at odds with our national tradition. We are philosophically committed to a broad-based educational policy. Moreover, failure to provide retraining for individuals facing technological obsolescence carries obvious social dynamite.

Servicing these legitimate educational needs will demand an unprecedented application of human and financial resources. It is by no means clear that our total resources—or, better, that fraction of the total which society is willing to devote to educational purposes—are indeed adequate to support every worthy program. Priorities may be necessary. If so, one can anticipate that the emphasis will quite properly be placed on consolidating and extending the lower levels of the educational pyramid. Primary education is an absolute necessity; by comparison (but only by comparison), advanced education and retraining are luxuries.

Hopefully it will never be necessary to establish such priorities. Since neither public nor private purses are bottomless, our best defense is to see that every dollar allocated to education is spent wisely; we must assure that resources are not dissipated in marginal activities. For example, some people today assert that a college education should be the prerogative of every American—apparently without reference to qualifications. While it is clear that as a nation we do not know what to do with untrained young people in the 17-21 age bracket, it is equally clear (at least to me) that "babysitting" is not a proper function of any educational institution above the nursery school level. Yet social pressure in this direction may prove irresistible over the next few decades. If so, significant diversion of energies from programs of higher education and re-education can scarcely be avoided. Implicitly or explicitly, a policy decision will be made on this subject—and probably not by educators!

DESpite facetious suggestions to the contrary, it is clear that the sum total of human knowledge is increasing explosively. A recent publication estimated the "doubling time" currently at ten to fifteen years and the rate of personal technological obsolescence at five per cent per year. The exact numbers are less important than the unmistakable trend.*

Perhaps it was once possible for a man of genius to have all of human knowledge and experience at his fingertips; today it is not. Time constants associated with information storage and retrieval—and most probably with the human learning process as well—limit the amount of

*It is easily demonstrated that the "exponential growth of science and technology" is more than a fashionable figure of speech. About fifteen years ago I plotted the speed of manned vehicles as a function of time over recorded history. This yielded a fairly good straight line on a semi-log basis. As I recall, it extrapolated to orbital speed around 1960 and, further, to the velocity of light early in the twenty-first century. I note this "prediction" for the record, in case posterity achieves this unlikely goal. For the present the example illustrates both the utility of the exponential model and the dangers of extrapolation.
information an individual can handle effectively during his lifetime. "Renaissance man" is very likely as extinct as the dodo!

One can (indeed, must) question whether current educational practice is pushing against any such fundamental limit on learning. Opinions vary, but there is reason to believe that training (or retraining) a mature individual is inherently more difficult than writing upon the *tabula rasa* of a young and receptive mind. Barring truly revolutionary advances in our ability to "re-program" the human computer, this limits the efficiency of all programs of adult education. (Efficiency, of course, is not the only consideration in such programs.) Conceivably, only exceptional individuals can really profit from special programs of continuing education—a point which, if true, has far-reaching implications.

Consciously or otherwise, society has adopted several responses to the challenge of the knowledge explosion. The fraction of an individual's life typically devoted to formal education is rising. During that education the emphasis is shifting from specifics (which rapidly become obsolete) to generalities (which presumably do not). This shift has its own problems; it lies at the root of the common complaint that today's graduates "can't do anything practical." But, faced with a climate of rapid change, educators see no alternative to placing major emphasis upon the basic scientific and mathematical foundations underlying a given field.

It would be comforting if at least these foundations could be regarded as having a "half life" comparable to an individual's professional lifetime. Alas, even this is unrealistic! New generalizations, new syntheses, and more powerful mathematical tools are continually being forged. In many cases these tools and techniques cannot simply be grafted on an existing technical background; the retrainee must figuratively "go back to zero" and learn his field anew.

This last statement may seem extreme, so perhaps an illustration is in order. In a number of branches of physics the basic equations have been known in general form for decades. However, direct solution of these equations under appropriate boundary conditions was often prohibitively difficult. A successful practitioner was usually distinguished by his ability to construct simplified, more manageable models which abstracted the dominant features of the physical situation. Often this involved "linearization" of an inherently nonlinear phenomenon. All this can be categorized as "physical insight" into the problem. The availability of powerful computers has changed this situation. It is now sometimes more practical to solve the basic equations directly by numerical methods. An interest in computing techniques can easily supplant interest in detailed physical mechanisms. This is neither inevitable nor necessarily bad, but it does sug-
gest that physical insight is being redefined in terms of the new tools. For better or worse, the next generation of scientists and engineers may not be very adept at making "order of magnitude" calculations when separated from their computing facilities!

If even foundations change with time, is there any invariant in the educational process? The most slowly varying factor in the educational equation is the student himself. His intrinsic learning ability (whatever that means) presumably alters on the time scale of Natural Selection itself. We know far too little about the limitations on the potential of the human organism. Still, it seems likely that even today we could do more to point the student toward effective patterns of study, and to help him more effectively use tools such as the library and the computer. I suggest that methods of study and problem analysis should become a more important part of the content of educational programs at all levels. This may well prove to be the last and most defensible bastion of the educator.

HAVING MADE THE POINT that our knowledge of the learning process is really inadequate and that teaching methods require continuous review, I want to focus on a particular aspect of advanced education.

The terminal stage of most doctoral programs in science and engineering essentially apprentices neophytes to senior individuals of demonstrated ability; this is true also of many master's level programs. The practice has a hoary tradition in fact and in legend. (Remember the Sorcerer's Apprentice!) It has been reasonably successful; to even question it is regarded as heretical in many circles. Yet we sometimes sneer at the building trades, for example, for their adherence to such an outmoded educational device. Are we guilty of selective blindness?

