

University of Tampa



Be it known  
To all to whom these presents shall come  
that

Oberton Greer Ganong

Rita Elizabeth Owen

*has completed the prescribed Course of Study and has met all the other  
requirements of the University of Tampa and is hereby declared a Graduate*

Magna Cum Laude

at Tampa, Florida this the sixth day of June, 1965

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Chairman of the  
Board of Trustees

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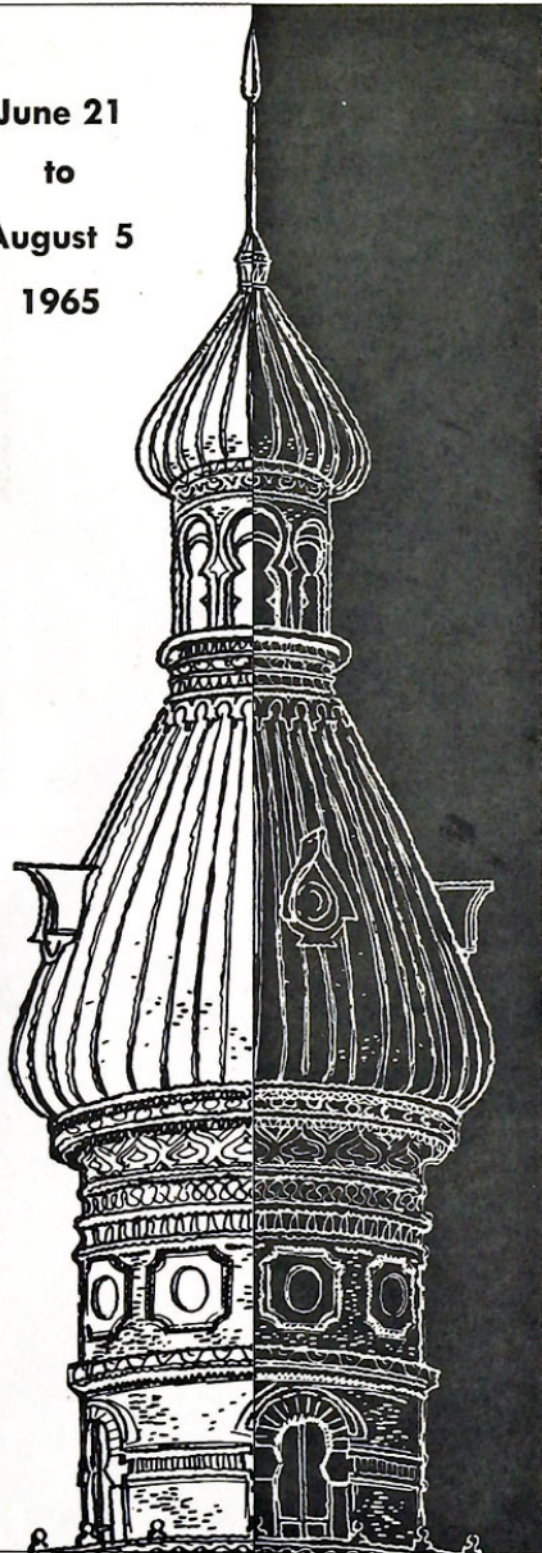
Vice President  
of Academics





# University of Tampa Pre-College Workshop

June 21  
to  
August 5  
1965



## DIRECTOR

Dr. Robert J. Nickel

## ADMISSIONS COUNSELORS

Mr. Eduard Van Gelder — *Director*

Mr. Donald L. Miller

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## HOW TO APPLY

Send name  
Address  
High School Transcript  
\$50.00 Deposit (Non-Refundable)  
Two Photographs

TO: Office of Admissions  
University of Tampa  
Tampa, Florida 33606

A 7-week program designed to improve the academic skill of students who would ordinarily not qualify for full college acceptance because of their academic deficiencies, but who appear otherwise to have the potential ability to do satisfactory work.

## PROGRAM and PROCEDURE

This rigorous five-day-per week program—including supervised study—will extend over a period of seven weeks.

The following program will be applied individually to the demonstrated need of each student:

- A. Delineation of individual academic deficiencies and strengths through careful diagnostic testing:
- B. Improvement of specific academic and study skills and level of academic achievement through instruction and practice in:
  - Basic English - rhetoric, writing, vocabulary building
  - Basic Mathematics
  - Speed-reading for slow readers
  - Efficient methods of study-reading; outlining; note-taking from texts and collateral reading; and from lectures
  - Library Usage
  - Effective use of time and scheduling of activity
- C. Adjustment to College Campus Life

## ENGLISH

Will include the following:

- Fundamentals of English grammar
- A functional and practical approach to expository writing through writing of theme papers
- Emphasis on instruction in proper English usage plus structure and style calculated to create reader interest
- Practice and instruction in use of the tools of study, including out-lining and note-taking of text books and collateral readings, and note-taking from lectures
- Stress on Vocabulary building
- Oral communication and practice in extemporaneous expression

This phase is intended to stimulate and build the confidence of the student in his ability to express ideas in cogent and effective English. It will be coordinated with other phases of the program.

## READING

Will include both individualized and group instruction designed to improve reading skills. Emphasis will be placed on reading with understanding, as well as vocabulary development. A student who completes the program will advance considerably in ability to do college level assignments.

## MATHEMATICS

Will emphasize the elements of arithmetic, algebra and geometry; functions and graphs, statistical data, and practical applications of mathematics.

## TESTING and GUIDANCE

In order to understand fully the academic potential of each student and to plan a program to meet his needs, a complete battery of tests will be administered prior to class placement.

The psychologists administering the tests will consult with the staff concerning the results and the individual needs of each student. Individual counseling will then be conducted based on the student's academic background as indicated by his high school transcript and results of general tests such as the Scholastic Aptitude Test, and the diagnostic testing. On completion of the program, a terminal series of tests will be administered to aid in evaluation of the progress of each student and to assist in the formulation of future educational plans.

## ATTENDANCE NO GUARANTEE OF ADMISSION TO COLLEGE

Attendance at the Pre-College Program does not guarantee admission to the University of Tampa or to any other college. Students who register for this program need not contemplate attendance at the University of Tampa, but may prepare for other institutions.

Those who complete the seven weeks program at the required level of competence may be admitted to the University of Tampa either in September 1965 or February 1966 dependent on space available.

## STUDENT REGULATIONS

- Use of automobile during this seven-week period is forbidden to all dormitory students. (A car used for transportation to and from the city will be out of use during this time.)
- Students must be present and participate in all activities of this program.
- Each student will supply his/her own bed linen and towels, plus one blanket. Rental service for linens is available.
- Students in this program are here to work diligently and will be subject to suitable dormitory regulations.

The intensive and accelerated nature of the program requires complete cooperation and observance of all regulations as prescribed. Students who find it impossible to do so, in the judgment of the staff, will be separated without rebate of tuition or fees.

## RECREATION

Planned recreation will be under the leadership of an adult member of the staff. Any expenses incurred will be paid by students.

## COST

Total Cost \$425.00	
Tuition	\$225.00
Room & Board	200.00

Estimated cost of books and insurance  
\$35.00 in addition to \$425 fee.



# The MUEZZIN

KENNETH P. HANCE, *Director*

SUZANNE OLIVER, *Editor*



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The Muezzin is published four times a year by the University of Tampa for its alumni. The editorial office is combined with the Alumni Relations office, Room 342, University of Tampa, Plant Park, Tampa, Florida 33606. Entered as third-class matter at the Tampa, Florida post office under non-profit bulk mailing permit No. 27.

**CHANGING YOUR ADDRESS:** Notice of address change should reach the alumni office at least 30 days prior to the publication date of the issue with which it is to take effect. When ordering an address change, please enclose the old address label or an exact copy.

The cover for this commencement issue features two outstanding seniors who, by virtue of their academic accomplishments, are graduating with honors. Both are history majors who will continue their education on the graduate level. (Story on page 8.) Cover photos by Frank Hutchins.





# *A Profile of Progress*



Frank Hutchins

*by Dr. David M. Delo*

Members of the class of 1965 have seen great physical changes since they entered the University. Howell Hall was first occupied in September, 1961. The Falk Theatre was secured in March, 1962. Wings were added to Smiley and McKay Halls in the summer of 1962, and the new Industrial Arts Building was opened. February, 1963 saw the first exhibition in the La Monte Art Gallery and the Student Center opened two months later.

In 1961, only one ethnic room in the Western Civilization Corridor of the main building had become an actuality; today there are nine beautiful rooms and two more planned for the near future. Other extensive alterations have been accomplished; more are planned.

The class of '63 contributed one of these rooms; the class of '64 has underwritten a new masonry entrance sign; the class of '65 will sponsor another larger room.

Not all the changes have been physical. Academic standards are rising. A separate well-

staffed Admissions Office was opened last Fall; the College Entrance Board Examinations are now required; and a central Counselling Office is planned for September. Cultural offerings have been expanded; additional intercollegiate sports have been added. The entire operation of the University, both academic and otherwise, is being subjected to careful and objective examination which we expect will lead to continued and marked improvement.

Each alumnus, whether from the class of '35 or '65, can assist in this process of growth. He can do so by maintaining contact with the Alumni Office; by sharing his personal success with other alumni through *The Muezzin*; by keeping informed about the University. The interested alumnus can create a desirable image of the University wherever he goes, not only through his own personal image, but by his expressed attitude toward the University. And, through annual participation in the Loyalty Fund, he can help to supply that "extra" which all private institutions must receive in order to realize their goals.



