


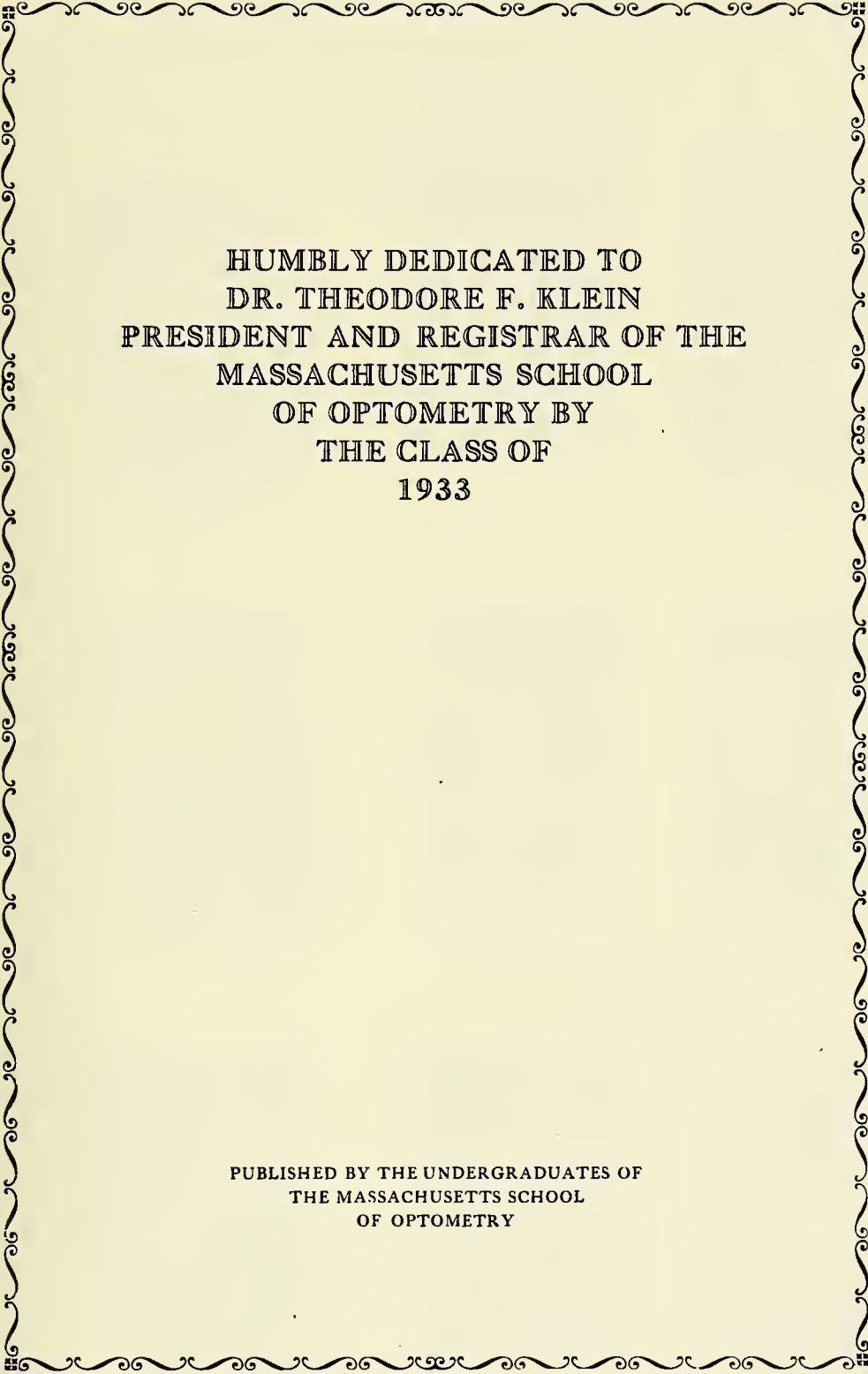
**THE SCOPE**  
**Graduation Number**  
**JUNE 1933**







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HUMBLY DEDICATED TO  
DR. THEODORE F. KLEIN  
PRESIDENT AND REGISTRAR OF THE  
MASSACHUSETTS SCHOOL  
OF OPTOMETRY BY  
THE CLASS OF  
1933

PUBLISHED BY THE UNDERGRADUATES OF  
THE MASSACHUSETTS SCHOOL  
OF OPTOMETRY



## Faculty



Foster Namias, O. D.  
*Physiological and  
Practical Optics*



David Y. Cahill, M. B., M. D.  
*Embryology and  
Physiology*



Dr. Albert E. Sloane  
*Pathology and Hygiene*



Guy C. Blodgett, B. S.  
*Theoretic Optics*



August A. Klein, M. D.  
*Dean*



Dr. Theodore F. Klein  
*Registrar  
Theoretic and Practical  
Optometry*



Miss Alyce McCabe  
*Secretary to Registrar*



Dr. Ralph Green  
*Perimetry and Theoretic  
Optometry*



Dr. Wilhelmina Svendsen  
*Anatomy*



## Cortico-Nuclear Pathways for Eye Movements

PAUL S. CLINE

The study of the ocular innervational pathways have always held the interest of the investigator of neuro-anatomy, not only on account of the intimate relationship existing between the organ of sight and brain through its embryological, anatomical and functional connections, but also because of the fact, that in disorders of the nervous system, ocular symptoms, principally as disturbances of movement or coordination, are in the great many of the cases, present.

