NEWSLETTER
OF THE
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Georgia Rebecca Waterman Brineman, O.D.,:

Early American registration records show that the profession of optometry has regularly included a significant but very small share of women prior to the statistical growth of recent years. Within this small group, about 3% in 1944, an occasional female optometrist had a leadership role, as happily identified in this newsletter, but, generally speaking, we really know little about the typical career pattern of the lady optometrist of yore. Perhaps the following chronology will at least provide one valid "case history."

Born on July 11, 1889, in Fort Wayne, Indiana, USA, was Georgia Rebecca Waterman, daughter of George H. and Rebecca (Anderson) Waterman. She graduated from Fort Wayne Central High School, probably in 1907, and attended Hammond (Indiana) Business College, Chicago Music Conservatory, Fort Wayne International Business College, and eventually the Northern Illinois College of Ophthalmology and Otology. There, on November 18, 1912, according to a handsome 26 x 33 cm. certificate signed by the Secretary and President of the College, G.W. and J.B.M. McFatrich respectively, both M.D.'s, she was registered as a "member" of the college and "Fellow of Optics".

On August 8, 1913, she was awarded the degree of Doctor of Optics by the same institution, receiving an impressive 48 x 61 cm. diploma signed by the two McFatrich's and five others identified respectively as Professors of Anatomy and Physiology of the Eye and Brain, Optometry, Dioptrics, Ocular Therapy, and Refraction. On April 1, 1914, "G. R. Waterman of Hammond, County of Lake" received here 43 x 36 cm. certificate of registration as an "optometrist" from the Indiana State Board of Registration and Examination in Optometry with five signatures, only one of which includes a degree designation, that of M.D.

The 1914 biennial Blue Book of Optometrists and Opticians lists her at 603 Home Avenue, Chicago, Illinois, and the 1916 issue lists her in Hammond, Indiana, without a street address. She is not listed in the 1918 issue, but in the 1920 edition she is listed at 205 W. Wayne, Fort Wayne, Indiana.

On May 1, 1920, she married John H. Brineman (1889 - 1944) in Bluffton, Indiana, a few miles south of Fort Wayne. Her husband also was an optometrist who, according to the 1912 and 1920 Blue

Book directories, practiced at 142 N. Pennsylvania Street, Indianapolis. The 1922 Blue Book shows her (misspelled Watterman) at 205 W. Wayne, Fort Wayne, Indiana, and him in two Indiana locations, 255 W. Fort Wayne, Fort Wayne, and 212 S. Michigan Street, South Bend. The 1924 and 1926 Blue Books list both under the Brineman name with the H. H. Rogers Co. on W. Wayne in Fort Wayne, but with her street address number 203 and his 205. In 1928 both John and Georgia Brineman are shown at 824 Calhoun Street, Fort Wayne. This, however, is her last optometric listing, probably representing her professional retirement to raise their family, which had been started in 1925 with the birth of their eldest, Don. The Blue Books for 1930 and 1932 show John practicing at 2409 S. Calhoun, Fort Wayne, and 101 N. Main, Fort Wayne, respectively. According to John's obituary, however, the family had moved to La Grange, Indiana, in about 1930 where John opened a practice at 118 S. Detroit Street and Georgia served as his receptionist as well as his wife and mother of their three boys and two girls.

Their community prominence was reflected in a 14 column-inch obituary for John in a La Grange newspaper on November 16, 1944 and in at least four obituaries for 99-year-old Georgia in La Grange, South Bend, and Bloomington, Indiana newspapers on August 30, 1988. Their optometric as well as general civic roles were well described. "Dr. (John) Brineman was one of the best-informed men to be found anywhere." Dr. Georgia Brineman died on August 29, 1988.

All of the documents, other than the Blue Books, mentioned in this summary were donated by their son, Dean Don R. Brineman, University Division, Indiana University.

A bit of recognition:

Not only one of the longest published optometric journals but possibly of widest international distribution and certainly one of the most attentive to historical details is The Optician, published in London. It is especially remarkable because it is an independent publishing enterprise, that is, it is not sponsored, controlled, or officially guided by any membership organization. At least these are impressions from a remote viewing distance.

