

INDIANA UNIVERSITY

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Library

NEWSLETTER  
OF THE

OPTOMETRIC HISTORICAL SOCIETY,  
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1990 OHS Executive Board:

Forty-four members responded by mailing in their completed ballots and "resoundingly" elected David Goss and Alfred Rosenbloom to the OHS Executive Board. Listed below is the full Executive Board and the expiration year of each member's term. The board members will elect officers for 1990 among themselves and the results will be announced in the next Newsletter.

OPTOMETRY LIBRARY

28 FEB 1990

INDIANA UNIVERSITY

David Goss	1993
Charles Haine	1992
Bridget Kowalczyk	1990
Meredith Morgan	1990
Douglas Penisten	1992
Alfred Rosenbloom	1993
T. David Williams	1991

The 1989 reminisce-in:

Squeezed into a single hour between, and in competition with, uncounted other activities occurring at the annual meeting of the American Academy of Optometry at the Hyatt Regency Hotel at 6:15 p.m. December 9, in New Orleans, some 40 persons gathered to hear J. William Rosenthal, M.D., talk about antique scissors glasses and pince-nez. Admitting that it was a difficult assignment with a number of long experienced optometrists in the audience, Dr. Rosenthal illustrated with his slides the developmental changes in design that began to occur approximately with George Washington's dependency on spectacles and through much of the 19th century. His collection is recognized as one of the world's finest, and his interpretations of the utilization of visual aids are well thought out. His commentary covered frame material, use of springs, handles, rivets, and hinges, artistic craftsmanship, the need to control rotations of cylindrical lenses, fashions and fads, and even special occupational requirements. He also pointed up the limitations of discovery of antique eyewear such as represented by even the occasional find of rarities in the long undisturbed excrement of early "privies" or outdoor toilets.

Prior to the talk was a presentation of the Hofstetter Recognition Award to Professor E.J. Fisher by OHS President T. David Williams. To commemorate the 20th anniversary of the

Society, a specially made cake was provided for all present to share.

A meeting of the OHS Board of Directors was called for a 7:00 a.m. breakfast the following day, which all of the Directors attended.

OHS President T. David Williams tells us:

While we were at Christchurch priory, I noticed something which I thought might make a blurb for NOHS. Here goes:

In a side chapel behind the alter at Christchurch priory in southern England are the tombs of Sir John Chidicock (d 1449) and his wife, Lady Katherine (d 1461). These are table tombs with reclining figures atop them, carved from alabaster. The facial details of both figures are nearly obliterated, and even portions of the heads have been smoothed away. According to John Forster, a guide at the priory who has written notes on many of the fascinating features of the priory (including the Miraculous Beam), there was a legend which said that if you scrape some alabaster from the face of such figures and mix it with pure water, the resulting mixture would be an infallible cure for eye infections. A lot of people must have scraped away at these figures with pocket knives to reduce them to their present state, a mute testimony to the frequency of eye afflictions at the time.

The curriculum in 1915:

Recently Dean Richard Hill sent us a photocopy of The Ohio State University Bulletin, vol. XX, July, 1915, no. 2, entitled APPLIED OPTICS, 1915-1916. This is of historical interest because The Ohio State University is the oldest continuous university degree program in optometry. Its first optometry courses were offered there in 1914 as a two-year curriculum but expanded in 1915 into a four-year curriculum leading to the Bachelor's Degree. Identified in the Bulletin as Professor and Director is Charles Sheard and included is the information that his office was in 206 Physics Building, telephone 99324, and his residence at 367 West Tenth Ave., telephone 16109.

\* The foreword, quite evidently written by Sheard, presumably reflects the concept of optometry of that era though neither the word optometrist nor optician appears therein nor elsewhere in the course descriptions or in other parts of the 12 page publication. The foreword reads as follows:

The primary purpose of this curriculum is to properly and adequately prepare its students to enter the field of optics as applied to the detection and correction of the errors of refraction, accommodation and associated functions of the eye. To this end the curriculum embodies the following essential and allied

branches of instruction: (1) general science and mathematics, (2) fundamentals of anatomy, histology, physiology and pathology of the human body, (3) special courses on the anatomy and the physiology of the eye, (4) instruction in the detection of pathological and diseased conditions of the eye, and (5) a thorough training in theoretical and practical optics and the applications of optical principles to the correction of visual errors, with an adequate provision for clinical practice in both the refractive and pathological fields. Provision is also made for some elective courses, in order that the student may continue any line of instruction previously pursued or select courses which are germane to his work.