Since the memorable experiments of Vogt, anatomists have written volumes on the localization of function of the brain cortex. A motor area in the precentral gyrus, a somesthetic region in the parietal lobe, a visual center in the calcarine region, etc., have revealed themselves to the indomitable perseverance of men of the calibre of Schaefer and Luciani, Sherrington and Horsley, Bernheimer and Dejerine, Tilney and Riley and so forth.

It must be remembered that a cortical center for ocular movements, best thought of as a physiological rather than an anatomical entity, serves for the purpose of initiating the efferent or motor impulse to the nuclei controlling the innervation of a set of conjugate muscles associated obviously in a particular conjugate movement, and does not preside over a single nerve or a single muscle. To the present day, three sites have been uncovered in the cerebral cortex, which are engaged in ocular gyrations. One exists in the frontal lobe, another in the occipital lobe and finally one is located in the temporal lobes of the cerebrum.

The oculogyrotory area in the frontal lobe occupies a small area in the second and third frontal convolutions of the both hemispheres. This region is purely for the execution of eye-movements dependent upon the volition of the individual. Stimulation of this area results in a conjugate movement of the eyes and the head to the opposite side, vertical ocular movements, convergence and dilatation of the pupil. The frontal centers in each lobe are therefore antagonistic.

The cortical center in the occipital lobe covers quite an area of cortex. Stimulation of the angular gyrus of one side results in a conjugate movement to the opposite side, convergence, pupillary dilatation and vertical movements. Schaefer, Horsley, Bernheimer and others have shown that stimulation of the anterior part of the angular gyrus, resulted in binocular elevation, while a similar stimulation in the posterior part of this convolution resulted in depression of the both eyes. The above results cannot only be produced by stimulating the angular gyrus, but also by exciting a large area in the lateral surface of the occipital lobe, and even its medial surface. The occipital center is purely a reflex center, and serves for the completion of the attention reflex arc, having for its afferent links, the optic impulses traveling to the calcarine area.

The center in the temporal lobe is situated in the posterior part of the superior temporal gyrus (Foerster), while even some advocate a center located in the parietal lobe. This temporal region serves for the execution of ocular rotations dependent upon acoustic stimuli, and is thought to be purely a reflex center.

If a center exists in the parietal lobe it probably serves for ocular conjugate innervation in response to a somesthetic or perhaps equilibratory stimulus.

Stimulation of the temporal center results in the same movements as is obtained by stimulating the occipital centers.





### FUNCTIONAL DIFFERENCES

In the course of investigation the following results were obtained:

- a. a lesser stimulation of the frontal center was required to effect a certain conjugate movement than if the corresponding occipital or temporal centers were stimulated.
- b. a similar intensity of stimulus resulted in quicker eye movements when the frontal area was stimulated, than if either of the other two was stimulated.
- c. destruction of the frontal centers resulted in an abolition of the volitional pathways for conjugate eye movements, but fixation of gaze was possible due to the mediation of the efferent impulses originating in the occipital lobe.
- d. fixation depends upon the occipital lobe, while direction depends upon the frontal lobe.
- e. destruction of both calcarine areas, abolished convergence.

### CORTICO-NUCLEAR PATHWAYS

(Suprasegmental Pathways) (Upper Motor Neuron)

The nuclei of the eye muscles are connected with the frontal cortex not by the regular pyramidal system, but by two systems of fibers of what Dejerine terms the aberrant pyramidal system, known as the subthalamic and peduncular components of the aberrant pyramidal tracts.

The axones of the cortical cells pass downward through the corona radiata in the pyramidal system, pass through the genu of the internal capsule into the mesencephalon or mid-brain. Here the fibers destined for the oculomotor and trochlear nuclei detach themselves from the remainder of the aberrant pyramidal system and pass to the nuclei of the opposite side, while the fibers destined for the abducens nucleus pass down further in the stem to the upper pontine region and pass to the opposite abducens nucleus.

The subthalamic group is principally concerned with vertical movements and is associated with the muscles of the upper eyelid and the frontalis. It leaves the aberrant pyramidal system in the subthalamus, and passes backward to reach the superior colliculus. Here the fibers are redistributed and sent to the nuclei innervating the muscles concerned in vertical movements.

The peduncular group is concerned with lateral movements of the eyes, and leaves the aberrant pyramidal system in the cerebral peduncle as two sets of fibers, known as the *pes lemnisci profundus*, and the *pes lemniscis superficialis*.

The *pes lemnisci profundus* is situated in the basis mesencephali dorso-medial to the occipito-parieto-temporo-ponto-cerebellar tract, and is the deep layer of the aberrant pyramidal system which blends with the median lemniscus or fillet.

The *pes lemnisci superficialis* is situated in the basis of the mid-brain dorsal to the fronto-ponto-cerebellar tract.

These two bundles descend for a short distance in the medial fillet and proceed dorsally to the tegmentum to the center for lateral movements which is believed to be the nucleus of Fused, which is part of the triangular nucleus. From here fibers are relayed to the nuclei concerned with lateral movements.

Convergence movements have been produced by stimulating an area in the frontal lobe, and also by exciting a part of the lateral convexity of the occipital lobe.

The aberrant pyramidal system also sends branches to the spinal accessory nerve as well as to the upper segments of the spinal cord for the associated movements of the head and eyes.