## Dr. Delo Meets in N. Y. With Parents, Alumni

Almost 100 persons attended the annual Spring meeting of the Tri-State Parents Association at the Park-Sheraton Hotel in New York City on April 21, 1965. Representatives from the University were President and Mrs. Delo and Vice President Walker.

President Delo spoke briefly on the changes now being considered in the academic program and the enrollment prospects for September, 1965. He pointed out that full admissions are now 20% greater in number than at this time a year ago. The quality of students admitted, as measured by college entrance examination board scores, has risen markedly.

A notable addition was made to the 1965 Parents Fund, with pledges and contributions totaling \$825.00.

Present at the meeting were six alumni. Of these, Norman Cohen, Illmars Dzilna, Helene Ripling and Joel Schneider were from the Class of 1964; Dr. G. Truman Hunter from the Class of 1939 and Frank Arthur Stump III from the Class of 1951.

## In Memorium

*Stevens R. Hardin* (class of '59) on March 7, 1965, in Tampa, Florida. Mr. Hardin had been a resident of Tampa for the past fourteen years and had taught in the Hillsborough County schools during that time.

*Julian M. Vricelle* (class of '61) on January 31, 1965, in Tallahassee, Florida. Mr. Vricelle was the charter president of Phi Alpha Theta, national history honor society, during his undergraduate years at the U. of T. He was also a member of the National English Fraternity and a Silver Key Scholar of Tau Kappa Epsilon social fraternity. He graduated from the University of Florida College of Law in 1963 and was appointed special assistant to the Attorney General.

## EDITORIAL

# Just In Passing . . . .

The opening of "The Forum" (page 8) will henceforth afford our readers an arena for the presentation and exchange of ideas. Your thoughts and comments on any topic of interest are welcomed and, if this begins to engender lively discussions, so much the better! What better impetus for thought or catalyst for accomplishment!

\* \* \*

We are extremely fortunate and proud to be the first to publish (page 4) a summary of scientific research into the development of myopia written by a noted alumnus, Dr. Francis A. Young of Washington State University. The paper deals with studies conducted by Dr. Young and the Primate Research Center on the relative contributions of heredity and environment to nearsightedness. Though detailed and technical, the summarization deals with a physical problem so common that it is bound to be of wide-spread interest.

\* \* \*

"The Muezzin" is equally happy to spotlight as contributing authoress, a future alumna, sophomore Alyce Spohn. Submitted in the Freedoms Foundation annual competition, Miss Spohn's award winning essay (page 10) is featured as the June issue's creative writing selection.

S. O.

## U. of T. Debates Harvard on National Topic

Teams from the University of Tampa and Harvard University met in a debate on the topic, Resolved: "That the federal government should establish a public works program to aid the unemployed" at 7:30 p.m. on Wednesday, April 7, at the Falk Memorial Theater.

Held in connection with Harvard's spring debate tour, the discussion on the national inter-collegiate debate topic was open to the public with the University of Tampa taking the negative side.

Don D. Stephens, a freshman business major from Houston, Tex., president of the Delo For-

ensic Society at the University, and John J. Mulry, Jr., freshman pre-law student from Worcester, Mass., newly elected president of the sophomore class, comprised the U. of T. team.

Harvard was represented by Frank White, junior international relations major from Canton, Mississippi, and Laird Kirkpatrick, a senior majoring in government from Bloomington, Ind.

Dr. Hugh Fellows, professor of speech at the University of Tampa, is director of the University's debate activities.



Left to right: John Mulry, Jr., Frank White, Laird Kirkpatrick and Don Stephens.



# Studies on the Development of Nearsightedness



by Francis A. Young, Ph.D.  
Director, Primate Research Center  
Washington State University

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*Editor's Notes:* Dr. Young's studies of myopia have developed to a large extent from his personal interest in the problem. Following graduation from the University of Tampa in 1941, he applied for a commission as a weather observer in the U. S. Air Force and was rejected for high myopia. This same condition was also responsible for his being rejected four times in volunteering for active duty in the U. S. Army.

Having obtained a B.S. degree in mathematics-economics from the U. of T., Dr. Young went on to earn a Masters degree in psychology from Western Reserve University while working for an aircraft products company during the period 1942-45. In 1949 he was awarded a Ph.D. in psychology from Ohio State University.

Dr. Young and the former Judith W. Wright of Cleveland, Ohio, were married in 1945 and now have two sons.

Currently Professor of Psychology as well as Director of Washington State University's Primate Research Center, Dr. Young joined the University's faculty in 1948 as an instructor. By 1961 he obtained a full professorship and has directed the Center since 1957.

In 1956-'57 Dr. Young held a National Academy of Sciences-National Research Council senior post-doctoral fellowship in physiological psychology with the Department of Physiology and Biophysics at the University of Washington School of Medicine. He is consultant to The Boeing Company, the Mental Health Research Institute and the V. A. hospitals in Washington, Utah, Arizona and California. The professor also serves as visiting scientist to the Regional Primate Research Centers in Oregon, Washington and Wisconsin and to Holloman Air Force Base.

Dr. Young is President of the Washington State Psychological Association and Western Regional Vice-President of Psi Chi Honorary Society. His membership in professional groups includes: Advisory Council of the Myopia Research Foundation; Executive Committee of the Washington Regional Primate Center; American, Western and Washington State Psychological Associations; Association for Research in Ophthalmology; American Academy of Optometry; American Association for the Advancement of Science; Ecological Society of America; Psychometric Society; Animal Care Panel; Medical Correctional Association; American Institute of Biological Sciences; American Association of University Professors; Sigma Xi; New York Academy of Sciences; Psychomonic Society; National Council on Measurement in Education; and the Myopia Research Foundation.

Anyone who would like a copy of the list of references used by Dr. Young in the compilation of material for this research paper can write to: Editor, The Muezzin; University of Tampa, Box 4; Tampa, Florida 33606.



# Is environment the major factor in simple myopia?

One of the most challenging and difficult problem areas facing biological and behavioral scientists is that concerned with the relative contribution of heredity and of environment to growth and development of living organisms. While it is likely true that both contribute to all aspects of growth and development, when one approaches this problem area with the intent of modifying some aspect of growth and development, it becomes necessary to determine just what contribution is made by each of these factors.

5 The challenge of this type of problem to the research investigator, and its importance for the medical practitioner may be seen quite clearly in the myopia, or nearsightedness problem. The refractive characteristics of the eye, or the ability of the eye to bring a distant point of light to a focus on the retina without using accommodation, vary with age from birth through the major growth period up to about age 20. Studies by Brown and Slataper upon human subjects and by the author on monkeys have found that the eye becomes more farsighted from birth to about human age six or seven and from birth to about age two in the monkey. Beyond this age the human and monkey eyes become less farsighted and usually stabilize between human ages seventeen and twenty, and monkey ages five and seven, leaving the eye slightly farsighted. However, some individuals, beginning at about age ten, tend to move more rapidly away from farsightedness toward nearsightedness, or myopia, than the rest of the population. These individuals usually continue to move toward myopia past the point at which the refractive error is essentially zero and into myopia, a condition in which the point of light which may be brought to a focus on the retina without the use of accommodation can no longer remain at infinity but must be brought closer to the subject. As the degree of myopia increases, the far point, or the point which will be brought to a focus without accommodation, moves closer and closer to the subject's eye. This type of myopia, usually termed simple or school myopia, may be due to the influence of the environment, such as exposing the child to an increased amount of reading or other types of near visual environment, or may be due to the operation of heredity in a manner similar to that of our sexual development which does not begin to occur until the individual reaches the age of twelve to fourteen years. If these myopic changes are due solely to heredity, ordinarily they are not amenable to extensive modification by manipulation of the environment. On the other hand, if in major part they are due to environmental influences, then they can be modified considerably by altering these environmental influences. Thus it becomes important, from a practical point of view, to determine whether the major factor involved in the development of this type of myopia is the environment. From a research point of view, an accurate evaluation of this situation

would add much to our knowledge concerning the relative contribution of heredity and environment to different aspects of growth and development in humans and in animals.

The relative importance of heredity and of environment has been argued since 1867, when Herman Cohn specifically attributed the development of myopia to the type of school conditions extant at that time. Before Cohn's time a number of investigators had noted that individuals in scientific, bookkeeping and literary occupations generally tended to be more nearsighted than soldiers, farmers and unskilled workers.

The following generalizations are supported by the majority of the studies which have been made to date. The onset of myopia usually begins at about age ten to fourteen and continues to progress until age seventeen or eighteen. The average rate of progression is approximately one-half to two-thirds diopters per year. The diopter is a measure of refractive power of lenses, but it may be related to visual acuity. Thus a person with no refractive error would usually have 20/20 visual acuity, or normal visual acuity at 20 feet. If this person developed a refractive error of one diopter of myopia, his visual acuity would likely drop to approximately 20/60, which means that he will now be able to see at twenty feet what he used to be able to see at sixty feet, before he became myopic. The rate of progression is related to the age of onset; thus, with an early age of onset the rate of progression is generally higher than is found in individuals who show a late age of onset. Simple myopia rarely exceeds to six or eight diopters, whereas pathological myopia, which may be present at birth, or set in at a very early age, frequently will increase to twenty or more diopters. Most myopes stabilize at four diopters of myopia, or less, and only a small percentage, approximately four or five per cent, exceed this amount of myopia. The percentage of myopes is higher among urban population than it is among rural populations. The percentage of myopes increases with grade in school. There is a higher proportion of myopes in high school than in grade school, a higher proportion in college than in high school and a still higher proportion in graduate school than in undergraduate school. Thus, where only five to fifteen per cent of high school students are myopic, twenty to forty per cent, or more, of college students are myopic. There is a higher proportion of myopes among Jewish populations than among non-Jewish populations. The relationship between the sexes is not quite as clear, but generally speaking, the onset of myopia is earlier in girls and they generally tend to develop a higher amount of myopia than do boys. While the onset of myopia is later in boys than in girls, more boys usually develop myopia than do girls.