A weekly magazine, now well into its fifth thousand editions, two volumes per year, it includes frequent items of historical interest and many an illustration of archival significance on the front cover. In other words it provides a cultural component conspicuously rare in the professionally ad hoc publications, except, of course, the NOHS. Examples during this past year have been two sequences of occasional articles. One, in two installments entitled "History of Spectacles", is by OHS member Colin B. Fryer, an ophthalmic optician in practice in Liverpool,

with the successive subtitles "Once upon a time..." (Vol. 196, No. 5170, Oct. 14, pp. 20 & 22.) and "Going back to our roots". (Vol. 196, No. 5175, Nov. 18, pp. 34 - 36.) Together they deal with inventions, frame design, early lens power designation, trade cards, prices, and guilds.

The other sequence in five installments is by the late Frederick Ralph Woodcock, also an ophthalmic optician and formerly a director of Bausch & Lomb Optical Company. The successive installment titles are "Milestones in the History of Optometry" (Vol. 195, No. 5149, May 20, pp. 17-18), "The Medieval Scientists" (Vol. 195, No. 5153, June 17, pp. 34-35), "Science in the Italian Renaissance" (Vol. 196, No. 5160, Aug. 5, pp. 15, 17, & 18), "The Newtonian Epoch" (Vol. 196. No. 5168, Sept. 30, pp. 23, 26, & 39), and "18th Century Physiological Optics" (Vol. 196, No. 5174, Nov. 11, pp. 39-30).

The other OHS:

The following report was sent to us by OHS Executive Board member Jerry Abrams.

REPORT OF THE OCULAR HERITAGE SOCIETY
ANNUAL MEETING

July 11, 1989

As a new member of the Ocular Heritage Society I attended my first annual meeting this year on May 10-11 in Waterloo, Ontario, Canada. The meeting was hosted by Dr. E. J. Fisher.

Some forty members, wives, and guests attended the meeting. We toured the magnificent museum in the Optometry Building. Several papers were rendered. One being "Actina, the Electro Chemical Eyes Restorer" by W. H. Marshall, M.D. An ophthalmologist from New Orleans gave a paper entitled "Recent Acquisitions of ancient Chinese Spectacles and Cases". Optometrist Jim Leeds gave a paper on "Louis Braille".

This meeting was the OHS 6th annual meeting since they began. Their membership roster consists of persons (most of which are collectors themselves) with a keen interest in such subjects as ocular books, old spectacles, one member collects eye cups, old instruments relating to the eye, 16th and 17th Century antique eyeglasses, and other varied ocular interests.

Interesting note that all three eye professions, ophthalmology, optometry and opticianry are represented

as members with one purpose and goal in mind that of preserving our ocular heritage thru individuals, collectors, museums and other institutions.

New York City will be the site of the 1990 meeting, May 11-12.

Early goggles persist:

Illustrated in many a text as historical comment are the Eskimo snow goggles variously carved from wood or cut from heavy leather to block the light from entering the eye from every direction except through small apertures or slits located at the straightforward position of the lines of sight. That they are current as well as ancient is illustrated by a young Eskimo wearing a pair in "The Kotzebue Basin," a 1981 issue of Alaska Geographic, Vol. 8, No. 3, p. 36. The legend for the colorful photo reads, "Ornate carving of these snow goggles identifies them as part of the Eskimo cultural period known as Ipiutak dating from 100 to 300 A.D." Credit for the picture is given to Robert Belous, National Park Service.

The fighting forties, fifties, and more:

"Recollections of 60 years of the history of optometry" is the title of a delightfully anecdotal account of American optometric politics and development in the May 1989 issue of the Journal of the American Optometric Association, Vol. 60, No. 5, pp. 391-404. The story is told by Gideon L. Lang, Jr., O.D. with the acknowledged help of numerous others to refresh his memory and confirm names, dates, places, and events.

Those of us who experienced the optometric era of mainly the '40s and '50s plus the introductory '30s and the more settling '60s remember Dr. Lang by his acquired nickname "Mr. HR6000". HR6000 was the U.S. House of Representatives bill to amend the Social Security Act so as to include the provision, "In determining whether a person is blind, there shall be an examination by a physician skilled in diseases of the eye, or by an optometrist, whichever the individual may select."