## THE SCOPE

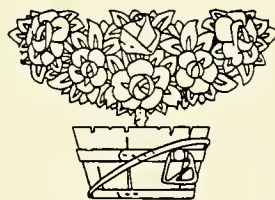
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Relatively little is known about the oculogyratory control in the occipital lobe, and practically nothing about the center in the temporal lobe. The cortico-nuclear tracts from the occipital lobe pass through the corona radiata over the occipital radiation to the white substance of the cerebrum, and thence to the oculogyric center by way of the posterior longitudinal bundle of the tecto-bulbar tracts, which innervate the abducens nucleus, which in turn innervates the opposite oculomotor nucleus. Bernheimer in a famous experiment has shown that the fibers of the angular gyrus decussate ventral to the cerebral aqueduct, since total extirpation of the superior colliculi did not interfere with ocular movements. These fibers after decussation pass to the opposite abducens nucleus, which in turn by means of the posterior longitudinal bundle and communicating fibers innervates the opposite oculomotorius.

Fibers from the temporal cortex are believed to pass down with the temporo-pontine group which pass through the corona radiata, thence to the superior colliculus, and onward to the oculogyratory nuclei. Some however, are of the opinion that the fibers from the temporal lobe pass to the pons communicating with the abducens nucleus of the opposite side, which sends fibers by way of the posterior longitudinal bundle to the opposite oculomotor nuclei.

### REFERENCES

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Archives of Neurology and Psychiatry, 1930  
Archives of Ophthalmology, Nov. and Dec. 1930  
Archives of Ophthalmology, 1932  
Ranson "Anatomy of the Nervous System"  
Zoethout "Physiological Optics"









THE SCOPE STAFF

*Back Row: L. to R. D. Gribbin, E. Haynes, S. Litwak, C. Rowan, J. O'Brien.  
First Row: L. to R. R. Hyland, P. Cline, H. Simons.*

## The Scope Staff

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Joke Editor, HYMAN GOLDBERG

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## History of the Senior Class

By D. L. SHAW

To-night we have reached that goal toward which we have been striving for the past two years and we pause, on this occasion, to reflect upon the memories we have in common; the common aims and desires which have made our school life a most interesting and enjoyable enterprise.

In Sept. 1931, forty-three members enrolled at the Mass. School of Optometry to begin their optometric studies and to acquire that knowledge and background so essential to a successful optometric career. Both the nature and number of our studies gave us early assurance of an arduous but interesting task.

Early in the first semester our class was formally organized and the following were elected to office: Pres.—Arthur Minehan of Dorchester, Mass.; Vice Pres.—John Bedell of Salem, Mass.; Sec.—D. L. Shaw of Bangor, Me.; Treas.—Raymond Perkinson of Lynn, Mass.

Early in October the Pi Omicron Sigma fraternity held its pledge week. This occasion proved to be very amusing to all non-participants and many members of our class were fortunate to become members of this organization.

The mid-year examinations instilled very strongly in our minds the necessity for hard work, and we returned from our Christmas vacation determined to surmount the formidable obstacles which stood between us and our goal.

The first social function in which our class participated was in the nature of a formal dance sponsored by the combined Junior and Senior classes, on Feb. 25 at the hotel Statler. This dance was thoroughly enjoyed by all present.

Our class dance in April was well attended and supported. We assumed the role of pioneers in that we were the first class to sponsor a like function in a night club. It was strictly informal and the occasion elicited much favorable comment.

The annual visit to the plant of the American Optical Co. at Southbridge ended our activities for the year.

Thus we had reached the half-way mark in our school life, and we disbanded for the summer months with a grim feeling of satisfaction in our accomplishments both from a scholastic and social viewpoint.

In the fall of 1932 the class of '33 reassembled to resume old friendships, and to complete the knowledge of a most complicated and scientific study, optometry.

This year the senior class has been especially fortunate in having Dr. Namiyas added to an already excellent teaching staff. As a result we feel more fully equipped, from the point of knowledge imparted to us, to follow the science of optometry.

At the first class meeting of the year Ralph Gaeta of Union City, New Jersey, was elected president, D. L. Shaw of Bangor, Me. vice-president, Robert Hyland of Pittsfield, Mass. secretary and E. Perry Truesdell of Somerville, Mass. treasurer.

The most commendable and enjoyable social achievement of the year was our Senior banquet, held at the hotel Kenmore. Our guest speaker for the evening was Dr. Howard Doane, formerly the chairman of the Mass. Board of Examiners in Optometry. Dr. Doane's contribution proved most befitting of the occasion and was fervently approved and appreciated by all present. Dr. Klein and other members of the faculty extended words of advice and their best wishes to the graduating class and this most enjoyable occasion is now only a memory. We extend our sincere thanks to our president, who was responsible for the success of our final social enterprise.

Our associations have been all too short, our friendships and memories of our school life we will always cherish.



## The Scope



### C. NILS BLOM—"Chick"

Sewell, N. J.

C. Nils believes that classes should start at 10 A. M., because he is of the opinion that the gray matter works better at a later hour. Gifted with a sense of humor, a pleasant personality, C. Nils should make a name for himself.

### GEORGE P. BUCKLEY

166 Brooks Ave., Arlington, Mass.

Pi Omicron Sigma

Cheerful, smiling, and serious in turn. George is the champion bridge player of the class. George and Donders believe that the reduction of myopia is best effected by drinking better and more milk.

### LEONARD M. CALLAHAN—"Cal"

80 Curtis Ave., Dalton, Mass.

Pi Omicron Sigma '33

Our young student from Dalton is a real worker. A plugging student, a willing Fraternity member, "Cal" should do his bit to make his nickname even more famous.

### NATHAN CIVEN

23 Hansborough St., Dorchester, Mass.

Civen is a creditable student. A graduate in chemistry and biology, he undertook the study of optometry with great success. Phlegmatic in temperament, Nathan is assured of success.





## The Scope



1933



PAUL S. CLINE

4 Almont St., Mattapan, Mass.  
 "A scholar among scholars." Paul is the student of the class, and he won the respect and admiration of all his classmates. Success will be yours, Paul, and you will be a credit to the profession as you have been to the school.