There is, I think, no question that a student can learn—and learn effectively—by association with the acknowledged leaders of his profession. There is a question whether this is a necessary (in the mathematical sense) aspect of advanced training. Are there other equally effective ways of imparting the final polish to a professional man?

I shall not presume to answer that question—but we must answer it eventually. Roughly speaking, a professor cannot conscientiously supervise the doctoral research of more than about 80 students during his professional lifetime (two students per year for 40 years). The average yield per professor is likely to be much smaller. In our present educational framework this probably represents the single most important constraint on rapid expansion of the pool of professionally trained people. Talent we demonstrably have; money we can presumably find; but where are the teachers?

This same bottleneck clearly applies to such programs of continuing education as residencies, internships, etc. They are essentially man-for-man efforts; the "multiplying factor" is close to unity. Such programs are inherently limited in the number of persons they can accommodate. Should they divert a professor's energies from his other academic activities, they could conceivably weaken those activities.

It may be that when all is said and done, we shall be forced to accept a system in which the highest peaks of education (and re-education) are in fact accessible only to a small elite group. But we must neither accept this conclusion prematurely nor ignore its implications. In any event it seems clear that we must explore the value of educational mechanisms outside the traditional degree framework. It may be that industry's educational needs are best met by non-degree programs, conducted either "in-house" or on nearby campuses. Perhaps we shall have to invent new advanced programs of study which do not require so much personal attention from faculty members, relying then on periodic professional licensing examinations to maintain standards of performance. Certainly, perpetuation of traditional forms purely for the sake of tradition is questionable educational philosophy.

ONE SIMPLE FACT lies at the heart of most of our educational problems. The world is changing—but "change" is a vector quantity. It has both a magnitude and a direction. We do not know either one very well, but I think we know less about direction. Our crystal ball is hazy at ten years, fog-bound at twenty, and virtually opaque at thirty!

It is trite but still useful to remark that we are immersed in the Second Industrial Revolution. There is little evidence to suggest that our progenitors had any real appreciation of the implications of the first such revolution, or that they would approve of the world we know today. Consider the automobile. Conceptually (but not technologically) this is a trivial device. Yet it has probably had as profound an influence upon our social structure and upon the fabric of everyday life as any other innovation of the last fifty years. Speaking in the broad sense of innovation, what will be the "automobile" of the next fifty years—and what will be its impact?

Educators must remain sensitive to other social constraints too. If we do not know what to do with teenagers, we are in no better position with respect to the majority of our older citizens. The plain fact seems to be that our total potential labor force is growing more rapidly than is required to maintain (and even expand) our standard of living. Pressures to "spread the work" are apparent. It may well be that the real educational job in 1985 will be to teach people to use their leisure time creatively. In the meantime prudence demands that we make cautious extrapolations of today's world in an attempt to anticipate tomorrow's educational problems.
CAMPUS DIALOGUE:

An editor asks about

CHANGES and CONSTANTS

in our colleges

Last spring John C. Hadley, assistant managing editor of the Rochester Democrat and Chronicle, interviewed three men whose impending retirement from the University faculty had recently been announced. The three, who collectively have amassed some 128 years in college teaching, were Professor Edwin O. Wiig, former chairman of the Department of Chemistry; Professor Willson Coates of the Department of History; and Professor Karl Mason, chairman of the Department of Anatomy. Appropriately, much of the conversation dealt with changes—past and potential—in the college scene. Some excerpts from their two-hour discussion follow.

Mr. Hadley: We hear a lot about the college admissions crisis. Is there really a crisis? And what will be its impact, if any, on the quality of education?

Prof. Coates: Actually, the opportunities to get an education are expanding—and they’ll continue to expand. Whether high standards of education can be maintained is an open question; I don’t see how high-quality personal attention can be given to the vast numbers of youngsters that want to go to college. But I would expect a difference in this respect between the extremely large universities and those institutions that still restrict their size. For example, in recent years the University of Rochester has increased its enrollment, although not in proportion to the number of college students nationally. But, at the same time, it has improved in quality. And it’s been able to do the latter largely because it has been able to control the size of its enrollment.

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Mr. Hadley: I’m concerned about what happens to the average student in today’s enrollment crush . . .

Prof. Coates: We have to remember that until recently many young people didn’t go to college. Today they can do so in large part because of the expansion of public institutions. As I say, whether these students will experience a high quality of education as we know it—or whether they will even expect it—is a question. After all, many students are coming from homes where there is no experience with colleges.
Prof. Mason: Frankly, I regret that my daughter, who is in college now, seems to lack the freedom of choice I had. Her program seems more tightly structured . . . there's a lack of free time to go into things in depth, an increase in pressure.

Prof. Wiig: I disagree. I think students have more freedom of choice today. The electives are there if you want them—or if you prefer, you can concentrate.

Mr. Hadley: I know there are more courses today, but isn't an undergraduate more restricted in his selection of subjects once he chooses his major field?

Prof. Wiig: Only in certain areas. Usually he has a couple of years to feel his way around.

Prof. Coates: I don't see any great danger of premature specialization in undergraduate education today. I think the new emphasis will be on prolonging the educational process, on more graduate work— which inevitably involves specialization. But the need for more Ph.D.'s almost guarantees the survival of the liberal arts college.

Prof. Wiig: It seems unlikely that specialization will filter down any farther in the educational process. For one thing, faculty manpower isn't available to make specialization possible at the lower levels.

Prof. Mason: As far as undergraduate specialization is concerned, I might note a reverse trend: Many of our present medical students took very little science during their undergraduate years, and they seem to do as well or better than those who took the more traditional, science-oriented pre-med curriculum.

Prof. Coates: This has been an interesting trend. In recent years I've noticed an increasingly large number of pre-med students majoring in a liberal arts field—even taking honors work—and completing only the minimum science requirements for medical school. I think these students feel that since the rest of their lives will be devoted to medicine, their undergraduate years offer the last opportunity to study the humanistic disciplines. Our own medical school encourages this kind of preparation.