The Applied Optics courses are all listed as being taught by "Mr. Sheard," "Mr. Sheard and assistants," or "Mr. Sheard and lecturers." They are subtitled, Theoretical Optics, Mechanical Optics, Theoretical Applied Optics, and Clinical Practice. Other courses in the total curriculum included Anatomy, Chemistry, Mechanical Drawing, English, Mathematics, Pathology, Physics, Physiology, and Psychology.

The course descriptions throughout are quite conventional, even classic, with perhaps the exception of a single phrase in a sentence setting forth the coverage of lectures and demonstrations in Theoretical Applied Optics in the final semester. The phrase reads, ". . . and the value of lenses as economic agencies in binocular vision." Did this have real meaning in contemporary lingo, or was it a rhetorical ploy to clear the topic through an interdisciplinary university faculty committee?

#### Kingslake and Optometry:

Professor and Mrs. (Hilda) Randolph Kingslake were honored for their contributions to optics by the establishment of an academic chair in their names at the University of Rochester Institute of Optics. In a recent interview reported in the October 1989 issue of Optics News, vol. 15, no. 10, pp. 4-5 & 32, Professor Kingslake includes a description of his involvement with optometric education.

After studying lens design for two years at Imperial College in London he was lured to America in 1929 by President Rush Rhees of the University of Rochester, who had come to England seeking faculty for the new Institute of Optics. Describing the early days of the Institute, Kingslake says, "At first we had only optometry students. There had been for many years a highly successful School of Optometry in Rochester, but New York State had recently passed a law requiring anyone practicing optometry to have a university degree. So in 1927, the Rochester School of Optometry joined the University so that its students could earn a bachelor's degree. This group constituted our first students in the new Institute of Optics. I taught geometrical optics and Taylor taught physical optics. The optometry group ultimately grew to about 40 students-

--it is all in my wife's History of the Institute of Optics, written for the 50th anniversary in 1979. In 1936, for various reasons the University decided to abandon the optometry course, particularly as Columbia University could easily handle our relatively small student body."

#### World War II and German ophthalmics:

Featured in the history columns of the September/October 1989 issue of Augenoptik, Vol. 106, no. 5, pp. 146-148, are descriptions of the impact of World War II destruction and the initial recovery period through 1949 in relation to optometry, optometrists, and ophthalmic supplies in Berlin, Rathenow, and Jena and to the publishing of the journal itself.

#### Leadership history:

A full page of the September/October, 1989, issue of Texas Optometry, vol. 45, no. 5, p. 20, is devoted to a chronological year-by-year list of the successive presidents of the Texas Optometric Association Auxiliary (optometrists' spouses) from 1927 through 1989. Also shown is each president's city of residence.

One might wonder what value such a list could possibly have. It does, of course, convey the message that the Auxiliary must have had continuing significance throughout its more than 60 years just to have existed so long. Since a great majority of the listed wives must still be living, they may well be archival resources of optometric and American organizational history. It also indicates that somewhere there is a file of accumulated minutes and documents from which this list was derived by an unidentified author. Where might it be? Have steps been taken to assure its preservation?

At least this list itself, by virtue of its publication, will be preserved in a few institutional libraries, and possibly nowhere else. The landmarks of history erode quickly and quietly.

#### A persistent historical hoax?

Dean Jay Enoch writes us as follows:

When I was in Florence, Italy, recently, I took the opportunity to visit Santa Maria Maggiore Church. This church is very close to the Florence Cathedral. If one draws a line from the Cathedral through the Baptistry and goes down the main street, SM Maggiore is the first church one encounters. The statement on the wall plaque dealing with Salvino Armati is slightly different than that listed in several books. I am enclosing a copy with this letter. As is stated correctly in many books, it is located at the back of a small chapel on the left hand side of the church. In fact, it is at the very back on the left wall of the chapel.

That which is of particular interest is that if one enters the priest's quarters which lie just behind this chapel, there are two rooms. These are used by the priest for robing and preparation of ceremonies.

I communicated my interest in Armati to what you might call the Deacon or Alicote. In the first of the two rooms, on the same wall of the church where the plaque lies, there is a broad cabinet on which there is a large centered crucifix. To the right of that crucifix is a small granite or marble bust. The Alicote pointed out that that was a bust of Armati.

The wording on the plaque is as follows:

Qui Diace  
Salvino d'Alvino  
d'Armato Delgi Armati  
di Firenze  
Inventor degli occhiali  
dio gli perdoni le peccola  
Anno D. MCCCXVII

An exhaustive analysis and convincing challenge of the validity of this famous display was made by Edward Rosen in a two-part article entitled "The Invention of Eyeglasses" in the Journal of the History of Medicine, Vol. 11, 1956, pp. 13-46 and 183-218 (available from ILAMO).