Editor-in-chief of the Scope '33

Valedictorian '33

Graduating magna cum laude



ABRAHAM CODISH—"Abe"

127 Howland St., Roxbury, Mass.

Abe is noted for his prowess in nullifying the arguments of others. Possessed of a stentorian voice, he should rise to the heights of optometry. We expect a lot from you, so don't disappoint us, "Abe".



GEORGE DILLON—"Dill"

12 Westbrook St., Milford, Mass.

Our young friend from Milford, is quiet and capable. He proclaims not, and he covets not. An indefatigable worker and a loyal Frat member George is our idea of a perfect combination. Note his smile.

Pi Omicron Sigma '32-'33



RALPH B. GAETA

287 Bergenline Ave., Union City, N. J.

A sincere friend, a good scholar, and of a disposition that has made him so competent as our class president. Ralph is a lover of anatomy, fast cars, and fast figures. You should see him solve those T. O. problems.

Senior class president '33

Guardian of the Exchequer P. O. S. '33

Pi Omicron Sigma '32-'33





The Scope



JOSEPH GILEFSKY—"Gil"

17 Starbird St., Malden, Mass.

Joe is the smiling member of the class. Gifted with this inimitable smile, Joe is sure to smile his way thru to the pinnacle of success. Always a willing worker, and a earnest Frat member.

Pi Omicron Sigma '32-'33



HAROLD M. GOLDEN

35 Plymouth Rd., Malden, Mass.

Quiet and unassuming, Harold seeks no laurels. A hard-working member of the fraternity and in his work, Harold is due to shine in his profession.

Frat dance committee

Pi Omicron Sigma '32-'33



JOSEPH HAGERTY

8 Capen St., Dorchester, Mass.

Joe is a gifted writer of examination papers. A good student possessed of a cheerful disposition, and an insuperable earnestness, Joe is a credit to the class.



ELVIN B. HAYNES—"Slim"

14 Burnside St., Lancaster, N. H.

Slim has been a real friend to all his classmates. Quiet and sincere, in his work and always dependable. We extend our best wishes to you, and the little girl from Arkansas. What a dull place Boston would have been, Slim, without Dana Hall!

Pi Omicron Sigma

Senior News Editor, Scope Staff

Fraternity Refreshment Committee.



The Scope



ROBERT C. HYLAND—"Bob"

345 Elm St., Pittsfield, Mass.

Bob is a leader and a worker, and could always be depended upon to do his share whether it be the Scope, the Fraternity, or the Class. We will always remember your inimitable impersonation of Bing Crosby, Bob.

Junior News Editor '32

Editor-in-chief-emeritus of the Scope

Pi Omicron Sigma '32-'33

Vice Chancellor, P. O. S. '33

Class Secretary '33



MALCOLM KAYE—"Mal"

481 Gravesend Ave., Brooklyn, N. Y.

Mal is our idea of a perfect business man whether it be clothing or optometry. Possessed of an insatiable mania for collecting all sorts of knowledge, "Mal" should be an authority on something or other in the coming years.

Pi Omicron Sigma '32-'33



SONIA J. LITWAK—"Sonny"

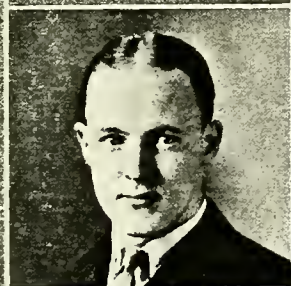
522 N. Main St., Fall River, Mass.

Sonia deserves the utmost credit for her endeavors. Under the handicap of being in this country only a few years, she has done well. Sonny was instrumental in making the sorority a "go".

President of Alpha Omicron Sigma Sorority

Alumni Editor of Scope.

Dance Committee.



WARREN R. LOVERING

12 Evergreen Ave., Somerville, Mass.

Warren is the sphinx of the class. Perfectly capable in every respect. Warren chooses the background in preference to publicity. Warren is certain to make the grade.

Pi Omicron Sigma '32-'33

Graduating cum laude





The Scope



ARTHUR MINEHAN—"Art"

71 Rosewood St., Mattapan, Mass.

Art is the athlete of the class. Possessed of looks, brains and ability. Art is out to make himself known. Among his accomplishments is a new green door downstairs. Success to you, Art.

Graduating cum laude.

President of the Junior Class '32

GERTRUDE FRANCIS MONOGHAN—"Gert"

335 John St., So. Amboy, N. J.

Gert is the coy member of the class. Good-looking we'll say, and in possession of the nearest thing to a silent voice. Gert is out to wake up New Jersey in general and So. Amboy in particular, and we are sure that she will succeed. Also a willing worker in the sorority.

Vice-president of the Alpha Omicron

Sigma Sorority

Ass't Associate Editor of Scope

O. A. S. Dinner Committee

JOHN W. O'BRIEN—"Obie"

131 Blake St., Mattapan, Mass.

John, our friend from Mattapan has done a bit in the Scope, in the Fraternity, and in his class. Determination is his characteristic, and possessed of this, and someone recent from "Katie" Gibbs, John is sure to climb the ladder of success.

Pi Omicron Sigma '32-'33

Executive and Initiation Committees, P. O. S.  
Circulation Manager of the Scope.

EDWARD P. PADDEN—"Pin-em-down"

284 Central St., Manchester, N. H.

Pin-em-down intends to have a gymnasium in a corner of his spacious establishment in order to establish a comfortable relationship between accommodation and convergence. By means of several toe-holds and half-nelsons, the desired results are sure to be brought about, thus emphasizing the need for more energetic treatment. Ed is a loyal member of the Frat, and one whom the class will miss.