A diamond jubilee in seeing:

The Seeing Eye, Inc. of Morristown, New Jersey, is celebrating 60 years of service to blind Americans by providing qualified individuals with seeing eye dogs. The nonprofit school was founded January 29, 1929, in Nashville, Tennessee, by Dorothy Harrison Eustis and Morris Frank, both of whom were appreciative of the independence afforded by their seeing eye dogs.

A brief history of the organization was entered into the Congressional Record on page E1474 on May 2, 1989 by Congressman Dean A. Gallo of New Jersey.

By way of explanation:

Some of you have asked how I find the numerous historical tidbits that I mention in this newsletter. It is really quite simple. With 19 years of editing I find myself mentally so selectively sensitized that the tidbits seem to jump off the page of whatever I happen to be reading.

My material comes to me in at least three ways. One is the several dozen professionally related, some quite remotely, serials, notices, and releases, that are stuffed in my mailbox daily by the postman. Why I am on some mailing lists puzzles me, for I pay virtually no one for them. They include numerous domestic and several overseas journals even though we reciprocate with none. You might guess them from the frequency of my citations. I scan at least the table of contents of each one.

The second source is the reader, you, who either calls my attention to a news item, an observation, an article, or a book, or often sends me a clipping. These contributions are occasionally prompted by an item which appeared in a previous issue of the NOHS. Typically these are real gems and often have a bit of very human interest. However, they may sometimes drive me "off the wall" as I try desperately to track down the bibliographic or otherwise authoritative origin so I can include an adequate reference, identity, or address for the reader who may wish to follow it up for more details or personal contact. I am determined not to propagate purely hearsay statements without identifying at least the reporting source. At the moment I have two rather interesting magazine clippings and a 10 page photocopy which I received with no clue as to the date, volume, or issue from which each is taken. The two clippings are from the Optician (London). I have leafed through at least 12 recent issues in the library with no luck! In the case of the photocopy I do not even know the name of the publication in which it appeared.

The third category of resources is simply the observations and encounters that I make quite serendipitously during travels, museum visitations, social gatherings, reading for pleasure, and including even the scanning of unfamiliar magazines in public reception rooms and the barber shop.

What is the ulterior aim of the newsletter if not merely to be interesting and entertaining? Why are so many dull details included?

First and foremost, the newsletter is intended to be a documentary record of every possible detail of optometrically related history, a record to bring together the scattered and piecemeal bits of information that defy gathering otherwise. In 1979 we indexed the first ten volumes of issues. At the end of 1989 we will include the index of the second ten volumes. From these two indices the scholar, the history buff, the librarian, or simply the curious should be able to trace a significant number of leads to whatever aspect of our heritage he or she may wish, be it the contributions of Abbe or Zurbaran, or such topics as aberrations or zones of comfort.

Indeed, to every reader a share of the contents is plainly dull reading. This may not be exactly true however if one thinks of it as a part of his or her professional heritage. There would be no way, for example, to make the description of an eye examination of Henry VIII dull reading for an optometrist.

H.W H

Aspherical contact lenses:

The early years of casting of a mold of the eye to provide a hard replica on which to shape a scleral or haptic contact lens quite incidentally produced lenses with posterior surfaces that were of course aspheric so as to match the eye. The technology for grinding and polishing a mathematically specified asphericity on a corneal lens however was a later development. Its evolvement is historically traced by A. G. Bennett in an article entitled, "Aspherical and continuous curve contact lenses" in the November 5, 1988, issue of Optometry Today (London), Vol. 28, No. 22, pp. 630-632 as a "tribute to pioneers".

Bennett credits optometrist Daniel O. Elliott, Jr. of South Bend, Indiana, with "the first recorded production of a usable aspherical contact lens" which Elliott reported in 1964. Subsequent experimenters and producers included David Volk, an optometrist and ophthalmologist who was attempting the design of aspherical spectacle lenses while still an optometry student at the Ohio State University in 1939 and applied his knowledge to contact lenses much later. Among others were Theodore E. Obrig, Philip L. Salvatori, Eugen Hirst, and John Shennan. Bennett describes their technical contributions as well as their personal involvements with the development of and production of aspherically curved contact lens surfaces.