Lest these generalizations should lead one to conclude that environment plays a major role

(Continued next page)



## Dietary Factors Appear To Have No Casual Effect . . .

in the development of myopia, it is well to point out that the supporters of the heredity hypothesis have been able to explain most of these results. If one assumes that the myopic person tends to gravitate into occupations in which myopia is a benefit, rather than a detriment, this will explain the high incidence of myopia among professional groups which do a considerable amount of near work. If these individuals have offspring, and the offspring become myopic because of the hereditary factor, then one would expect these offsprings to continue the same type of occupations: thus we would tend to find a high proportion of myopes among occupations which require a good deal of near work. This explanation generates an interesting conclusion. Since these same types of occupations also usually require a higher level of intelligence, than other types of occupations, many have felt that the myopic individual is more intelligent than the non-myopic individual.

In an attempt to provide more information on some of these points a survey was made of the school population of Pullman, Washington, in 1952. This was the initial study of a group of studies which have continued to the present time. These studies were expanded in 1957, to include studies on various types of primates, mostly rhesus and pigtailed monkeys and chimpanzees.

A visual survey, utilizing most of the measures incorporated in a complete clinical optometric examination, was made of 651 children in the university town of Pullman, Washington. More than half of the children in the survey had parents who were associated with the university in an instructional or research capacity. Most of the parents of the remaining children were engaged in agricultural occupations, or in local businesses. At the time of the survey, Pullman had a population just under 10,000, with no slum areas but with a very high level of income. At the time of the survey the mean income was approximately \$8,400 per year. One of the advantages gained by the use of this type of community was the overall similarity of nutritional factors. Large nutritional deficiencies play a role in almost all types of medical problems. The similarity of nutritional standards found in Pullman meant that these nutritional deficiencies did not occur and thus did not act as variables in the development of myopia in this particular population.

The survey found the usual increase in the incidence of myopia, with an increase in age. This increase differs from that found by Hirsch, for example, in that the onset was earlier, about nine to ten in girls and eleven to twelve in boys. Also, the percentage of cases showing a minus refractive error was about double that found by Hirsch: 30 per cent against 14.8 per cent for the total groups, 27.5 per cent for boys against 14.8 per cent, and 32.7 per cent for girls against 14.8 per cent. In terms of skewness of age distribution curves, a result similar to Hirsch's was found: the distribution of refraction is skewed toward the hyperopic side until the age of nine or ten,

is symmetrical at this age, and then becomes increasingly skewed toward the myopic side with increased age.

In order to check the assumption that there were no great nutritional differences in the Pullman population, the parents were asked to keep a diary of the different types and amounts of food consumed by their children during a one week period. The analysis of these data indicated that there were no significant differences in the type and amount of food consumed by children who were myopic as compared with that consumed by children who were not myopic. Since the basic diets of the myopic and nonmyopic children were the same, this would effectively rule out dietary differences as casual variables of myopia in this population. This conclusion must be qualified, however, since it is based only on the equality of the amounts and types of food consumed. Since individuals differ in their ability to utilize food, it is highly probable that there are some nutritional differences in this population. Unfortunately, at the present time, there is no easy way of evaluating the efficiency of a person's use of the food which he consumes.

A number of writers have suggested that myopes tend to be taller and thinner than nonmyopes. These physical comparisons were also made between the myopic and nonmyopic children in the Pullman population. No differences in height, weight, or facial breadth were found between the myopes and nonmyopes in the Pullman population. This finding suggests that when nutritional aspects are equated as nearly as possible, height and weight are not related to myopia; thus the statement that myopes tend to be taller than nonmyopes may be related to nutritional differences, rather than to a casual relationship between rate of growth and development of myopia.

Since there was a higher proportion of myopic children in the families of college staff personnel than in families in agricultural and business areas in the Pullman population, it might appear that the relationship between intelligence and myopia is upheld in this group. However, when Binet IQ scores are correlated with refractive errors in the same children, we find a zero correlation between IQ scores and refractive errors. There would appear to be no casual relationship between intelligence and the development of myopia, even though a higher proportion of children with higher intelligence tend to be myopic than children with lower intelligence. Rather, this relationship seems to be due to be due to the reading habits of the children of college instructors. When the relationship between refractive error and reading time was investigated, a significant correlation between the amount of time spent in reading and degree of myopic refractive error was found; thus the more time the child spent reading the more myopic was his refractive error. Since college personnel value reading activities much higher than do non-college persons, we might expect that the children of college personnel spend more time reading



## Reading Time Only Environmental Aspect of Significance

than do children of non-college persons. This finding is substantiated and, since the amount of time spent in reading seems to be related to myopic refractive characteristics, it is much more likely that this is the variable rather than the relationship between intelligence and myopic refractive characteristics.

7 A later study on these children indicated that the myopic children do score higher on reading types of intelligence tests than do nonmyopic children, and there is a correlation between the scores on reading types of intelligence tests and myopic refractive errors. However, when reading ability is evaluated we find that the myopic child is a significantly better reader than the nonmyopic child. When faced with a reading type of intelligence test, the myopic child can read more rapidly and with greater comprehension, than the nonmyopic child, and thus achieves a higher overall score. When reading ability is partialled out, we find no correlation between a measure of intelligence on a reading type of test and refractive characteristics, which supports the conclusion obtained with the Stanford Binet Test. Since the myopic child reads more, he tends to become more proficient as a reader.

The attempt to evaluate the effect of environment upon the development of myopia in the Pullman study revealed that only the amount of time spent in reading seemed to be related to the development of myopic refractive errors. This relationship, while significant, was quite low (0.35). Since the population of 651 children involved in the Pullman study contained 207 pairs of siblings, it was possible to use this group of siblings to test the effect of heredity upon the development of myopic refractive characteristics. While one of the most common techniques used to evaluate the effect of heredity is to trace the family tree or pedigree, this technique is not completely satisfactory, since it is effected by the environment as well as heredity. Thus, one starts with a set of parents and traces the offspring from these parents, indicating which offspring are myopic and which are nonmyopic. If a considerable number of the offspring are myopic the conclusion is drawn that myopia is determined by heredity. As we have already pointed out, parents who tend to read a lot tend to become myopic and pass along the reading value to their children, so their children also tend to read a lot. Consequently, any development of myopia among these children would not necessarily indicate the transmission of myopia by heredity since these individuals have been subjected to a type of environment which may have lead to the development of myopia.

A more defensive technique for evaluating the contribution of heredity is that developed by Karl Pearson, which involves the correlation between siblings on the same measures. Although the measures involved in this type of correlational procedure are also influenced by the environment, it is possible to evaluate the effect of environment in this situation and to determine

whether or not the obtained correlation could have been explained on the basis of an environmental causation. For example, if one were to measure the heights of a number of pairs of siblings and correlate the heights between pairs of siblings, one usually obtains a correlation of approximately 0.50. When fraternal-twin heights are correlated in this manner, the correlation usually approximates 0.65. When identical twins are correlated, the correlation for height is approximately 0.93. When randomly selected subjects are intercorrelated, the correlation between their heights are 0.00. Pearson has suggested that a correlation of .52, obtained with an unselected environment, indicates a purely hereditary determination. The environment in the Pullman group is known to be selected and consequently, no attempt should, or will, be made to place a proportional value on the obtained correlation with respect to the relative contributions of heredity and environment.

A comparative interpretation can be made in terms of the values obtained on the Pullman group alone. On good logical grounds, as well as empirical grounds, it is possible to rank the measures used in terms of decreasing importance of hereditary components as: interpupillary distance, height, weight and IQ. Both weight and IQ are more likely to be influenced by environmental factors than either high or interpupillary distance. On the Pullman subjects, we find that the correlation for interpupillary distance is 0.43, for height 0.36, for IQ 0.35, for weight 0.25, and for refractive error of the right eye 0.14. These findings suggest that the refractive error is less determined by heredity than any of the other measures investigated.

It would have been possible to determine the correlations between the refractive characteristics of the parents and the refractive characteristics of the offspring. In either case, the assumption is made that if heredity plays a role there should be more similarity between brothers and sisters and between parents and offspring, than between randomly selected individuals. Since the refractive characteristics of the parents of the Pullman children were not available, it was impossible to determine the correlation between parents and children. Recently, we were able to determine the correlations between 153 mother-offspring and father-offspring pairs of rhesus monkeys, born and raised, or housed, in the University of Wisconsin Regional Primate Research Center. Since all animals were kept in laboratory cages, the visual environment was quite similar for the entire population and should have contributed little to the obtained values. The obtained correlations, 0.13 for each eye, were corrected for a significant age refractive error correlation, -0.31 in the offspring, through the use of a partial correlation technique. The corrected values, 0.12 for the right eye, and 0.11 for the left eye, as well as the uncorrected values are not significantly different from zero. Correlations within age levels of the offspring are

(Continued on page 14)



## The Forum

... I want to thank you for the tremendous courtesies and enthusiasm with which you greeted me on my recent visit to the University. (Addressed to the Director, Alumni Relations)

You know I was quite pleased with the progress that has been made since my long departure back in 1951. I cannot express the surprise, the really pleasant surprise, which was in store for me when I visited the school. The new buildings are just overwhelming. The grounds are beautiful. The other buildings you have acquired showed great progress but, I must say, what you have done to the old Tampa Bay Hotel is where I was so amazed ... just wonderful ... I think of the days when we went in and it was like an iceberg in those rooms and we had the old fireplaces going. It really is unbelievable the progress you have made ... As you know, my wife (the former Annie Gardner) is also one of the alumnae of the University and she is quite anxious to visit the University along with our two sons, Steve and Ken, who are 10 and 12 ... they are strong potential future students of the University. Nothing could thrill me more than to have them attend my alma mater.