Pi Omicron Sigma '33



The Scope



MAURICE PENAN

58 Holt St., Fitchburg, Mass.

Our friend from Fitchburg has been concerned with the growing need for optometrists, so he matriculated several years ago. An earnest and indomitable worker, Maurice will endeavor to satisfy part of this demand to the best of his ability.

RAYMOND PERKINSON—"Ray"

54 Autumn St., Lynn, Mass.

How dull our school life would have been without Ray's humor, smiling countenance, and broken glasses. As we are wishing you success, Ray, we wonder what a certain Junior will do in your absence.

Pi Omicron Sigma

HARRY SADOW

135 Blackstone St., Boston, Mass.

Harry is characterized by a moustache, and by considerable optimism. Always cheerful, he is on his way to make a name for himself, whether it be in Massachusetts or Maine.

Member of Class Reunion Committee

NED J. SALIBA—"State Boards"

35 Waltham St., Boston, Mass.

Ned has one secret desire, namely to give the state boarders an examination. Ned is renowned from one end of Mass. Avenue to the other for his uncanny ability to tell you that this question appeared in the November board of 1916, or that question will appear in the June 1944 exams. Such an individual deserves not to go unrewarded.





The Scope



WILLIAM L. SCHLOSSER—"Bill"

482 So. 16th St., Newark, N. J.

Bill's pride is his drawl. Gifted with a fine sense of humor, and a good sociability, Bill will get there. He is presently experimenting to improve techniques in certain lines.

Pi Omicron Sigma '32-'33



MORTON SCHOENBAUM—"Morty"

645 Eastern Ave., Malden, Mass.

Morty has certainly done his share of work. Employed after school hours, and studying hard, he graduated cum laude. He is in silence and then in intermittent speech. We wish him success.

Graduating cum laude

Member of Class Reunion Committee

Class Will Orator '33



DEARBORN L. SHAW—"Deak"

65 Otis St., Bangor, Maine

"Deak" is our idea of a professional man, with a pleasing countenance that is his silent recommendation. "Deak" has done his bit, as Chancellor of the Fraternity, Business manager of the Scope, and as Vice-president of our class. Success is yours for the asking. "Deak".

Pi Omicron Sigma '32-'33

Chancellor of P. O. S. '33

Class Secretary '32-'33

Class vice-president '33

Scope business manager '33



H. EDGAR SIMONS—"Hy"

24 Quint Ave., Allston, Mass.

Hy is the psychologist of the class. Possessed of an introspective mind, Hy is in a constant state of unraveling the optometric Gordian knots. Gifted with a brilliant personality, and a keen nose for the stock market, H. Edgar is sure to be seen in the journals of the future, telling us what to do, or not to do.

Graduating magna cum laude

Salutatorian '33





E. PERRY TRUESDELL—"Perry"

340 Highland Ave., W. Somerville, Mass.

Quiet, studious, and always ready and willing to lend a helping hand in fraternal and class activities. Perry is a real student and will surely be a success in his chosen profession. We wonder how our fair co-eds could have ever managed without Perry.

Class Treasurer '33

Pi Omicron Sigma '32-'33

POS Scribe '33

Graduating cum laude

The following members of the Senior Class, due to an insuperable modesty or other reasons, refrained from having their pictures taken, and therefore are without a photographic representation. We wish to list them, and insert a fitting remark here and there.

JOHN BEDELL—"Jack"

13 Laurel St., Marblehead, Mass.

Gifted with a keen sense of humor. Lots of luck, Jack.

ABRAHAM CHASIN

3 Sterns Walk, Brooklyn, N. Y.

The most serious worker in the class. We wish you success.

SOLOMON DRUCKERMAN—"Sol"

2433 85th St., Brooklyn, N. Y.

He will be remembered like Patrick Henry for his speeches.

Pi Omicron Sigma '32-'33

HYMAN GOLDBERG—"Hy"

31 Wave-way Ave., Winthrop, Mass.

A better pharmacist than an optometrist, we hope.

Pi Omicron Sigma '32-'33

Joke Editor of Scope.

J. PHILIP HILPERT—"Phil"

146 Balch St., Beverly, Mass.

A willing student and a good humor. Lots of luck, Phil.

Pi Omicron Sigma '32-'33

SIDNEY KEIT—"Sid"

435 Brooklyn Ave., Brooklyn, N. Y.

Earnestness and faithfulness in his work are his chief properties.





## THE SCOPE

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NATHAN LAGER

81 Bristol St., Saugus, Mass.  
He wishes that knowledge be hereditary.

ISRAEL MICHELSON—"Mike"

67 Church St., Lynn, Mass.  
Satyrical in demeanor marks the man.

RALPH MULVANITY—"Mul"

31 Concord St., Nashua, N. H.  
Mul will be remembered for his lengthy orations, and fine sense of humor.

JULIAN PINCKNEY—"Pink"

11 Brookledge St., Roxbury, Mass.  
"Pink" has been noted for lecturing on "what's-the-use."

JACOB RICE

26 Central St., Milford, Mass.  
Jacob is to be remembered for his indomitable persistence.

PHILIP STOLAR—"Phil"

9 Pleasant St., Sharon, Mass.  
Phil claims to be the worst student, but we disagree with him. Just another case of vocational maladjustment.