Delayed references and more:

In the October 1986 issue of the NOHS, Vol. 17, No. 4, on pages 56 and 60, two manuscripts submitted by Jay M. Enoch were

reviewed. The first was authored by Enoch and carried the unusually long and unconventionally capitalized title, "It is Proposed That the Cornea of the Eye of the Bull's Head Rhyton from the Little Palace of Knossos (artifact dated 1550 - 1500 B.C.) Is a True Lens". The second was co-authored by R. F. Heitz and J. M. Enoch with the title, "Leonardo da Vinci: An Assessment of His Discourses on Image Formation in the Eye".

Since then both articles have appeared in print in the volume titled "Advances in Diagnostic Visual Optics", Proceedings of the Third International Symposium, Tirrenia, Italy, May 1 - 4, 1986, under the editorship of A. Fiorentini, D. L. Guyton, and I. M. Siegel and published by Springer-Verlag, Berlin and elsewhere, in 1987, the former on pages 15 - 18 and the latter on pages 19 - 26.

Because this publication may well be totally unfamiliar to most of our readers, a bit of description may be appreciated. The first such symposium took place in Japan in 1978 as a satellite meeting of the International Congress of Ophthalmology, proceedings of which seem not be have been published as a symposium volume. The Second International Symposium occurred in Tucson, Arizona, USA, on October 23 - 25, 1982, again as a satellite meeting of the International Congress of Ophthalmology but co-sponsored by the Optical Society of America and with support from 10 other organizations including the Worshipful Company of Spectacle Makers. The proceedings, titled as for the above-mentioned third symposium, were published in 1983 by Springer-Verlag.

The third symposium, in which Enoch's papers appeared, has two additional papers under the broad heading of History of Optics. One is "Binocular Rivalries: Conflicts Between Pioneers of Research on Stereoscopic Vision (Cassini Lecture)" by N. J. Wade, pp. 2 - 10. The other is "Between Alhazen and Kepler: The Treatise 'On Sight' by Fabricius ab Aquapendente, Venice 1600" by H. M. Koelbing, pp. 11 - 14.

Wade's paper deals very analytically with the history of the concepts of stereopsis, the impact of Wheatstone's mirror stereoscope, the bitter disputes of Brewster and Wheatstone and of Brewster and Bell, and the conceptual contributions of numerous others. The article is thoroughly referenced.

Koelbing's paper is largely a review of the book "De Visione" by Girolamo Fabrici (ca. 1533 - 1619), a professor of anatomy and surgery at the University of Padova. His Latin name was Hieronymous Fabricius ab Aquapendente, identifying him with his place of birth, Acquapendente, now in central Italy. The book was published in 1600 with the subdivisional titles Anatomy of the eye, General physiology of the eye, or theory of vision, and Special physiology of the eye, in which "Fabricius discusses <u>physiological or visual optics</u>". Koelbing describes the treatise as "an exhaustive account of the science of sight at the end of the

sixteenth century", and that in visual optics it follows faithfully and learnedly Alhazen's "Perspectiva", the authoritative text of the era.

Talking books:

Talking books may hardly seem to be within the domain of visual science but they do relate especially to people who have certain visual limitations and to some who have normal vision but physical inability to manipulate a printed book. In the sense that one must be familiar with the kinds of visual handicaps for which talking books are indicated, the related knowledge is a legitimate part of visual science.

Such rationalization justifies mentioning here a free 1988 publication of the National Library Service for the Blind and Physically Handicapped, The Library of Congress, Washington, DC 20542, entitled, "Talking Books: Pioneering and Beyond" by Marilyn Lundell Majeska. The 108 + ix pages in 6" x 9" (15 x 23 cm.) paperback is almost totally history, well written and informative, supplemented by two pages in prognosis of the future of the National Library's talking book program.

The Library of Congress has provided various library services for the blind since 1897. Talking books, however, were first included in the service in 1934. The author describes in detail the technological, legislative, administrative, and organizational developments leading up to and following their initial use. It is an excellent historical reference as well as an interesting document.