Prof. Mason: Yes, and I believe it's having a beneficial effect on medical schools in general.

Prof. Coates: In talking about enrollment pressures, it should be pointed out that many youngsters go to college because it's the thing to do; that is, they come with rather little intellectual ambition or desire for intellectual achievement as such—they're mainly interested in what their degrees will get them. Now this has always been true, of course. But, fortunately, there are always a certain number of students who come with this attitude but who then get intellectually aroused—and this is one of a teacher's most exciting experiences: to see them catch fire. We see it here every year, and it happens to students of whom we'd never expect it. In the future there may not be such possibilities at all institutions simply because there won't be enough stimulating teachers to go around . . .

Mr. Hadley: But will there be room in college for the late-blooming type of student? Will he get in?

Prof. Coates: I don't foresee any great change in the existing levels of admission. There are some places where anyone can get in and the weeding out comes afterward; other institutions are more selective in admission.
Mr. Hadley: At any rate, I gather that youngsters won't always go to the colleges of their choice. What will be the impact of this?

Prof. Coates: As I mentioned, the number of youngsters receiving educational opportunity is bound to go up. Now this democratizing process involves some losses, but the overall picture means that our potentially "intellectually able" people will enjoy more opportunities than ever before. And, of course, students can move on from a junior college to a four-year college; they can transfer from one institution to another.

Prof. Wiig: I predict that we'll see many more transfer students; for example, many engineering colleges already are recruiting at two-year institutions.

Mr. Hadley: On the subject of entering students—do you think today's freshman is as well prepared as the freshman of twenty years ago?

Prof. Coates: I think he's better prepared—although not necessarily in the use of the English language!

Mr. Hadley: Is this improvement the result of honors and enrichment courses in high school?

Prof. Coates: Probably.

Prof. Wiig: Advanced work in high school is quite common today, of course, whereas it was unheard of years ago. It's largely the result of improved high school teaching. For instance, in my field, such developments as National Science Foundation summer institutes have helped to improve teaching at the secondary school level; in addition, institutes of this type are providing high school students with opportunities for learning that they never had before.

Mr. Hadley: How do you feel about the increasing emphasis on graduate work?

Prof. Wiig: I suspect the greatest impetus for today's students to study for the Ph.D. is the better salary involved; there seems to be less love of the discipline per se.

Prof. Mason: I don't agree. That may have been true in the immediate postwar period, but in recent years I think we've experienced a resurgence of the "oldtime" graduate student.

Prof. Wiig: Well, possibly the future doctor has a more humanitarian point of view than others. . . . Of course, one reason for the increase in graduate students is the increased financial support available. It doesn't cost a student much to get an advanced degree today compared to the old days.

Prof. Coates: This trend to acquiring more and more education has been going on for a long time. President Wallis has pointed out that the percentage of high school graduates at the beginning of the century was about the same as that of college students today, and he forecasts similar changes in the future—that is, in years to come, there will be as high a percentage of Ph.D.'s in our population as there are bachelor's degrees today. This reflects
the changing pattern of education in our increasingly technological society.

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Mr. Hadley: Most graduate education today seems to be government-financed. Who paid for it in the old days?

Prof. Wiig: The universities and the students financed it, for the most part. But today the costs are much higher—you need expensive equipment—and you need more graduate students.

* * *

Mr. Hadley: Well, how do you feel about the taxpayer moving into education? Are you concerned about government control under such circumstances?

Prof. Wiig: I see no evidence of control in this respect.

Prof. Coates: No.

Prof. Mason: No.

* * *

Mr. Hadley: At the state level, what do you think about the college situation in New York?

Prof. Coates: I believe expansion of the state units in New York is essential. For one thing, it increases the possibilities of our tapping hitherto unsuspected sources of talent.

* * *

Mr. Hadley: Incidentally, is there a danger of overspecialization at the two-year community colleges?

Prof. Coates: Well, many students at such colleges want to qualify immediately for technical jobs... but others intend to go on to four-year institutions.

May I just interject at this point that I personally believe there's too much emphasis on attending the so-called prestige colleges. When I was in England, I found many people there were concerned about the similar overemphasis on the importance of attending Oxford and Cambridge. Certainly it's possible to get a good education at other than the prestige institutions.

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Mr. Hadley: I'd like to wind up by asking what significant changes you've observed in higher education over the years.

Prof. Coates: I think the most important change has been the improvement in the quality of both faculty and students. This is a cumulative process...

Then, too, there have been many changes in educational practices at Rochester since I came here: the development of the Honors Program, for instance. Of course, good teaching has always been important here, and it's certainly not being lost sight of now. In fact, there are more exciting teachers here today than when I came.

Prof. Mason: As far as change in the calibre of students is concerned, I'm not sure there's much difference in the potential of today's students compared to those of former years, but they do come here better prepared—and they leave better qualified—than in the past. One important development, I think, has been the improvement in faculty salaries since World War II, along with the increasing recognition of teaching ability as a major factor in faculty promotion and compensation.

Prof. Wiig: I'd like to mention another major change: today's tendency toward experimentation in education. In the old days there was a set pattern of instruction; today, this is less true, even in the smaller institutions and in the high schools.

And, of course, the tremendous growth in graduate work has been a significant change. This is a healthy development, a valuable way to expand knowledge. I agree with Professor Mason that today's student potentially is no better than his predecessor, but he certainly comes better prepared. And, of course, he's more independent, more likely to question his professor—or even the text. This more questioning attitude is certainly an important development.

* * *

Mr. Hadley: What lies ahead for the next 20 to 25 years?