STUART WRIGHT

84 Cedar St., Taunton, Mass.  
Stuart deserves credit, for his efforts as a student. Success is his in the long run.

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## SUPERLATIVES OF THE CLASS

Most popular—Bob Hyland  
Most intellectual—Paul S. Cline  
Most athletic—Art Minehan  
Most humorous—Philip Stolar  
Best disposition—Ray Perkinson  
Most professional—"Deak" Shaw  
Handsome—Ralph Gaeta  
Latest to class—"Chick" Blom  
Best theorist—Ned Saliba  
Quietest—Warren Lovering  
Best card player—Jack Rice  
Most forward—Ned Saliba  
Best dressed—Chick Blom.  
Most likely to succeed—The class of 1933  
Class Grind—Perry Truesdell





Evelyn Hollander

Sonia Litwak

Gertrude Monoghan

### Alpha Omicron Sigma

The pioneers of this organization are Miss Sonia Litwak, Miss Gertrude Monoghan, and Miss Evelyn Hollander, together with their able advisor Dr. W. A. Svendsen.

The officers were elected as follows:

Miss Sonia Litwak—President  
Miss Gertrude Monoghan—Vice-president  
Miss Evelyn Hollander—Secretary

During the course of the year, the sorority increased and augmented their membership with many of the female element engaged in the practice of optometry, and with the wives of optometrists.

Dr. Svendsen was instrumental in making a success of both the educational and social side of the sorority activities. The services of Dr. Benker were secured in giving enlightening lectures, esoteric in nature, to the sorority. The sorority presented numerous exhibitions and concluded the year's activities with a dinner dance at Hotel Westminster.







*Back Row:* L. to R. J. Reilly, P. Tucker, H. Golden, M. Bronstein, M. Goldberg, C. Rowan, E. Haynes, R. Paster, W. Lovering, C. Ricard, J. Gilefsky.  
*Third Row:* C. Pike, S. Druckerman, M. Rice, J. Buckley, M. Soutra, M. Lebson, C. Seale, L. Callahan, H. Goldberg, E. Colitz, R. Perkinson.  
*Second Row:* S. Lipsky, F. Mills, R. Gaeta, P. Truesdell, D. Shaw, R. Hyland, J. O'Brien, B. Sedgwick, B. Clark.  
*First Row:* L. Lamphear, M. Bonaventura.



## Pi Omicron Sigma Fraternity

By E. PERRY TRUESDELL

The Pi Omicron Sigma Fraternity opened its activities for the year on Thursday evening, October 13th, with a smoker at the school for the members of the Junior Class. The guest speaker of the evening was Dr. Ralph H. Green of the Alumni and Faculty, who gave a very interesting talk on Fraternalism. Dr. Foster H. Namias, a past chancellor and member of the Alumni, also spoke on fraternal life.

After a week of pledging twenty-three candidates were initiated into the fraternity on the evening of November 2nd. The initiation ceremony was held at Ye Lantern Hall in Arlington.

A Pledgee Frolic by way of an informal dance was held at the Beaconsfield Hotel on October 27th. This dance was open to all members of the school and their friends and was enjoyed by all who attended it. In February a formal dinner dance was held at the Hotel Westminster.

On December 1st the fraternity unanimously elected Dr. Ralph H. Green to the position of Grand Chancellor.

During the year the fraternity has sponsored a series of educational lectures having as guest speakers Mr. Gamble of New York, Dr. William Smith of Dorchester, Dr. James Collins of the Colonial Optical Co., and Mr. Wilson of the Wilson and Halford Optical Co.

The final business meeting of the fraternity was held on May 4th at the school. The election of officers for next year took place.

The officers elected for 1933-1934 are:

Chancellor—Frederick T. Mills, Brighton, Mass.

Vice Chancellor—J. Charles Reilly, Springfield, Mass.

Scribe—Paul E. Tucker, Lowell, Mass.

Guardian of the Exchequer—Milton Lebson, Hackensack, N. J.

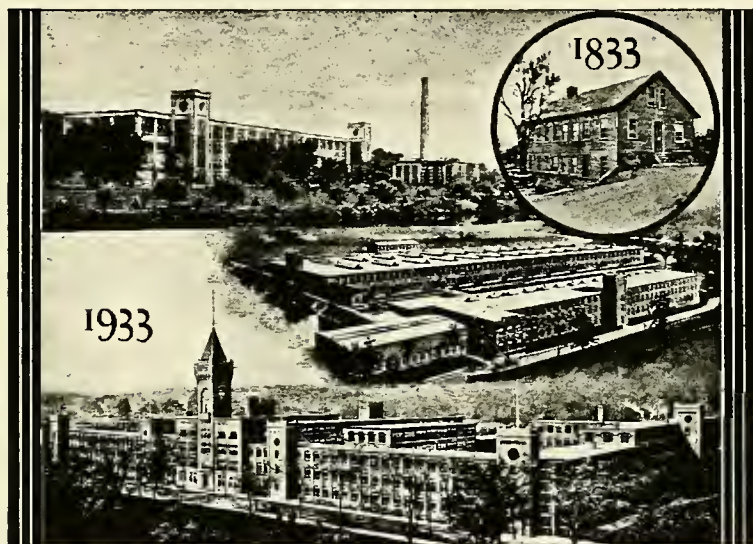
Member of the Executive Committee — Frederick E. Brucker, Jamaica Plain, Mass.

Sergeant-at-Arms—Marino Bonaventura, Southbridge, Mass.

The fraternity held its annual banquet at the Hotel Touraine on May 11th.







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*One hundred years of*  
**OPTICAL LESSONS - AND STILL AT IT**

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ONE hundred years ago American Optical Company began the study and practice of optical manufacture. In the years of scientific research and development which have followed, AO has accumulated a vast experience which helps us with our own problems and has enabled us to assist with the problems of those we serve.