The mystery of "blue":

In the October 1983 issue of the NOHS, Vol. 14, No. 4, p. 97, "'blue plate' glass imported from Holland" was mentioned without explanation in connection with a history of Japanese eyeglasses. In the January 1988 issue, Vol. 19, No. 1, p. 6, it was reported that Jehan Sadat mentioned blue painted doors on some current Egyptian houses to ward off jinns (evil spirits). Possibly sensitized by these comments, OHS member Charles Letocha noticed several very blue window panes on the second floor of a house in Washington, DC, on 16th Street a couple miles north of the White House. To document his observation he submitted a front view photograph. The window glass is indeed blue. The house looks a bit old but probably of 20th century vintage.

Astigmatism tests:

Jay M. Enoch, Robert F. Heitz, and Vasudevan Lakshminarayanan

remind us that the many tests and devices described in the 20th century literature for measuring astigmatism might lead us to believe that the basic principle of astigmatism measurement is quite recent in origin. Not so. In an article in the July 1988 issue of Ophthalmic and Physiological Optics, Vol. 8, pp. 349 - 350, entitled "John Frederick William Herschel on testing for astigmatism in 1845" they observed that although Herschel's article appeared in an 1845 edition of Encyclopaedia Metropolitana, the article itself was dated "December 12, 1827" and that it was published separately in 1828.

Herschel (1792 - 1872) in turn mentioned a prior paper by G. B. Airy (1801 - 1892) read before the Cambridge Philosophical Society in 1825 and published in 1827 describing his use of a crossline figure to detect and measure the astigmatism of his own left eye. Also, in 1826, J. I. Hawkins (1772 - 1855) suggested the use of printed music staves as a test target for astigmatism determination with an optometer.

Another memorial:

The Pennsylvania College of Optometry has established a Milton J. Eger Scholarship Fund in memory of the late editor of the Journal of the AOA.

Optometric developments in India:

From Narendra Kumar, editor and publisher of Optometry Today in India, we received a copy of his paper presented at a workshop sponsored by the Indian National Society to Prevent Blindness, March 15-17, 1989, in New Delhi. This was the first time that an optometrist was invited to participate, so Dr. Kumar took the opportunity to include a bit of history of his profession in India under the title of "Role of Paramedical Personnel in NPCB." The NPCB is an abbreviation for National Programme on Control of Blindness, the theme of the workshop. Kumar's paper also appears in his journal, Vol. 15, No. 2, 1989, pp. 31-32.

He identifies the introduction of the term "optometry" with the opening of two-year diploma courses in optometry in several eye hospitals in 1958 with the expressed two-fold purpose of "lessening the burden of time-consuming refraction and orthoptic work on the already busy ophthalmologist; and saving the members of the public from exploitation in the matter of scientific dispensing of spectacles in the hands of the traditionally unqualified optician."

He then reports slow progress until there were about a dozen such optometry schools in operation, and priorities had shifted toward two-year diploma courses in "clinical technology" in optometry and orthoptics as offered at AIIMS (full name not given;

apparently an academic institution of higher education). Subsequently there appeared on the scene a three-year B.Sc. (Hons.) degree course in "ophthalmic techniques" in place of the two-year diploma course in clinical technology, apparently to produce ophthalmological assistants while the unimproved two-year diploma courses continued and are still continuing at optometry schools in eye hospitals "which resulted in the continued production of half-baked optometrists".

He adds, "The Elite School of Optometry at Madras then emerged as a blessing in disguise, to run a comprehensive three-year degree course in optometry followed by a one year's internship."

At a later point in his talk Kumar parenthetically identifies ophthalmology as "the Mother of Optometry". This assertion suggests that Kumar's historical grasp of optometry probably dates to his first involvement in the middle '50s. This coincides with the establishment of schools in India having optometric identity under ophthalmological conception. The analogous perceptive phenomenon occurs among many American optometrists who associate their professional origin with the introduction of the more recently adopted term optometry rather than with the prior centuries of our existence under the identification of opticians and other nomenclature. By no means is ophthalmology the mother of optometry; at best she is optically a prying maiden aunt.

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