Prof. Coates: Possibly more need for technological aids in education—TV, for example—to meet the problems of numbers. And I think we'll find the relationships among the disciplines will continue to change—certainly they've already changed considerably in recent years.

* * *

Mr. Hadley: Do you envision a higher emphasis on the sciences?

Prof. Coates: Not necessarily. What's happened in this direction over the past several years has been essential, but there's a limit. I'm not fearful of overemphasis on the sciences.

Prof. Wiig: I don't believe you can predict what lies ahead, but I do think there will be more emphasis on interdepartmental work, together with a great deal of departmental overlapping.

Prof. Mason: I'm sure this will be true in our medical schools. Certainly there's a greater emphasis today on breaking down the barriers between departments. This is a very healthy approach, and I think that as it is reflected in the medical student's education, it will broaden his outlook on medicine and science generally.

Prof. Coates: Actually you can't forecast new frontiers; you can only forecast that change is certain. . . .
SOUTH ASIAN CENTER  In cooperation with the government's program to expand college teaching of non-Western languages and cultures, the University is establishing a center for South Asian studies. The new unit—officially designated a "Language and Area Center for South Asia"—is one of eleven such centers throughout the country.

Directing its activities will be Provost McCrea Hazlett, who served as the first resident director of the American Institute of Indian Studies in Poona, India, during 1963-64 while on leave from his campus post.

A grant from the U. S. Office of Education will help to support the Center.

PREMIERE  The first performance outside the U.S.S.R. of Dmitri Kabalevsky's *Requiem for Soloists, Chorus, and Orchestra* will be presented by the Eastman School of Music in December. Written in 1962, the work requires a full symphony orchestra, mixed chorus, children's chorus, and four soloists.

Walter Hendl, Eastman School director, will conduct the *Requiem*, which will be sung in English.

DORM DESIGN  Undergraduate involvement in university planning—a topic touched on by Dean Joseph W. Cole elsewhere in this issue—was much in evidence last semester in a unique project designed to find out what kinds of facilities students want in the new River Campus residence center.

The student project, which was suggested by President Wallis, is believed to be the first in the country that armed undergraduate teams with cost and design data on a projected building and invited their recommendations.

In the study, eight teams of randomly selected students met independently to discuss several key questions:

Should the new residence provide "living suites" (similar to the Towers) or traditional dorm rooms? Should there be single and/or double rooms? Should students pay different rates for different kinds of rooms? What other facilities do students want?

Based on overall cost and design data, the teams opted for six-student living suites, preferably with single rooms (if costs permitted); uniform room rates; provision for special-purpose facilities such as kitchenettes; and inclusion of one faculty apartment for every 96 students.

According to Thomas R. Mason, the University's director of planning, the administration and the building's architects hope to come "as close as possible" to the undergraduates' recommendations.

The $3 million residence will be the first unit in a complex that will ultimately house some 900 undergraduates on the University's newly acquired land between River Boulevard and Mt. Hope Cemetery.

TEACHING ASSISTANTS  An experiment aimed at developing more effective use of graduate students as instructors is under way in the College of Arts and Science. Partially supported by a grant from the Esso Education Foundation, the two-year project is headed by Kenneth E. Clark, dean of the College.

Initially the project team—which includes several senior faculty members—will study the ways in which graduate students currently are used in the departments of biology, history, physics and astronomy, and psychology. The investigators also will explore the ways in which graduate students contribute to faculty-student relationships and will investigate student and faculty attitudes on their use. Hopefully, the studies will suggest some innovations in the use of graduate assistants that can be tried out and evaluated later in the project and, eventually, made available throughout the University and on other campuses as well.
HONORS  Professor Harold C. Hodge, chairman of the Department of Pharmacology, and Professor William F. Neuman, '44G, co-chairman of the Department of Radiation Biology and Biophysics, have received awards from the International Association for Dental Research for their research contributions—Professor Hodge for his work in the fields of pharmacology, radiation biology, and biochemistry, and Professor Neuman for his basic research on the biological behavior of calcium. Each award carried a $1,000 prize.

NEW FACES  Dr. Robert H. Jones has been named director of the Medical School’s Rehabilitation Unit and associate professor of preventive medicine and community health. Dr. Jones was coordinator of rehabilitation at Massachusetts General Hospital . . . Ronald A. Jackson, formerly dean of students at the University of North Dakota, is now associate dean of students on the River Campus . . . Composer Burrill Phillips, '32E, '33GE, has returned to the Eastman School faculty for a year’s stay as visiting professor of music. He was a member of the School’s Department of Composition and Theory from 1933 to 1949.

BRAIN RESEARCH  A $349,392 grant from the National Institute of Mental Health will help to support advanced training at the Center for Brain Research during the next two years. The grant extends the Institute’s previous awards to the Center for predoctoral and postdoctoral work in neurobiology.

BAIL BOND  Seventeen River Campus students served as volunteer investigators last semester in a “Release from Custody” project sponsored by the Monroe County Bar Association. Aim of the project was to determine whether individuals who had been arrested and accused of felonies had sufficient ties in the community to warrant their release without posting bail. The volunteers interviewed accused felons in the city jail—often in the early morning hours—to help the court evaluate the risks involved in their release from custody. (About 90 per cent of those interviewed were released on their own recognizance.)

In a letter of commendation to President Wallis, Mitchell T. Williams, president of the Monroe County Bar Association, praised “the unselfish and unstinting labors of these volunteer students, and the intelligence, discretion, and perception they have demonstrated in their work. . . . They have impressed all with whom they have contact . . . with their responsible and successful manners and methods.”