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## The Scope Staff 1933-1934

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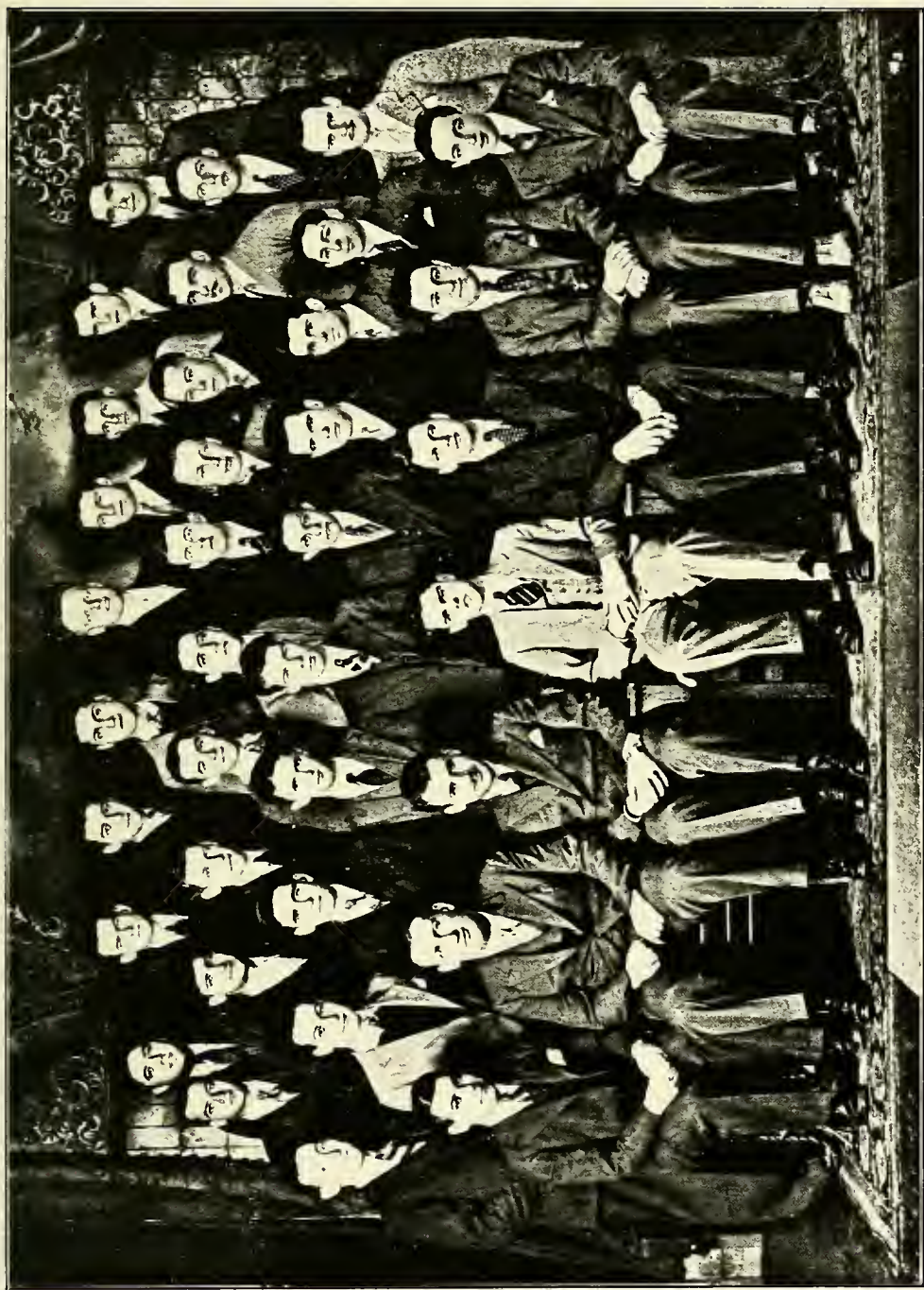
Three members of the incoming Junior Class will be chosen next year to round out the personnel of the Staff.

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The Editor wishes to avail himself of this opportunity to thank each member of the present Staff for the whole-hearted co-operation which has been afforded him during the past year. Words can hardly express gratitude to Miss Alyce McCabe, our congenial School Secretary, for the many, many things she has done and the words of wisdom and guidance which she has smilingly offered throughout the year. Please accept a profoundly sincere "Thank you" Alyce. Last, but not least, we wish to thank our advertisers, who make our little paper possible. May we remind our subscribers that they are reputable business houses offering quality merchandise backed by their own good name who merit and will value your patronage.







#### JUNIOR CLASS

*Back Row:* H. Kaplow, N. Chaitin, M. Bronstein, R. Paster, V. Husby, M. Goldberg, R. Clements, C. Rowan, M. Kaplow.  
*Third Row:* S. Lipsky, A. Gulezian, F. Rogness, P. Tucker, M. Rice, D. Gribbin, C. Seale, M. Soutra, C. Ricard.  
*B. Sedgwick.*  
*Second Row:* P. Goldfarb, B. Siegel, D. Kornetsky, E. Moss, L. Thomas, C. Pike, C. Reilly, A. Emmes, A. Tieri, J. Monkarsh.  
*Front Row:* M. Bonaventura, I. Schwartz, M. Lebson, A. Collins, F. Mills, E. Colitz, B. Clark.





## Junior Class History

By DONALD GRIBBIN

On Monday, Sept. 19, the class of '34 assembled for the first time at the Mass. School of Optometry. Our class proved to be the largest in the history of the school.