I have been in contact with two of the Alumni of my class. One, Donald Munn, ... was very interested in anything I had to say about the University and he is looking forward to a return visit, if possible.

Quite by accident I ran into Helene Keller who is also a graduate of the class of '51 ... she also expressed the wish to be able to return to the University for a visit in the near future. Both she and Don would be more than willing to help form an alumni group in this area ... to whom you can look for some support, morally and financially.

... In 1962 I entered the insurance field as a trainee agent with Equitable Life Assurance Society. Since then I have been quite successful and am now district manager for the Society

## Message from the Director of Alumni Relations

With this, our commencement issue, congratulations are in order to all seniors receiving their degrees in June as well as to their professors who have counseled, taught and guided them to this undergraduate plateau of higher education.

With graduation comes also the title of "alumni". We trust that all of you, as you branch out into your chosen areas, will remember your University and its need of your continued support in the years ahead ... spiritually, morally and financially.

To those of you who are alumni of long-standing, we urge you to set the pace and example by giving to the Alumni Loyalty Fund ... please, be a Loyalter and not a Slackateer!

KENNETH P. HANCE

## Ganong, Owen Graduate Magna Cum Laude

Among the graduating seniors of June, 1965, were many fine students. Two of the most exceptional are pictured on this issue's front cover. Their outstanding academic achievements have resulted in each being graduated magna cum laude.

*Mr. Overton Greer Ganong*

"Tony" Ganong has been awarded a \$7800.00 stipend under a National Defense Education Act Title IV Fellowship for advanced study at the University of Florida in Gainesville. He is graduating with an overall accumulative average of 2.96

with a straight 3.0 average in his major fields, English and history.

Mr. Ganong, a 1961 graduate of Plant High School, Tampa, has held seven undergraduate scholarships including the Crown Zellerbach Award for 1963-'64. He is listed in Who's Who and is a member of several honorary societies including: Pi Delta Epsilon, journalism; Sigma Tau Delta, English; Phi Alpha Theta, history; and Ulema. He is former editor of "De Novo" literary magazine and received the Pi Delta Epsilon Service Award Medal for his work on "En Avant", another creative publication.

*Miss Rita Elizabeth Owen*

The recipient of numerous scholarships including Scottish Rite and Tampa Women's Club, Rita Owen will graduate with an accumulative average of 2.75. Miss Owen, a history major, will enter graduate school this fall at George Washington University in Washington, D. C., to study international relations. Her plans are to enter the State Department Foreign Service after obtaining a Masters degree or, possibly, a Ph.D.

A graduate of Plant High School, she is listed in Who's Who and is a member of Phi Alpha Theta, Pi Delta Epsilon, Ulema and the International Relations Club. She has been an active participant in the University band, concert choir, The Minaret, University Players and Alpha Chi Omega social sorority. Her avocation is folk singing and guitar playing on a semi-professional basis.

here in Albany, (N.Y.) I feel that much of the success that I made ... was due to the fact that I attended college, as every day I am talking to men who are seeking to enter the insurance field, and, believe me, without a college education they are really handicapped because we have so many to choose from that we can always get a graduate.

... I am coming down the latter part of June and a couple of weeks in July with my family and we will definitely visit ... everyone at the University and we will have plenty of time then to contact old friends and kind of bring things to date.

Again, I want to thank you for making my visit so pleasant and so rewarding. Looking forward to seeing you in June. Anything I can do to be part of your wonderful program down there I would appreciate.

**Walter Rapoport**  
Class of '51



## Original Student Body of '31 To be Honored

Members of the original student body of Tampa Junior College in 1931 will be the University's honored guests at a luncheon to be held on Alumni Day, June 5th.

Dr. Miller K. Adams, one of the members of this class, has served as chairman of the committee in charge of locating and contacting other class members.

Comprising the list of honorees are the following:

J. Leon Alderman	Mrs. F. Widmer Haas
Mrs. Edith Beckner	Marcus Hall
Jacqueline Bettis Gaither	Bill Hippenmeier
Marcia Bierman	Mida Jameson
Ralph Botts	Elizabeth Jones
Alton Cain	Lawson B. Jones
Margaret Calhoun	Raymond Kimball
Dr. Felix Cannella	Ruby Knight
William Carnes	Louise Leonard
Anne Cary	Ida Lockwood
Fletcher Carthon	Carolyn Maness
Mrs. Nell Clark	Rafael Mendez
Mrs. Nellie H. Cross	Mrs. W. H. Merriman
W. H. Curlin	Mamie Messina
Marjorie Dewitt	Paul Mitchell
Harry Feeney	Isbon S. Murphy
Mary Louise Ferlita	Martha Outlaw
George Fish	Mariano Paniello
John Flannery	Barbara Phillips
Alline Freeman	Lois Pinson
Stanley Freeman	Dorothy Pou
Arthur Friedberg	James M. Shaw
John S. Gale	Ray Sherouse
Rosemary Gavilan	William Stuart
Bradley Godbout	Bertiernary Tarpley
Manuel Gonzalez	Harry Thompson
Maude Etta Graham	William C. Vosburgh
John B. Gremer	Wofford Wait
Irene Haas	Ray West
Melba Whitner	

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## Speakers Announced for Commencement Weekend

Commencement activities for June, 1965, will feature two noted speakers, both business executives with large corporations.

Mr. J. R. MacDonald, President and Chairman of the Board of General Cable Corporation,



Mr. MacDonald

will be the guest speaker at commencement on Sunday, June 6th, in McKay Auditorium and Dr. Melvin A. Shader of IBM Corporation will speak at the Alumni Day luncheon on Saturday,



Dr. Shader

June 5th, in the Student Center.

One of the founders and past chairman of the National Electrical Manufacturers Association, Mr. MacDonald is a graduate of Trenton State Teachers College, Trenton, New Jersey. He is a former physical education teacher and coach in New Jersey public schools. He has been with General Cable Corp. since 1940 and was elected to his present offices in 1955.

Dr. Shader is currently Director of Scientific and Academic Programs, responsible for activities relating to the scientific and academic community outside the United States. He joined IBM in 1954 after instructing mathematics at Stanford University. During World War II he served as Lt. (JG) in the U. S. Navy and afterwards he worked for two years as research scientist with the National Advisory Committee for Aeronautics.

## Reminiscences of Tampa Junior College

by Dr. Miller K. Adams, class of '35

Thirty-three years ago the community had the foresight to establish a junior college. From a humble beginning the school grew and developed into what is now our own University of Tampa. For the first two years of its existence the junior college held classes at night at the Hillsborough High School which made it possible for working students to attend college. The enrollment, though small, cut a cross-section through the community with people from every walk of life represented. The student body was made up of clerks, bank tellers, factory workers, stenographers, policemen, housewives and a number of high school graduates who just couldn't afford to go off to an out-of-town college.

Since its first two years were night school, any attempt at extracurricular activities was difficult, but the school did put out a tennis, basketball and football team with local high school coaches donating their time to help the new school get started. Where coaches were not available the students elected coaches from their own ranks.

In addition to sports there were attempts to organize a debating team and a school orchestra got beyond the talking point. Spirit was never lacking as most of these students realized that they were the nucleus of better things to come. Of course they were right.

The University of Tampa is honoring this first class at this year's commencement exercise. The members of the first class will not all be present but those living in Tampa and vicinity have indicated that they will be on hand for the occasion honoring their pioneering effort.

This class reunion should be a festive occasion for many have not seen each other for thirty years.

**A Complete Schedule  
of  
Commencement  
Activities  
and  
Alumni Day Events  
is Featured  
on the  
Back Cover  
of this Issue**



# The American Way of Life

by Miss Alyce Spohn

The American Way of Life was graphically illustrated last November by an assassin's bullet, sudden death on a Dallas street, a horse-drawn caisson on Pennsylvania Avenue, a lone flame burning beside a grave in Arlington. Yes, a nation's grief at the death of a great man, a brave man, who believed in justice and equality for all, is a symbol of The American Way of Life. This man, who died in an attempt to insure peace and bring freedom to those now enslaved, certainly exemplified The American Way of Life.

The American Way of Life is seen through the courage of a young American stationed in Viet Nam. Though wounded and under heavy fire he withstood the Communist attack so that his Vietnamese companions, among them an important government official, might escape.