#### Ina Cramer deceased:

A news item in the Southern College of Optometry Newsletter, Summer 1989, p. 16, informs us that Mrs. Ina B. Cramer passed away on Feb. 25, 1989. She and Dr. W. R. Cramer purchased the Southern College of Optometry from its founder, Dr. J. J. Horton in 1937. She served as Secretary/Treasurer until she retired in 1968.

#### Notes from Muth:

OHS member Eric P. Muth, Ph.D., sent us a photocopy of J. H. Hammon's patent #2,177,021 of Oct. 24, 1939 for a fused multifocal ophthalmic lens, later to become well known as the Panoptic. The detailed document consists of four pages of 26 line drawings plus eight pages of descriptive legend. This will be forwarded to the International Library, Archives, and Museum of Optometry.

He also tells us that he offers for sale a 75 piece quality vision aids collection for \$16,000. His address is 25 Parkland Place, Milford, Connecticut 06460, USA, telephone 203-874-4595.

Further, he included a copy of his paper on Thomas Jefferson's reading glasses which appeared in the August, 1989, issue of the Optical Monthly of Korea, pp. 57-60.

The rare books shelf:

Antiquarian Science, Medicine, and Instruments, Catalog 21, Winter 1989 (P. O. Box 367, Dracut, Mass. 01826, USA) includes the following rarities:

21. Beer, Georg Joseph, Pflege gesunder und geschwacher augen, 1800 (\$1,000)
36. Bohne, W., Hand-book for opticians, 1892 (\$150)
38. Boscovich, Roger Joseph, Dissertations quinque ad dioptricam pertinentes, 1767 (\$950)
49. Brewster, David, A treatise on optics, 1833 (\$100)
50. Brewster, David, The stereoscope, 1856 (\$275)
54. Browne, Edgar A., How to use the ophthalmoscope, 1877 (\$90)
108. Donders, F.C., On the anomalies of accommodation and refraction of the eye, 1864 (\$225)
114. Emerson, William, The elements of optics, 1768 (\$450)
183. Lawrence, William, A treatise on diseases of the eye, 1834 (\$400)
195. Luckiesh, M., Visual illusions, 1922 (\$75)
226. Czapski, Siegfried, Theorie der optischen instrumente nach Abbe, 1893 (\$150)
266. Molyneux, William, Dioptrica nova, 1709 (\$975)
272. Mueller, Johannes, Ueber die phantastischen gesichtserscheinungen, 1826 (\$1,275)
324. Prentice, Charles F., A treatise on simple and compound ophthalmic lenses, 1866 (\$125)
359. Schweigger, Carl, Handbuch der speciellen augenheilkunde, 1871 (\$225)
371. Scriptores optici (Edited by Francis Maseres and Charles Babbage), 1823 (\$1,250)
430. Wilde, Emil, Geschichte der optik, 1838-43 (\$300)

The catalog provides full details on each item listed.

The oval shape:

OHS member Eric Muth provided a preliminary draft of a manuscript of this title which he plans eventually to submit for publication elsewhere. This is as it should be for it deserves direct availability to a wider spectrum of readers.

The paper traces the evolution of spectacle lens shapes. The first known shapes were round and they dominated the scene for four centuries before cylindrical corrections and large lenses posed new problems. New frame materials, edging machinery, and styling were influential factors as well. The first evidence of a shape other than round is in a 1510 painting, the next evidence appearing in 1702. Muth theorizes that the advent of temple spectacles prompted the demand for oval lenses to enable the presbyope to peer over the lenses more easily for distance viewing.

Filius Thuringorum et Polonorum:

Lacking a family name and possessing only his given name, Witelo (ca. 1235 - ca. 1290) identified his parental heritage with the above Latin phrase meaning "Son of a Thuringian and a Pole." His given name Witelo has variously appeared in the literature as Vitellio or Vitello. Apparently born in southwestern Poland and dying in or near Wroclaw, he considered Poland his homeland.

He studied in Wroclaw and Paris (France), attaining the Master of Liberal Arts degree. He taught at a church school in Legnica, subsequently as a tutor to a duke, giving lectures in arts at the University of Padua (Italy), and later as a resident scholar at the Papal Court at Viterbo near Rome. In 1275 he was named Canon of the Wroclaw Cathedral, working also as a diplomat in three successive royal courts. He probably spent the last years of his life in a monastery near Wroclaw.

Besides teaching, he published extensively on nature and philosophy and corresponded internationally with scientists in Silesia, Prague, Salzburg, and elsewhere. The subjects of his treatises included philosophy, mathematics, astronomy, physiology, and meteorology, copies of most of which have not survived. His opus of great fame, however, was the ten-volume Peri optikes, Perspectiva in 1273 which contains the whole knowledge of optics hitherto possessed by known scientists, Greek, Arab, and contemporary. It was recognized as the best and most comprehensive work of its kind by such intellectuals as Leonardo da Vinci, Roger Bacon, John Peckham, and Johannes Kepler. Twenty-three handwritten copies survive as well as copies of three editions printed in the 16th century.