The Junior class has been very fortunate in having Dr. Namias added to the teaching staff. His patience and artistic trends have won him the admiration of the students. He has served us well as class advisor and to him belongs much of the credit for a successful year.

At the first class meeting of the year the following were elected to office:

Arthur Collins, President.  
Milton Lebson, Vice-President  
Frederick Mills, Treasurer  
Evelyn Hollander, Secretary.

Our class meetings have afforded us the opportunity of becoming better acquainted with each other. Few will forget the fiery pleas (or what were they?) of Mr. Tieri and the reports of our blushing secretary.

Two well attended dances were enjoyed by the class this year.

Through the efforts of Dr. Svendsen we were given several lectures by H. William Bencker, M. D., which proved very interesting and beneficial.

The annual trip to Southbridge, a yearly invitation extended by the American Optical Co. to visit their enormous plant, far exceeded expectations. It was decidedly interesting and instructive. We wish to thank the American Optical Co. and we might add, it is with pleasure that we anticipate next year's visit. Rowan is still dreaming of "Miss Southbridge," that woman in grey.

The year has passed almost too quickly, but the summer holidays will give us an excellent opportunity for reviewing and absorbing this year's work. The summer will also afford time to work on pet theories, such as Mr. Lebson's new subject "Skiamic Dynametry."

It is with regret that we say good-bye to the Senior class. To them we extend our heartiest wishes for success in their chosen profession, Optometry.



Pictures by J. E. PURDY, 160 Tremont St.

BOSTON, MASSACHUSETTS



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## DR. FOSTER NAMIAS

The students wish to express their appreciation, and to extend their thanks to Dr. Foster Namias for his labors in their behalf. He has shown us the wide extent of the realm of physiological optics, and has given us an insight into the problems confronting the modern investigator of that field.

He has handled as well the teaching of Practical Optics, which was enhanced by years of experience, and modified by a theoretical knowledge of no mean confine.

*Best Wishes of*

DR. RALPH GREEN

BOSTON, MASS.

*Compliments of*

DR. ALBERT E. SLOANE

*Compliments of*

DR. FOSTER NAMIAS

"That boy of yours is a great talker."

"Yes, indeed. He ought to make a great insurance agent when he grows up."

"That fellow certainly can make a great speech."

"That so? Then why doesn't he?"

"I take half an hour's beauty sleep every afternoon."

"You should make it longer, dear"

"The doctor told Brown he must walk three miles every day."

"Where does he take it?"

"Around a pool table, generally."





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## DID YOU KNOW

.....that the shortest distance from the emmetropic eye at which no accommodation is required is not 20 feet, but 110 feet, and that this distance becomes less with the advance of age.

.....that the absolute far point of convergence is 15 times farther than that of accommodation in the ordinary case.

.....that the reason why hyperopes wear apparently with comfort an overcorrection, and the myope with a poor accommodation tolerates a full correction of the myopia, lies in the fact that a full correction of the refractive error at distance is always an under-correction at near.

.....that a nominal hyperope of 5 diopters uses 1 diopter more accommodation when corrected at 13", than a 5D myope when looking at the same distance with the correction on. Which explains why the degree of hyperopia is always underestimated by the optometer, as well as the amplitude of accommodation.

.....that theoretically the amount of astigmatic correction differs at near as compared with the static finding.

.....that an adduction of 30 prism diopters as so recorded at 20 cms, is really an overestimation, since the effectivity of these 30 prism diopters is only that of 26 prism diopters.

.....that the ordinary decentration formula is not accurate practically when using high powers in either plus or minus spheres, due to effectivity. For example, a plus 10 diopter sphere when decentered 1 cm results in a prismatic effect, not of 10 diopters, but of  $13 \frac{1}{3}$  diopters, and that the prismatic effect decreases with the increase of the dioptral distance.

.....that keratometrically a concave cylinder produces a myopic and a convex cylinder produces a hypermetropic effect.

.....that the superior oblique muscle of the left eye is supplied by the trochlear nerve originating in the right mid-brain and vice versa.

.....that the nasal wall of the orbit is the thinnest of the 4 walls.

.....that the muscle planes of the vertical recti nearly coincide with the axes of the orbits.

.....that the fundus is the only place in the body where arteries and veins can be seen in a physiological state, without subjecting a patient to a great deal of inconvenience.

.....that there are 13 cranial nerves not 12 on each side as is commonly supposed, as the nervus terminalis, distributed to the nasal region is the latest acquisition.

.....that the proprioceptive fibers to the extraocular muscles are best believed to be a distribution of the mesencephalic root of the 5th nerve.

.....that the center for lacrimation as well as other vegetative functions is believed by the Cushing school to be in the 'tween-brain or diencephalon.



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"He has the artistic temperament happily developed."

"How is that?"

"Only goes with red-headed girls in Autumn."

"My son is making a record at college."

"Good; science or classics?"

"Neither. He's such a baseball find that he's been released from all routine study."

Goldberg: "I suppose you did the town when you were in New York?"

Kaye: "No, just the reverse—New York did me."

"Do you like Wagner?"

"Better than I used to. There's a lot of his music that no one would attempt to dance to."

A man with a sunny disposition seldom has a hot temper.

He: "My ancestors were all people of brains."

She: "You must have been disinherited."

"You must have many queer experiences in the country?"

"We do. Once I actually ran across a farmer whose name was Hirman."

The teacher was having her trials and finally wrote the mother: "Your son is the brightest boy in my class, but he is also the most mischievous. What shall I do?"

The reply came duly: "Do as you please. I am having my own troubles with his father."

Jack: "What's the most outstanding contribution chemistry has given to the world?"

Ralph: Blondes.

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