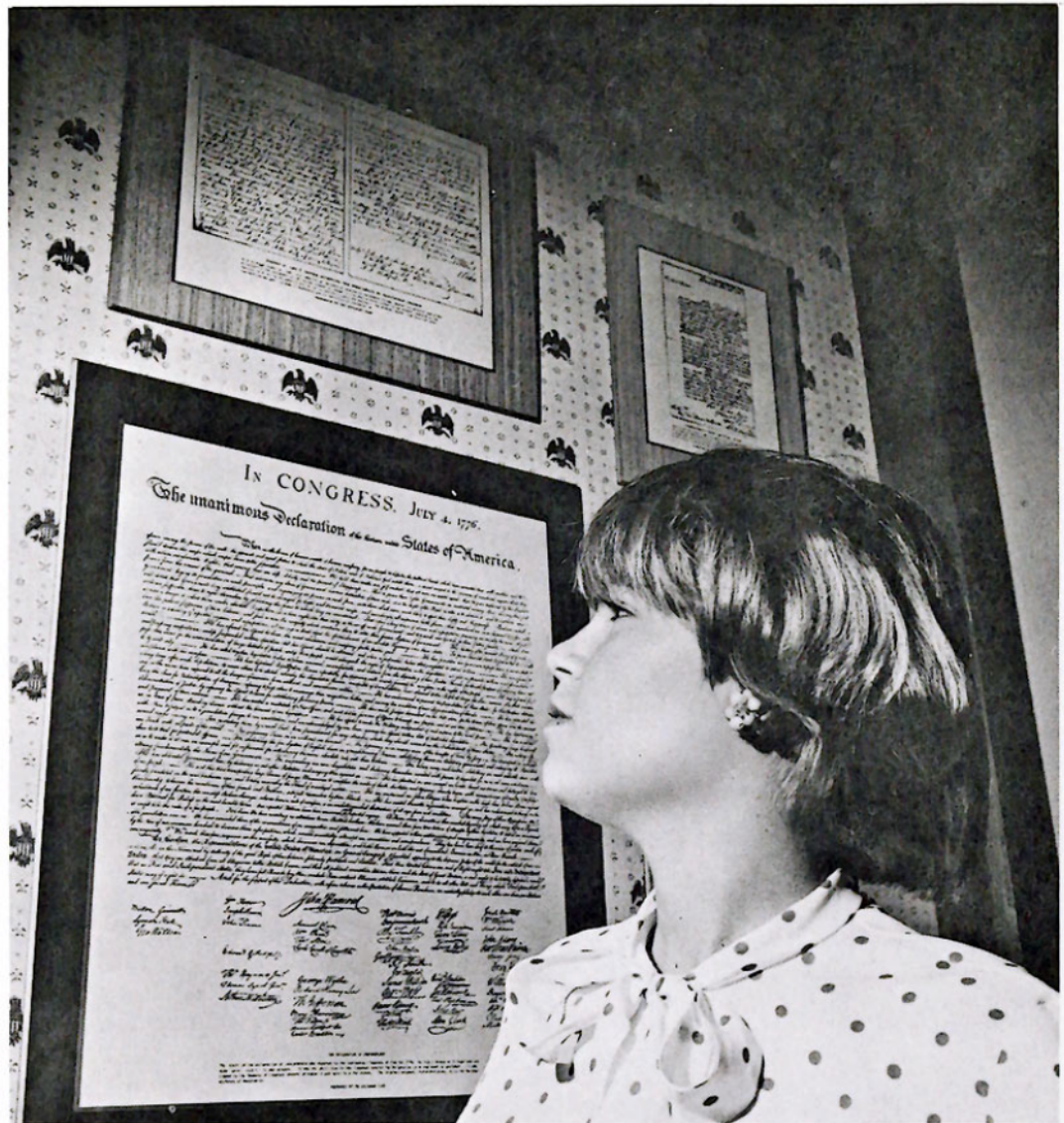
The American Way of Life is displayed by a Southern senator who dares to vote for a Civil Rights Bill that he believes to be just. He knows that this vote will cost him heavily "back home" and may prevent his reelection.

The American Way of Life is also witnessed on the battlefield—Saratoga, Gettysburg, San Juan Hill, Somme. It is the row of American graves around the globe . . . graves of those who died that our nation might live.

What is this American way of Life that gives men the courage to do what they know is right despite personal consequences? What is this way of life that makes men die willingly to preserve it? What is so intriguing about it that Americans have believed in it for nearly two centuries?

The American Way of Life is Yankee ingenuity—the ability to create. It is the light bulb, the airplane, the steamship. It is the tall skyscraper and the humming factory.

The American Way of Life is the system of economics called capitalism of free enterprise.



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*Editor's Notes:* Recipient of a George Washington Honor Medal and a \$100.00 cash award for this essay, Miss Spohn is completing her sophomore year at the University. Her first journalistic venture was editing a neighborhood newspaper at the age of nine in collaboration with other young aspiring journalists. This April she was the first winner of a scholarship award given by the Florida West Coast chapter of Sigma Delta Chi, professional journalistic fraternity. The English and history major is a resident of St. Petersburg and is advertising manager of the "Minaret", the University's student newspaper. Other activities at the U. of T. include membership in: Pi Delta Epsilon, journalistic honor fraternity; Delo Forensic Society; Pinellas County Young Democrats; Student Congress; International Relations Club and the Pre-Law Club.

The consumer determines what will be produced and how the goods and services will be divided. Competition, private property, and free markets are the basic institutions of this system.

The American Way of Life is free enterprise under representative government, a govern-

ment under which the state is the servant of the individual. It is this government which proved that democracy could work on a continental scale and provided an enduring example for liberties the world over.

The American Way of Life is people and ideas. Many Old World races and cultures have



## A Freedoms Foundation Award - Winning Essay

blended to produce the American people. The American race is a remarkable one—tough, resourceful, efficient, energetic, capable of accomplishing almost anything. For, in less than two centuries, this people cleared a wilderness and established an empire that stretches from Maine to Manila, Panama to the Pole. Today, this race stands at a crossroads of history, cherishing the past with its glorious achievements and looking toward the future with a sense of apprehension.

The American Way of Life is the ballot box, the country politician on a soapbox in the public square, the town meeting to exchange ideas as well as goods, gatherings to discuss political issues without wondering if the secret police are uninvited guests.

The American Way of Life is the picket before the White House gates, the strike of coal miners in West Virginia, the beat poet in Greenwich Village.

The American Way of Life is education without state censorship, the campus where students dissent from the instructor's opinion, the teacher who teaches to his own convictions.

The American Way of Life is the right to hold court and judge one another, to be free from arrest without cause, to be considered innocent until proven guilty.

The American Way of Life is the morning newspaper, the right to read real news instead of that manufactured by a state agency.

The American Way of Life is the steeple on the country church, the big city cathedral, the Jewish synagogue, and the Moslem mosque in Washington, D. C. It is the crowds that flock to church each Sunday, the faith of a small child, the fact that there are 258 denominations in America.

The American Way of Life is fields of cotton glistening white in the sun, sleek cattle grazing in the fields, waves of grain. It is rich soil, prosperous farmhouses, and barns bursting with surpluses.

The American Way of Life is Nature and her bountiful resources. It is tumbling waterfalls ready to be made into electricity, plentiful minerals, huge forests. It is snow on mountain peaks, streams filled with trout, game grazing on the plains.

The American Way of Life is the country fair, the city parade, the three-ring circus. It is the rodeo, the square dance, the taffy pull. It is the way in which Americans relax and have fun.

The American Way of Life is chewing gum, the soap opera, the Model-T Ford, jazz—all uniquely part of our American culture, all reflecting the nature of our civilization.

The American Way of Life is the Manhattan skyline and the plan of our towns and cities. For both are symbols of American individualism and ingenuity.

The American Way of Life is the rejoicing in an American triumph—such as John Glenn's space flight—and shared grief of a national disaster—such as the presidential assassination.

The American Way of Life is the sharing of a common heritage and the pride in the American ideals, the achievements of its citizens, and the shrines and symbols that represent that heritage.

Ideals which were expressed by American tongues and pens on great occasions to set forth the basic American doctrines: The Constitution of the United States, the burning speech of Patrick Henry in 1775, the wisdom of George Washington, Thomas Jefferson, and Benjamin Franklin, the re-dedication of our nation to its ideals by Abraham Lincoln at Gettysburg, and Franklin Roosevelt and John Kennedy's courageous words in times of national danger.

The American Way of Life is the feeling of patriotism one has at the passing of the flag or a visit to the Lincoln Memorial or to the grave of John Kennedy.

The American Way of Life is exemplified by the thousands of refugees who, fleeing tyranny, come to this country each year.

It is seen in their reaction to the first glimpse of the Statue of Liberty and the thrill and pride when they finally recite the citizenship oath.

The American Way of Life is the right to bear arms—to defend our homes and our land. Today, however, the average citizen is called upon to bear the weapons of self-sacrifice, courage, knowledge, and the truth to fight the enemies of Communist subterfuge, prejudice, and apathy rather than real guns and actual targets.

The American Way of Life is the right and the obligation to defend our country if called upon. For, as part of a new generation of Americans, it is our role to be the guardian and defender of freedom. This destiny is part of the American Way of Life and it is endeavor in which we must not fail, for if we do, we fail our heritage, our ancestors and the ideals which they proclaimed.

The American Way of Life is the Broadway play, the Little Theater groups, the art museums, the public libraries, where government censorship does not exist.

The American Way of Life is competition in sports—the Saturday afternoon football game, the betting at a horse race, the local chess tournament.

The American Way of Life is the comic book and the fairy tale, the childhood belief in Santa Claus and fairies, the right of a small child to remain a small child instead of a miniature adult controlled by the state.