FAMILY DOCTORS  While the general public and the medical profession bemoan the national decline in the number of medical students who become family doctors, the Medical School has quietly been moving to reverse the trend among its own students—or, at least, to give them a better understanding of general medicine. As part of this program, the School recently added eight area doctors in general practice to its clinical faculty. Like 455 other part-time members of the medical faculty, the new appointees will continue their private practice while fulfilling specific teaching assignments. Dr. Robert J. Haggerty, chairman of the Department of Pediatrics and director of the School’s family care program, said it is hoped that the move “will stimulate greater interest in family practice through student association with family doctors.”

BIRTHDAY  The tenth anniversary concert of the All-University Symphony Orchestra November 5 will feature William Dooley, '54, of the Metropolitan Opera as soloist in Mahler’s Songs of a Wayfarer. The program also will feature Dooley and the new University Chorus in the first Rochester performance of This Sacred Ground, written by David Diamond, '37E, to the text of the Gettysburg Address.

$38 Million Campaign

CALENDAR

Between September 22 and November 18, an all-star UR troupe will bring the story of the $38 Million Campaign to alumni from New York to Honolulu. The cross-continent series of 65 Kickoff Dinners is off to a gala start—don’t miss the dinner in your area!
Former United States Senator Kenneth B. Keating was the keynote speaker at the opening last summer of the 1965 Hartford Jewish Federation Campaign.

Cyril J. Staud, '22G, was reelected president of George Eastman House.


Charles Rosenblum has been named senior investigator at Merck Sharp & Dohme Research Laboratories.

Hildreth C. Olney has been elected chief executive officer and chairman of the executive committee of Rochester's S. M. Flickinger Company.

Arthur H. Moehlman, graduate professor of history and philosophy of education at the University of Texas, is the author of an article, "Speaking for America," published in The American-German Review. Professor Moehlman served two years as American cultural attaché to Germany while on leave from Texas.

Sam Shulsky is writing a syndicated column, "Investors' Guide."

John A. Gorges to Eleanor Lyons, June 6, 1964.

Flora Jean Rizzo has been named the Rochester schools' senior consultant in foreign languages.

Dr. Harold W. Grosselinger, '36M, has been appointed to the board of managers of the Summit Park (N.J.) Sanitarium.

Mort Nusbaum is president of the Rochester Jewish Home and Infirmary.

Herbert A. Norton, '38G, has been appointed acting administrative director of secondary schools in Rochester.

Congressman Samuel S. Stratton was principal speaker at Auburn Community College's commencement ceremonies.

Ruben Bitensky has been appointed executive director of the Family Service Center and an assistant professor in the School of Social Work at Syracuse U.

Sylvia Frank Levy has received a Fulbright grant to teach biology and biochemistry at Haile Selassie University in Addis Ababa, Ethiopia.

Robert P. Larson has become president of the Glens Falls National Bank and Trust Company.

Rose Engelman, '43G, is a division chief in the U.S. Army and Evaluation Command, Aberdeen, Md.

Dr. John H. Manhold has published his third book, Clinical Oral Diagnosis.

John A. Butck, former Monroe County deputy director of finance, has been named county controller.

Arnold B. Grobman, '44G, has been appointed dean of Rutgers' College of Arts and Sciences.

David Tiedeman is president of the National Vocational Guidance Assoc.

John F. Schnacky has been appointed manager of plant design at R. W. Booker & Associates, St. Louis.

Dr. Robert M. Jaeger has been elected president of the Allentown Hospital Association's Medical Board.

William A. Adler has been elected to the Athletic Hall of Fame of Evanston Township High School. He received a master's degree in business administration from the University of Chicago last June.

Neal S. Bellows is associated with Walker and Murray Associates, Inc., in the University-Euclid urban renewal area in Cleveland.

Margaret Brant Adams has been elected Woman of the Year by the Sisterhood of Temple Beth Shalom, West Essex, N.J.

Ferne B. Grey has been awarded the Army Commendation Medal for meritorious service as instructor at Walter Reed Army Medical Center.

Galway Kinnell, poet, gave readings of his works at Wesleyan University's Honors College and the American International College (Mass.).

Steven Terris has been appointed manager of insurance industry market development for the UNIVAC Division of Sperry Rand Corp., New York City.


Paul Smith was elected by the senior class at Trinity College to receive its Senior Award to faculty.

Harold C. Lundgren has been ap-
pointed manager, accounting services, for the Glens Falls Insurance Co.

- **1951** 
  RAFFAEELA E. CUPIDA has become co-ordinator of public and professional education at Brown University's Institute of Health Sciences.
  MICHAEL FUREY (G) has received a National Science Foundation Fellowship at Rensselaer Polytechnic Institute.

- **1952** 
  ROBERT E. GROCHAU, who has been pastor for 10 years at St. Philip's Lutheran Church, Wilmington, Del., has accepted a call to the Lutheran Church of the Holy Comforter, Baltimore.
  HALFORD B. JOHNSON, Jr., who is associated with the Rochester branch of Connecticut General Life Insurance Co., has been named to the company's Vice President's Club for outstanding agents.
  ROBERT F. OSBORNE was manager of design and development engineering for the new Xerox 2400 copying machine which won one of 12 awards for "Master Design of 1964" given by Product Engineering magazine.

- **1953** 
  PETER W. ALLAND has become director of curriculum and research for the Guild-erland School District.
  JOE PONAZECZKI is appearing in the award-winning Broadway musical, Fiddler on the Roof. In Fiddler, his eighth show, he plays the successful suitor of one of the daughters of Tseyv (the role performed by Zero Mostel). His earlier roles included a featured part in the long running Take Her, She's Mine. Following graduation from UR, where he directed a "Q" Club production in his junior year, he appeared in summer stock, served an Army hitch, and earned a master's degree in fine arts from Columbia University.
  KENNETH CAMERON's The Hundred and First appears in an anthology, New American Plays. His Physician for Fools was given its Rochester premiere by the University's Ninth Masque Players this summer; the play was one of eight to receive a Ford Foundation Grant in Playwriting in 1959.

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**S.O.S. FROM A. J. MAY**

In reconstructing the history of the University, the files of the under-graduate paper, The Campus, are an invaluable source of information on the interests and opinions of students. Unfortunately, the University Archives Collection lacks the following issues of The Campus:

- Volume XIX, No. 12, January 25, 1893
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- All numbers from the autumn of 1896 to June of 1897
- All numbers from April into June of 1898
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ARTHUR J. MAY  
University Historian

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**Marriages**

**1954**

- ANTHONY DI VASTO to Yvonne C. Mancini in June.

- KENT O. PARMINGTON has been named vice president of Rochester's Security Trust Company.
  WILLIAM GRASTORP has been named chairman of the Allegany County Red Cross fund campaign.
  RONALD E. SHAW's manuscript "Erie Waters West" has been awarded first prize in the Mississippi Valley Historical Association's American history contest.
  ERIC W. ZAENGELEIN has been named comptroller of Quinby & Co., Rochester.
  DONALD S. BENNETT has been appointed director of personnel and EUGENE F. LILLY has been named manager, general accounting and budgets, for Rochester's Lawyers Cooperative Publishing Co.

**Births**


**1955**

- JOSEPH D. BERNARDO (G) has been named principal of Gates-Chili High School, Rochester.
  OLIVER A. LONGHINE, '59GEd, was graduated from an Army nurse course at the Medical Field Service School, Brooke Army Medical Center, Texas.

**1956**

- KENNETH R. STAPLEFORD has become supervisor of development programming, digital systems division, Foxboro Company, Natick, Mass.

**1957**

- ROBERT S. EDGAR has received a United States Steel Foundation award in molecular biology for work on a method of determining how genes control the development of a virus.

WALTER COOPER is returning to the Eastman Kodak Company as a senior research chemist after a six-month leave to serve as co-director of Rochester's anti-poverty program, ABC (Action for a Better Community).

**Marriages**

- NANCY L. SMITH to Eugene B. Ackerman, June 19.

- CAPT. A. MASON AHERN, a doctor with the U.S. Army Special Forces in South Vietnam, is the principal organizer of a volunteer medical team of American and Vietnamese doctors organized to combat disease in South Vietnam.

**1958**

- THOMAS P. LIEBSCHUTZ has been ordained a rabbi at Hebrew Union College—Jewish Institute of Religion, Cincinnati.
  FLORENCE CATHORNE SHELTON (G) is the author of an article, "Return of a Native Daughter," in Negro Digest. A social psychologist affiliated with the Laboratory of Community Psychiatry at Harvard Medical School, she recently returned to this country from Istanbul, Turkey, where she taught at Roberts College.

**Births**

- To William and Beverley Malchow Carlson, a son, David, Dec. 12, 1964.

**1960**

- ROBERT D. ARLIN is general manager for Trenholm Motels, Inc., Victor.
  NICHOLAS R. MILLELLA has become co-director of the "Lighted Schoolhouse" program, an arm of Rochester's anti-poverty agency.
  ALBERT GOLD has been promoted to associate professor in the College of Engineering and Applied Science at UR.
  TONY ENSTG SANTMIRE is doing graduate work at UR's College of Education.

**Marriages**

- SONIA ARLENE REID to Dwight J. Strawn in June.
  ROBERT D. ARLIN to Lorraine Hurbut in April, 1964.

**1961**

- RONALD B. KNIGHT, who received a master's degree in business administration from the University of Rhode Island last year, is a graduate-in-training at the Harrison Radiator Division, GM Corp.
  ESTELLA LOOMBE is assistant dean of Hartford College for Women.
  LEON J. ABLON, assistant professor of mathematics at Alfred University, received a grant from the National Science Foundation to attend a summer Institute at the University of Kansas.

**Births**


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**Deaths**

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**Births**

DAVID F. HERTLE to Carol Marie Dwor­
an, May 1.

JAMES H. PUTNAM to JoAnna Prise, June 5.

Births
To James D. and LOUISE GOODYEAR

• 1962
ELIZABETH CORWIN, associated with
NASA Goddard Space Flight Center,
Greenbelt, Md., served as
a trajectory
analyst for the scientific satellite Explorer
XXVI.

JOSEPH CITRO, '64G, is doing graduate
work on his doctorate in history at UR.

Marriages
RICHARD L. COOLEY to Carol P. Coul­
born in April.

JOSEPH F. CITRO, '64G, to CONSTANCE
ANN FORBES, '63, June 19.

• 1963
CONSTANCE FORBES CITRO is working
on a doctorate at Yale.

Births
To W. Michael and EILEEN CAHILL
COWLEY, a son, John Michael, April 17.

To MARY KOETHEN and STEPHEN WIL­
lard, '62, '64G, a daughter, Dawn Eliza­
dbeth, April 19.

• 1964
DONALD L. HEFFER has become an en-
gineer for Pittsburgh Plate Glass Co., New
Martinsville, W. Va.

Marriages
ALICE ANN PARMAN to Jack C. Carnes
in June.

FAYE R. BROWN to Ralph E. Steuer,
April 3.

DONALD L. HEFFER to Jacqueline Muks,

LINDA HURD to Kenneth F. Ewing in
June.

Births
To Jacqueline and DONALD L. HEFFER,
a son, Daniel Lawrence, Nov. 25, 1964.

Gus FLEMING is attending the Neigh-
borhood Playhouse School of Acting in
New York City this semester.

ELLEN R. STONE, SHEILA E. BLUMSTEIN,
and ALBERT M. SCHWARTZ have been
awarded Woodrow Wilson fellowships.