The American Way of Life is the tourist industry—created by the fact that Americans may travel to any part of their land or abroad without government restriction.

Yes, the American Way of Life is destiny, daring examples, people and ideals, independence. Yet it is more than just a combination of these intangible qualities. Perhaps it is the privilege, in the midst of a cold war and national turmoil, to write an essay on "What is the American Way of Life."

END



## Spartan Wrestlers Gain Championship Stature

The University of Tampa's wrestling team was first organized in 1962. In their first year of competition, the SPARTANS won the Gold Coast AAU and the State Meet. Tampa has held the title of State Champions ever since.

The 1965 team won only one of their four regular season meets due to inexperience, but managed to retain their State title. The '65 SPARTAN matmen also finished second in the Vero Beach AAU Invitational and the University of Florida Invitational.

Chuck Heindel was successful in defending his title in the 114 pound class in the State Meet. Chuck also won the Southern Open in Atlanta.

Barry George repeated as State Champ in the 125½ pound class for the SPARTANS this year.

Other SPARTANS who took first place in the State Meet were: Anton Marx in the 170½ pound class; Pete Meoli in the 213½ pound class; and Len Altramura in the heavyweight division.

Altramura has served as student coach for the SPARTANS during the last two years. In 1964, he and Meoli won the Southeast Olympic Trials in their respective divisions and went to the World's Fair last summer where they were eliminated in the National Trials.

## The Forum (continued from page 8)

My husband and I should like to take this opportunity to congratulate the University of Tampa Alumni Association on the success of the open house held here in Jacksonville last Friday, (March 19th meeting of Florida Educational Association) . . . Let us know if we can be of service to your organization at any time.

**Eleanor Coleman** (nee Ebsary)  
Class of '59  
(Wife of  
Robert C. Coleman, '59)

. . . Rather than giving you the usual of how tough graduate school is and how insignificant one feels while climbing and

## THE Muezzin NOTES . . .

1939

**GARVIN D. BROWN**, a graduate of the American Institute for Foreign Trade in Arizona is presently working for La Fundacion para el Desarrollo de Venezuela.

1946

**HARRY GORDON PARKER**, teacher at Columbia High School in Lake City, Florida, has been chosen the STAR teacher by STAR student, Nelson B. Blocker, Jr. Winning students are determined by their rankings scores on the College Board Scholastic Aptitude Test and they, in turn, select the teacher who made the greatest contribution to their scholastic achievement. Mr. Parker obtained his Master's degree from Auburn University and is a mathematics and physics instructor. He is also certified in Administration and Supervision and has been on the Columbia faculty for fourteen years.

1947

**JOHN S. CANNON** has been promoted to the rank of major in the United States Air Force. He is currently assigned to Tachikawa Air Base, Japan where he is an operations officer in a unit supporting the Pacific Air Force mission of providing air power for defense of the U.S. and its allies in the Pacific area.

1948

**THE REV. WILLIAM J. WYLIE**, former pastor of the Craig Avenue ARP Church in Charlotte, North Carolina, and his wife are serving as missionaries in Brazil. Their activities are being supported by the Venice-Nokomis Presbyterian Church of Venice, Florida. Their two children, Jill and Jim, are now six and eight years old, respectively.

1950

**ERNEST F. ROSS, JR.**, principal of Mitchell Elementary School in Tampa, has been elected a director of the Florida Education Association. Mr. Ross has been active on local, state and national levels and is currently on the boards of the Hillsborough County Education Association and the Association for Childhood Education. He graduated magna cum laude from the U. of T. and received a Masters degree in education from the University of Florida.

**JAMES L. GHIOTTO** is manager of trade development and agriculture for the Greater Tampa Chamber of Commerce. The former counselor at Tampa's Plant High School, was listed in "Who's Who" during his undergraduate years at the U. of T. and later completed his Master of Science at the University of Florida, followed by further graduate work in education at George Peabody College for Teachers in Nashville, Tennessee.

1951

**PERRY O. KEENE, JR.**, past president and currently board member of the University of Tampa Alumni Association, was recently named Vice-President for manufacturing by the Tropical Garment Manufacturing Company.

**ANTHONY CARDOSO** had a one-man show of his award-winning work held at the Beaux, Flor-Gallery in Pinellas Park, Florida. For the past thirteen years, he has headed the art department at Tampa's Jefferson High School where he also teaches



adult evening classes. The showing featured modern semi-abstract paintings created by the collage method from scrap paper and plastic sealed cloth as well as some surrealistic oils and satirical ink drawings. Mr. Cardoso is also a graduate of the Art Institute of Minneapolis, Minneosta. His paintings have appeared in most of the important U. S. and Florida shows.

#### 1953

**GEORGE M. ANDERSON** has assumed his new duties as hospital supervisor for the Southern region of the A. H. Robins Company of Richmond, Virginia. Mr. Anderson has been with the company since 1959.

#### 1954

**JAMES Q. ROOP** is the author of a popular children's book entitled, "Billy Brahman". Published by Greenwich Book Publishers, the story centers around a baby calf, born and raised in Central Florida, and his adventures while growing up. Following his graduation from the U. of T., Mr. Roop taught English at Wildwood High School while studying toward his Masters degree, which he received from the University of Florida in 1959.

**FRANK L. MATINOLI** is currently working for radio station WERT in Florida. He is a graduate of the American Institute for Foreign Trade in Arizona.

**JAMES McALISTER** is president of Eta Field Chapter of Epsilon Pi Tau, national honorary fraternity for industrial arts and industrial vocational education. He is also president of the Tampa district of the Florida Industrial Arts Association. Mr. McAlister teaches full time at Jefferson High School in Tampa and part time at the U. of T.

#### 1956

**THOMAS D. GINEX**, Captain, U. S. Air Base, has received the Bronze Star for meritorious service in Viet Nam. Captain Ginex has been reassigned for a three-year tour of duty as assistant professor of military science at Ohio State University.

#### 1957

**PETE LABRUZZO**, teacher at Pierce Junior High School in Tampa,

is president of the Hillsborough County Industrial Arts Council and district vice-president of the Florida Industrial Arts Association.

#### 1958

**CHARLES DOWNIE** is Florida State chairman of the Junior Chamber of Commerce committee to select the outstanding young educator to represent the state in national competition.

**ELMER A. NICHOLS, JR.** Captain in the United States Air Force, was recently assigned to Hickam Air Force Base, Hawaii, following a tour of duty in Japan. Captain Nichols is a navigator and is attached to the Pacific Air Forces.

**W. J. BUZBEE** has been promoted from assistant cashier to assistant vice-president of the First National Bank in Tampa. He is head of the Data Processing department and has been with the firm since 1957.

#### 1959

**STEVE GERAKIOS**, Clearwater High School teacher, was the only instructor recognized for excellence among 50 states surveyed for the 1964-65 edition of "State-by-State Survey of Education About Communism in Secondary Schools". Mr. Gerakios also instructs adult education classes and has attended the University of Georgia's workshop on "Newspapers in the Classroom" on a scholarship program provided by the St. Petersburg Times.

#### 1960

**JETTIE E. PADGETT**, First Lieutenant in the U.S. Air Force, is a member of the outstanding B-52 Stratofortress crew in the Strategic Air Command unit at Amarillo Air Force Base, Texas. The crew was cited for commendable performance during operational and training missions.

**LUIS ABUDO** is currently the manager of the Banco Popular de Puerto Rico in Mayaguez, Puerto Rico. He graduated from the U. of T. with a Bachelor of Arts degree in business administration.

#### 1962

**SUE NOTHOUSE** and **DAVID A. VOYE** were recently married at

St. Mary's Episcopal Church in Tampa. Mrs. Voyer has been teaching for the past three years and the couple is now residing in Pinellas Park, Florida, where Mr. Voyer is an assistant Manager for the F. W. Woolworth Company.

**ARMAND H. FLOWERS**, First Lieutenant USAF, has earned combat ready status on a B-52 crew with Strategic Air Command at Seymour Johnson Air Force Base in North Carolina. Lt. Flowers is a navigator and met intensive study, ground training and operational proficiency requirements to attain the recognition.

**DAVID W. CRIPPEN** was the first recipient of a Master of Arts degree from the University of South Florida. He received the MA in elementary education in April, less than one year after beginning his graduate work. During his studies he was awarded a graduate assistantship and served as an advisor in the College of Basic Studies.

#### 1963

**TED MELCHING** is now assistant cashier of the Exchange National Bank in Tampa. He has been with the company for the past eight years having started work while still in high school. Mr. Melching and his wife, Glenda, have two children and reside at 9700 Willow Drive.

**SM/SGT. ELLIS S. ROBERTS** (MacDill Center) was recently retired from the U. S. Air Force after 22 years of military service. During the ceremony he was presented a commendation medal for distinguished service. Sgt. Roberts served 14 years in Tampa; eight years in the recruiting office and six years at MacDill Air Force Base.

**DICK O'BRIEN**, former three-year letterman in football at the U. of T., is now the new offense coach for the King High School Lions in Tampa. Previously, Mr. O'Brien taught science and was backfield and track coach at Robinson High School. His new duties will also include coaching the King golf team.

(Continued next page)



1964

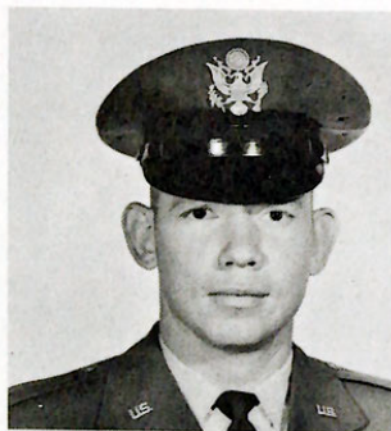
**THOMAS W. MOORE** has been commissioned a Second Lieutenant in the U.S. Air Force upon graduation from Officer Training School at Lackland Air Force Base, Texas. Lt. Moore has been assigned to an Air



Training Command unit at Lackland for training as an air police officer.

**WAYNE IVAN MORLEY** is now enrolled and taking postgraduate work as a member of the American Institute for Foreign Trade in Phoenix, Arizona. His major subject while at the U. of T. was history.

**DENNIS L. DURDEN** has been commissioned a Second Lieutenant in the U.S. Air Force upon graduation from Officer Training



School at Lackland Air Force Base, Texas. Lt. Durden, selected for OTS through competitive examination, is being assigned to Moody AFB, Georgia, for pilot training.

**GERALDINE ANNE CHARETTE** was married this past winter to Richard W. Schloesser, a graduate of Florida Southern College. The couple resides in Chicago.

**JOHN E. HORST** has been commissioned an ensign in the U.S.

Navy and is now attending a supply course school in Athens, Georgia. He expects to be assigned to sea duty later this year.

**WILLIAM F. ROBINSON** and **Yvonne Margaret Booth** were married recently at Most Holy Redeemer Church in Tampa. Mr. Robinson is employed by Northside Bank.

1965

**JOSEPH TOMAINO** and his wife, the former **JO ANN RANDAZZO** ('63), were recently accepted into the Peace Corps for assign-

ment as teachers in Chile. Their activities will center primarily around agriculture and community development. Mr. Tomaino majored in history while at the U. of T. and Mrs. Tomaino has been teaching in the Tampa elementary schools since her graduation.

**KEVIN HUGHES**, psychology major and member of Psi Chi, has been awarded \$1500.00 scholarship for advanced study at Rice University in Houston, Texas. He will work toward a Ph.D. in ethno-psychology.

### *Nearsightedness* (continued from page 7)

also not significant. There were no differences between the correlations obtained on mother-offspring pairs and father-offspring pairs. The results support those obtained on human siblings and suggest that heredity plays a relatively small role in the development of refractive characteristics.

One could submit this question. "What variables contribute to the development of myopia?" to an experimental test. Two types of experimental approaches may be used. We could take individuals with the same heredity, such as identical twins, and place them in different types of visual environment in order to determine the effects of these different visual environments on the development of myopia. On the other hand, we could take individuals of different hereditary characteristics and place them in the same types of visual environments. If the environment is a major determiner of refractive characteristics, we could expect these individuals in the same type of visual environment to develop the same type of visual characteristics. But, if on the other hand, heredity is the major contributor since these individuals have different hereditary backgrounds, they should turn up with different types of visual characteristics, even though the environment is common for all individuals involved. Unfortunately, neither of these approaches can be used effectively on humans. The number of identical twins available is small, and the submission of identical twins to different types of visual environments is virtually impossible. On the other hand, the problems involved in attempting to submit human beings to a constant visual environment are equally impossible to achieve.

Since it is impossible to experiment upon human beings, a search was made for a possible animal substitute. The primates are the only animals which have eye placements which permit accommodation and convergence like that found in the human. In addition, the primates are the only animals which have eyes anatomically similar to the human eye. While the chimpanzee is the closest of all primates to the human, in terms of eye characteristics, they are relatively difficult to obtain and expensive to maintain. For these reasons, monkeys were selected instead of chimpanzees and a series of studies was begun upon monkeys.

Since identical twins are no more common, if as common, among monkeys than among humans, the experimental design involved placing animals of different hereditary backgrounds in similar types of visual environments. These visual environments should be as similar as possible to those obtained in the human situation, if we are to make generalizations from the monkey to the human. Inasmuch as the Pullman study indicated that only reading, or near-work activities, seemed to be related to the development of myopic refractive characteristics, it seemed that a situation similar to human reading should be set up for the monkeys. Since monkeys cannot read, a nearwork type of situation was developed, which would



induce a condition of accommodation and convergence in the monkey similar to that found in the human, when the human is reading or doing similar types of nearwork. In order to make the monkey situation as similar as possible to the human situation, it was desired that the monkeys should be maintained in a sitting position. While the monkey ordinarily walks on all fours, it usually sits in an upright position, similar to that shown by the human being. A restraining chair was developed, which permitted keeping the monkey in an upright sitting position without effecting the health or welfare of the monkey in any way. The monkey, in this chair, was then enclosed within a hood which restricted the visual space of the monkey to a maximum distance of 20 inches from the eye. This hood was made of translucent, but not transparent, architect's cloth, and outside lights provided approximately four foot candles of illumination on the surface of the lower place of the chair. In this situation, if the monkey looked at anything at all, it must accommodate and converge in order to be able to see the object clearly. Therefore, this situation approximates, quite closely, the usual situation found when an individual spends a good deal of time in reading or similar nearwork activities.

When adult monkeys were kept in the chairs, under the hoods, for a period of up to one year, total elapsed time, changes in the refractive characteristics toward myopia were found. The usual experimental setup provided twelve hours of light and twelve hours of darkness. The animal was removed from the chair for two days each month, to permit cleaning of the chairs and allow the animal some additional exercise. The refractive characteristics of the animals were determined by retinoscopy under a cycloplegic. The animals were usually anesthetized during the process of refraction. With this approach it was possible to determine, quite accurately, the refractive characteristics of the eye without the cooperation of the monkey being required. The determination of the refractive characteristics under anesthesia were compared with the refractive characteristics obtained without anesthesia. No differences were found.

Under the hooded conditions, adult animals tended to move toward myopia within the first month under the hood and continued to increase in myopia until the end of approximately the fifth or sixth month. After this, the changes ceased and the animals continued with no further changes for the remaining six months under the hood. With very young monkeys, up to eighteen months of age, the animals did not show any changes toward myopia for a period of approximately four and one-half to five months under the hoods, but then they began to show changes and moved much more rapidly toward myopia than had the adult animals. The amount of myopia developed in the same period of time by the younger animals was much greater than that developed by the adult animals. Thus, the young animals developed an average of one and three-quarters diopters of myopia against three-quarter-

ers diopters of myopia for the adults. A third group of animals were placed in the chairs, under the hoods; these animals were intermediate in age between the young and the adult animals. They demonstrated characteristics which were also intermediate between the young and adult animals. Thus, they showed no changes toward myopia for approximately two and one-half to three months and once they started they changed more rapidly toward myopia than the adult animals but less rapidly than the young animals.

Inasmuch as the young animals developed within a period of approximately six months, an amount of myopia equivalent to that developed in the human in about two and one-half to three years, it is apparent that the visual space situation to which the animals were exposed was effective in developing myopia. Animals kept in the chair, without the hood, as control animals, did not develop myopia during a similar period of time. The amount of myopia developed by all of these animals showed no regression over time, after the animals were removed from the chairs. In most cases there was some continuation into higher degrees of myopia. In all of the groups placed in the restricted visual space situation, some animals, approximately one-quarter to one-third, did not show changes toward myopia. At the present time the lack of change in these animals is not explainable. We hope to be able to investigate this aspect shortly.

Since a number of investigators have suggested that the lighting conditions under which a child reads may be a variable in the development of myopia, we attempted to investigate this hypothesis, by keeping three groups of animals in chairs, under hoods, with different levels of lighting within the hood. One group had approximately 25 foot candles of light under the hood, a second group four foot candles, and a third group .02 foot candles. The animals under the highest and lowest levels of illumination developed far less myopia in the same length of time than the animals kept in the situation involving four foot candles. In the usual home lighting situation, the light level more nearly approximates four foot candles than 25 foot candles. The results of this study suggest that if proper lighting were provided, changes toward myopia would be reduced in a nearwork situation.

If an investigator wishes to make generalizations from an animal population to the human population, he must support the validity of these generalizations. An attempt to do this was made by comparing a population of 1,000 rhesus and 100 pigtailed monkeys with populations of human children ranging between six and eighteen years of age. One of these populations of human children was the Pullman group, and the other was a group of 1,829 children studied in Washington, D.C., between 1924 and 1927. The Washington group showed much less myopia than the Pullman group. Consequently, the two distributions were not identical in shape nor were the means and medians the same. Distribution of monkey eyes fell between the Washington, D.C. group

(Continued on next page)



the Washington, D.C. group than to the Pullman group. Since the monkey population contained 300 animals which were freshly captured and out of the jungle for less than six weeks, as well as 800 animals which had been in laboratory cages for two years or more, it was possible to separate the monkeys into these two subgroups. When this was done the distribution of refractive characteristics in the wild animals much more closely approximated the Washington, D.C. group than did the distribution of refractive characteristics in the total group of monkeys. On the other hand, the laboratory monkeys much more closely approximated the Pullman group than did the wild monkeys. These results suggested that laboratory cage living has an effect on the refractive characteristics of the monkey eye.

This hypothesis was investigated by matching 300 laboratory animals against the 300 wild animals, for age and sex. When these two groups were compared, it was found that the laboratory animals were significantly more myopic than the wild animals. Since the laboratory animals had been wild animals approximately two or three years earlier, the only conclusion which could be drawn was that the laboratory living situation had an effect upon the refractive characteristics of the laboratory animals. It was also possible to match two groups of 50 monkeys each, which had been purchased by the same laboratory at the same time, and in which one group had been kept in outdoor runs while the other group had been put in laboratory cages. These animals had been in the laboratory for approximately two years. The laboratory caged animals were significantly more myopic than the outdoor run animals.