CHARLES TAILLIE, JR., has received a
National Science Foundation graduate fel-
lowship for advanced study in algebra
and mathematics at Yale University.

Eastman School of Music

1927
Harry A. King, dean of the College at
the State University College of Fredonia,
will become Dean Emeritus following his
retirement in January after 37 years of
service. Dr. King, who has been dean
since 1960, recently received the College’s
"Alumni Award of Merit."

1932
Mitch Miller has a new post with
Music Corporation of America Inc.’s cre-
ative development division.

Theodore Vosburg, ’37GE, directed a
production of The Unsinkable Molly
Brown presented by the Midland (Mich.)
Music Foundation.

1935
Millard Taylor, professor of violin
at the Eastman School, was concertmaster
with the Chautauqua Symphony Orches-
tra last summer.

1936
Richard Bales was visiting conductor
of the Eastman Chamber Orchestra during
the Eastman School Summer Session. He
also conducted the Summer Session Sym-
phony Orchestra and taught advanced
graduate students.

Vladimir Ussachevsky, ’39GE, was
recitalist and lecturer on electronic music
during St. Lawrence University’s eighth
David B. Steinman Festival of the Arts.

1937
Earl B. Blakeslee is choral instructor
at the Laney campus of Peralta College
(Calif.).

Mildred Wolf Grood recently at-
tended a conference of the International
Association of Auditorium Managers in
Evansville, Ind. Mrs. Grood is one of
only two women in America who are
managers of civic auditoriums.

1939
Dorothy J. Hickok, associate profes-
sor of music at State University College
at Oswego, has organized a Flute Club.

1940
Ulysses Kay directed seminars in com-
position and orchestration during Boston
University’s summer session.

1941
Marti Taniguchi, ’61GE, was soprano
soloist in a presentation of Judas Mac-
cabeus in Waupaca, Wis.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1942</td>
<td>Jack Beeson's ('43GE) chamber opera, <em>Hello Out There</em>, was recently recorded by Destro Records.</td>
</tr>
<tr>
<td>1943</td>
<td>Rayburn Wright conducted a Metropolitan Opera summer concert at Lewisohn Stadium in New York City. The concert featured Dave Brubeck's <em>Elemen-tals</em>, which received its world premiere at the Eastman School's 1963 Arranger's Holiday Concert.</td>
</tr>
<tr>
<td>1944</td>
<td>Patricia Speer was guest artist at a program sponsored by the Palm Beach County Branch of the AAUW. Lois Lawrence, violinist, was featured at a concert sponsored by the St. Clair Shores (Mich.) Symphony Orchestra.</td>
</tr>
<tr>
<td>1945</td>
<td>Shirley Adkins appeared recently as guest artist with the Glen Rock (N.J.) Men's Glee Club.</td>
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<tr>
<td>1946</td>
<td>Mildred Northrop Wiseman was flute soloist in a recent concert presented by the Niagara Falls Philharmonic Orchestra.</td>
</tr>
<tr>
<td>1947</td>
<td>Lois Fisher, mezzo soprano, was featured in a recent concert at the University of Wisconsin. Harry J. Brown conducted the Symphony Benefit concert at Shreveport, La. Louis G. Lane, associate conductor of the Cleveland Orchestra, recently returned from a tour of Europe and the U.S.S.R. with the orchestra.</td>
</tr>
<tr>
<td>1948</td>
<td>Jennie Perello Alesse is accompanist for the Babylon (N.Y.) Chorale. Harvey Garber, '49GE, assistant conductor of the Oklahoma City Symphony, conducted the eighth &quot;Oklahoma Showcase&quot; concert.</td>
</tr>
<tr>
<td>1949</td>
<td>Warren Thew recently presented a piano concert at Davis &amp; Elkins College (W. Va.). Emma Lou Diebler, '59GE, conducted an experimental Ford Foundation-sponsored program in Arlington, Va., last spring in which sixth graders composed and performed their own music.</td>
</tr>
<tr>
<td>1950</td>
<td>Carl Alette's ('51GE) composition entitled &quot;Resurgence&quot; was recently performed by the Memphis (Tenn.) Symphony Orchestra.</td>
</tr>
<tr>
<td>1951</td>
<td>Elaine Bonazzi Carrington, mezzo soprano, sang at the annual summer program of the Chaminade Club of Yonkers. Warren A. Scharf, '61GE, has been appointed executive secretary of the National Association of Schools of Music.</td>
</tr>
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<td>1952</td>
<td>Malcolm Seagave, '62GE, conducted the Erie, Pa., premiere of his Symphony No. 1 for orchestra. Norman Heim, '62GE, has been appointed graduate advisor for applied music and composition at the University of Maryland. Edgar Summerlin presented a special program in Swarthmore, Pa., on the relation between jazz and religious worship. He recently received a grant from the National Council of Churches of Christ to write experimental choral music.</td>
</tr>
<tr>
<td>1953</td>
<td>Earl C. Groth directed the Ogdenburg Community Players' production of <em>H.M.S. Pinata</em>. William D. Gaver directed a band festival sponsored by the Western Massachusetts Music Educators Association.</td>
</tr>
<tr>
<td>1954</td>
<td>Alumni Win Ford Grants</td>
</tr>
</tbody>
</table>

### Alumni Win Ford Grants

**Jack Johnston, '62GE, Jack M. Jarrett, '57GE, and Charles C. Fussell, '60&'64GE**, are among 15 American composers awarded fellowships to serve as composers-in-residence in public school systems throughout the country. The grants are sponsored by the Ford Foundation and the Music Educators National Conference. Johnston will serve with the Parma, Ohio, schools; Jarrett, in Oskosh, Wis.; and Fussell, in Newton, Mass., where he is in residence under a previous grant.