The similarity of the monkey and human population are also supported by studies of primitive humans and Europeans. Holm studied the refractive characteristics of a large group of primitive negroes in French West Africa, and compared the findings obtained with those obtained upon Scandinavians. He found a very narrow range of refractive errors and very few myopes among the negroes. On the other hand, he found a very wide range of refractive characteristics and a considerable number of myopes among the Scandinavians. When the wild monkeys are compared with the laboratory monkeys, the range of refractive errors among the wild monkeys is only approximately two diopters, whereas the range among the laboratory monkeys is 27 diopters. Further, the number of myopes among the wild animals is approximately three per cent, whereas among the laboratory animals it is closer to thirty per cent. The similarity of these refractive characteristics between monkeys and humans, together with the basic anatomical and physiological similarity of the two visual systems, suggests that it is possible to generalize quite readily from the monkey to the human, or vice versa. The latter direction of generalization is of interest since it is a relatively difficult task to determine the visual acuity of a monkey,

whereas the refractive characteristics of the monkey may be determined quite easily. If one generalizes from the human to the monkey, it is possible to determine the relationship between refractive characteristics and visual acuity in the human and estimate, on this basis, the visual acuity of the monkey once the refractive characteristics of the monkey have been determined.

Since the eye undergoes a number of changes in the nearwork situation as compared with the far vision situation, it is necessary to determine which changes in the nearwork situation are related to the development of myopia. Thus in the nearwork situation there is increased pressure on the globe introduced by the extraocular muscles in the process of convergence; there is possible stretch upon the globe as a result of the action of the extraocular muscles; and there is an increase in accommodation, in order to be able to see clearly at near point. Any or all of these may be related to the development of myopia. An attempt was made to determine the influence of accommodation on the development of myopia by placing the monkeys in the chairs under the hoods. After the monkeys had demonstrated an average development of approximately one diopter of myopia, under these conditions, the animals were put under a three drop per day schedule of atropine sulfate. Atropine sulfate effectively prevents accommodation from occurring. Once this schedule was introduced, the animals progressed no further into myopia over a period of a month and a half. The experiment had to be discontinued at this time. But, upon checking these animals a year later, no further amount of myopia had been developed even though they were not given atropine beyond the cessation of the experiment. Convergence continued under these conditions after accommodation was effectively removed. After the removal of accommodation no further changes toward myopia occurred; it appears that accommodation may be the important variable in the development of myopia. These results are supported by studies on humans which demonstrate that if the human is kept under a cycloplegic, such as atropine or scopolamine, the progression of myopia does not occur.

This series of studies, under the support of the National Institute of Neurological Diseases and Blindness, is continuing and is presently investigating the development of the components of refraction in four groups of new-born monkeys. One group of monkeys is being raised in an outdoor pen situation, one group in a laboratory cage situation, one in a restricted visual space situation, and one under a special condition in which no accommodation or convergence occurs. The refractive components of the eye are being measured through the use of photographic and ultra-sound techniques. With this approach we hope to be able to determine what happens to the one-quarter or one-third of the animals which do not show the changes toward myopia in the restricted visual space situation.

END



# Annual Alumni - Varsity Competition Highlights Spring Football Practice

Some thirty alumni of the University of Tampa returned to campus April 8th and participated in the spring football game against the 1965 Spartans. Youth proved too much for the alumni as the Spartans won 50-13. The game was the climax to the spring practice and they put on a good offensive show for the 1,000 fans. Head Coach Sam Bailey and his staff were pleased with the showing and are looking forward to a successful season next year.

The series between Alumni and Spartans now stands at 4 wins for the "Hasbeens" and 2 wins for the "Willbes". The battlewise grads started the game controlling the ball during the first half but ran out of gas in the second. The Spartans scored the first time they got the ball but failed on the conversion. The Alumni came back to score and convert to take the lead 7-6. The grads' moment of glory was short lived as the Spartans came back to take the lead and from then on retain control throughout.

## 1965 ALUMNI FOOTBALL SQUAD — SPRING GAME, APRIL 8

NAME	NO.	HEIGHT	WEIGHT	YEAR GRADUATED
BILL TURNER	10	6	175	TAMPA 60
DARYL BORDERS	12	5-10	175	HILLSBOROUGH 63
BILL YOUNG	14	5-10	175	MIAMI SR 57
TOM DOAN	20	5-9	160	TAMPA 65
VADEN BESSANT	21	5-11	165	TAMPA 65
LARRY MAIER	22	6	180	TAMPA 65
JIM CALDWELL	24	5-10	180	TAMPA 61 PLAYER
TOM SPACK	30	5-10	215	TAMPA 56
BILL BRINKLEY	32	6-1	195	F.S.U. 64
BILL BOYD	44	5-9	170	TAMPA 64
TONY YELOVICH	52	6-1	215	TAMPA 64
PAUL GORE	51	6-2	220	TAMPA 63
GERALD ODOM	61	5-10	190	FLORIDA 64
RED COLEMAN	65	6-1	215	PLANT CITY 57
RONNIE BRETT	66	5-10	210	TAMPA 65
GENE ROWELL	67	5-10	215	TAMPA 64
JOE ARASIM	68	5-10	220	TAMPA 63
ED OWEN	70	6	215	TAMPA 65
DICK LEIS	50	6-2	220	TAMPA 59
DAVE FULLER	72	6-6	330	TAMPA 62 PLAYER
BOB BANKS	73	6-2	235	TAMPA 63
BILL MOONEYHAM	74	6-2	240	BARTOW 54
PETE MEOLI	75	6-1	225	TAMPA 65
RICK GILLIS	76	6-3	235	TAMPA 65
MAX DAVIS	77	6	220	TAMPA 63
JOHN FELECONI	79	6-1	195	TAMPA 61
VAUGHN BELL	81	6-1	180	MADISON HS 57
BILL DAVENPORT	83	6-2	220	TAMPA 53
JIM GALMIN	86	6-4	230	TAMPA 65
DICK DECKARD	87	5-10	180	TAMPA 61 PLAYER
DAN RIVEIRO	88	6	200	TAMPA 65
GIL RODRIGUEZ	71	6-1	230	TAMPA 60
SAM RODRIGUEZ		6	215	TAMPA 63
BYRD WHIGMAN		5-9	165	AUBURN 56

Alumni Coaches: Nash Higgins and Bob Lovely  
Assistants: Paul Gore and Bill Turner

# Spring Sports Re-Cap

by Mike Moore

Baseball, Crew and Tennis are going full force this spring at the University of Tampa. At this writing, the Baseball team has a record of 5-3 and appears to be on its way to a great season. The Crew team has been hampered by inexperience this year and has only managed one victory in its first four races. With two new shells and a number of freshmen in the varsity boat gaining experience, the SPARTANS should be tough after this "rebuilding" season. Judy Alveraze Campbell has been coaching and playing for the tennis team. This is the first year Tampa has participated in intercollegiate tennis and the sports is still in the "building stage". The men's team has won one of its first four meets. The women's team has been a little more successful and for a good reason. Miss Campbell and Mary Arfars, two of the top players in the state, entered the State Intercollegiate Match and Judy came home with the singles title and then teamed with Mary to win the doubles championship.

A season football ticket drive will soon take place in Tampa and athletic director Sam Bailey announced prices have been lowered for the 1965 season. Fans will be able to see 6 games at Phillips Field next fall for \$15 in the three center sections and \$10 for the other reserved seats. All alumni are encouraged to purchase season tickets and back the Spartans next fall.

## 1965 SCHEDULE

Sept. 18	McNeese T
Sept. 25	Buffalo T
Oct. 2	Mississippi State T
Oct. 9	North Texas State H
Oct. 16	S.W. LA. H
Oct. 23	Delta State H
Oct. 30	Jacksonville State H
Nov. 6	Open
Nov. 13	Maine H
Nov. 20	Northern Michigan H

## TICKETS PRICES (6 Home Games)

Season Tickets: \$15.00 & \$10.00  
Single Game: \$3.00; \$2.00  
(General Admission \$1.00)



# 1965 Commencement Calendar

## SATURDAY, JUNE 5th

### Alumni Day Activities

- 9:00 a.m. Breakfast — Student Center
- 10:00 a.m. Registration — Lobby Student Center
- 11:00 a.m. Tour of the University
- 12:30 p.m. Luncheon — Student Center — Honoring original student body of Tampa Junior College. Guest speaker, Dr. Melvin A. Shader of IBM. Topic: "The Computer in a Changing Society."
- 2:00 p.m. Alumni meeting — Student Center. Discussion of alumni plans and programs
- 3:30 p.m. President's Reception — International Room in Student Center
- 8:00 p.m. Concert — Falk Theater  
University Woodwind Ensemble and Spartan Dance Band featuring Miss Fran Foran, student vocalist.

## SUNDAY, JUNE 6th

- 11:00 a.m. Baccalaureate Service — McKay Auditorium
- 12:30 p.m. Luncheon honoring graduating seniors — Student Center
- 3:00 p.m. Commencement — McKay Auditorium  
Speaker, Mr. J. R. MacDonald of General Cable Corporation.

Immediately following commencement—President's reception honoring the graduates, their families & friends—Student Center.

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