**Robert Fountain, '41E, '42GE**, has been named dean of the Oberlin Conservatory of Music. A member of the Oberlin music faculty since 1948, Fountain was director of the Oberlin College Choir which last year made a six-week tour of Russia and Southeastern Europe.

**Richard Gilley, '56GE, appeared as tenor soloist in a presentation of Haydn's The Seasons in Babylon.**

**1955**

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**Ralph Finneran directed the calligraphy department at the University of Wisconsin.**

**Lorri Jane Givens directed a band at the University of Minnesota.**

**Herbert Hoyner, organist, recently performed in a recital in Kinston, N.C.**

**Ray Luke's composition, *Concerto for Bassoon and Orchestra*, was recently premiered by the Oklahoma City Symphony.**

**1957**

**Guy Lumia, '59GE, is violinist with the Greenwich Quartet, which recently appeared in the concert series of the Los Gatos (Calif.) Concert Assoc.**

**Ronald R. Sider, '60GE, director of the department of music at Messiah College, was organist at a recent presentation of Mendelssohn's St. Paul.**

**1958**

**Manuel Alvarez has been appointed an instructor in the music department at Niagara County Community College.**

**Nicholas di Virgilio, tenor, had a prominent role in a recent production of Puccini's *La Bohème* at Chautauqua Institution. A member of the Metropolitan Opera National Company, he also was featured in a summer concert at Lewisohn Stadium.**

**1959**

**John Blankenship, '61GE, has been appointed to a teaching post at Central Michigan University.**

**1960**

**Frederick D. Truesdell, head of the music department at the College of William and Mary, recently gave a piano recital sponsored by the Old Dominion College in Norfolk, Va.**

**Frank Benesicuttro, director of bands at the University of Minnesota, directed the university's Concert Band Ensemble in its premier performance.**

**Herbert Hoyner, organist, recently performed in a recital in Kinston, N.C.**

**Ray Luke's composition, *Concerto for Bassoon and Orchestra*, was recently premiered by the Oklahoma City Symphony.**

**1961**

**John L. Miller (G) was presented in a piano recital at Linfield College.**

**Homer Holloway gave a violin recital at Georgia State College, where he is a member of the music faculty.**

**1962**

**Kerry McDavitt, '64GE, appeared in a series of four pop concerts last summer with the Chautauqua Symphony Orchestra. He recently returned from a year's study in Italy under a Fulbright grant.**

**1963**

**Ellen Press will teach at the Ethical Culture Midtown School in New York City this fall. She received a master of**
IN MEMORIAM

Roscoe Lewis Ashley, '94, '98G, in May.
Louis A. Pultz, '05, June 24.
Howard C. Page, '05, May 6.
Effie H. Eison, '07, Nov. 20.
Beulah E. Fuller, '08, April 19.
Raymond B. Eddy, '08, April 21.
Edith Briggs Andrews, '08, March 22.
Florence Galloway Bardsley, '10, April 12.
Elizabeth Darrow Welles, '11, Dec. 16.
Henry Archibald Mason, '12, June 6.
Walter B. Hall, '12, July 8.
Gertrude Matteson Martin, '17, March 21.
James P. Attridge, '17, Feb. 7.
Gilbert E. Ault, '18, April 13.

Dr. George R. Martin, '59GM, has received the International Association for Dental Research Award in Oral Science.

Dr. Martin, a biochemist at the U.S. National Institute of Dental Research, was honored for his contributions in the basic research of bone metabolism. He has achieved international recognition for his studies on the chemistry of connective tissue formation and destruction.

A native of Boston, Dr. Martin received his B.S. degree from Colgate University and his Ph.D. degree from Rochester. From 1955 to 1958 he was a research assistant at the UR Atomic Energy Project.

In Memoriam

Marion P. Hallock, '26, Aug. 6, 1962.
Watson C. Patte, '27, Aug. 11.
Oliver Milton Hall, '28, June 4.
Margaret Caragher, '31, October, 1960.
Grace Carroll Fulford, '32, Feb. 3.
Irene Gedney Miller, '33E, in June.
Ruth Wilcox Emerson, '34, May 21.
Dorothy Schoenhoff Chase, '35, April.
Muriel L. Jones, '36, March 6.
William E. Kooglcr, '38E, March 16.
Dr. Arthur C. Stirling, '40M, April 11.
Thomas N. Dodd, Jr., '41, July 8.

Marriages

Edward I. Yadzinski to Marie Kathryn Kosack, 63, Aug. 21.

Evelyn A. Termolle to Robert Schick, pianist, was featured with the Chautauqua Symphony Orchestra.

Thom Ritter George's Hymn and Toccata was premiered at an intercollegiate band festival held at Lock Haven (Pa.) State College.

Sharon Lee Hiller, Boyce Reid, and Fred Wiemer have been awarded Fulbright fellowships for a year's study in Rome and Salzburg.

Gilbert E. Gertrude Matteson Martin, '17, Elizabeth Darrow Welles, '11, Dec. 16.

Marriages

Dr. Alexander L. Feldman has been appointed to the attending medical staff of Newark State School.

Dr. William Gamble is chief resident in surgery at the University Hospitals of Cleveland.

Dr. William Powell is chief resident in obstetrics and gynecology at the University Hospitals of Cleveland.

Births

To Sally and William Powell, a daughter, Jennifer Taylor, July 9.
October 15-16

PERSPECTIVES ON HIGHER EDUCATION

6th Annual CONVOCATION-HOMECOMING WEEKEND

Convocation Speakers:

Kenneth B. Keating, '19  Professor Dexter Perkins

Convocation marking the 40th anniversary of the granting of the Ph.D. degree at Rochester . . . panel discussion . . . Homecoming game: Rochester vs. Amherst . . . special Homecoming events