Reflecting the broadly inclusive meaning of the word optics prior to this century, the work covered virtually every known facet of visual science, including the structure and function of the eye and even meteorological optics. Perhaps fortuitously it served as the major if not the exclusive scientific reference basic to the

understanding of spectacle lenses, which appeared only a few years later.

Prompting this commentary is the fact that Witelo is given a substantial write-up in a 1989 book in two languages, Polish and English, entitled "Polish contribution to medicine," authored by Roman K. Meissner and Jan M. Hasik and published by the Medical Academy in Poznan in joint celebration of its 70th anniversary with the University of Poznan, the Academy of Agriculture, and the Academy of Physical Training.

In this same anniversary year the Academy is establishing a school of optometry. One of the creative thoughts being considered in this connection is the possibility of designing a medal to be identified with Witelo as Poland's optometric patriarch for possible use in recognition of major benefactors of the school.

### A tangled angle:

"Would Brewster recognize today's Brewster angle?" is the title of an article by Akhlesh Lakhtakia in the June 1989 issue of Optics News, Vol. 15, no. 6, pp. 14-17. Referring to a Pakistani postage stamp commemorating Ibn Al-Haitham (ca. 965-1039), the author traces the earliest optical concepts to the Arabian optician and makes the comment that "Later opticians busied themselves with construction and improvements of optical instruments and did not bother about the nature of light." Then through Rene Descartes (1596-1650), Pierre de Fermat (1601-1665), Willebrord van Snel van Royen (1580-1626), Erasmus Bartholinus (1625-1698), Christiaan Huygens (1629-1695), Sir Isaac Newton (1642-1727), and Etienne-Louis Malus (1775-1812), he leads into the polarizing experiments by Sir David Brewster (1781-1868) for which the law and angle were derived.

Next, the author extracts from numerous currently available texts the discussions of the Brewster angle and finds two definitions emerging, one being the "zero-reflection angle, for which a parallel-polarized plane wave is totally transmitted," and the other being "that of a polarizing angle, for which an unpolarized plane wave is reflected as a linearly-polarized plane wave."

\* He appeals to the Optical Society of America to resolve the confusion.

### Who was Isaac Barrow (1630-1677)?

If you check Webster's Biographical Dictionary (1983), you will read only of Isaac Barrow (1614-1680), a famous uncle. The Dictionary of Scientific Biography on the other hand features a lengthy account of the nephew, about whom this commentary relates. A recent (1987) publication of the Worshipful Company of Spectacle Makers is helping to shed more light on the role of a widely



ignored contributor to the development of optical science, especially as related to vision. The book, a 29x21x2 mm. handsome paperback, is entitled "Isaac Barrow's Optical Lectures 1667," an English translation from the Latin by a Belfast teacher of classics very helpfully edited by A. G. Bennett and D. F. Edgar of The City University, London. The price is about £25.

Is it pleasantly readable? Indeed it is, unless you happen to be so unfortunate as to have abhorred the study of geometric optics. The two optometric editors have rephrased all proofs in terms of current nomenclature, symbols, sign conventions, and mathematical notation and have redrawn or touched up as necessary the more than 200 optical diagrams as they should appear in a modern work.

Why has Barrow been largely overlooked? Contemporarily he was not. The more glamorous Isaac Newton (1642-1727) was in his audience and some years later succeeded him in the chair to expand further in optics. Historically Barrow became overshadowed as well by such other contemporary, or almost contemporary, optical giants as Kepler (1571-1630), Descartes (1596-1650), and Huygens (1629-1695) and even on a broader scale by his uncle of the same name only 16 years older. Finally, as the editors suggest, with the drifting away from Latin as the language of science, the changes of optical conventions, and the lack of a good translation into English, the oblivion deepened. This book should re-establish Barrow's rightful place in history, with the especially touching circumstance that he was born the year following the granting of the charter of the Worshipful Spectacle Makers Company by Charles I in 1629.

The editors have also included many interesting biographical details of Barrow's life and career as well as annotations of the 18 lectures to clarify concepts in modern terms and to provide some pertinent comments about other contemporary or prior optical scientists whose concepts related significantly to those expressed by Barrow. The text seems also to have captured an occasional tongue-in-cheek and pleasantly self-deprecating style which seems to fit Barrow's personality as conveyed in the biographical notes.

#### Keratoconus care, 1888:

A thoroughly documented paper by Richard M. Pearson entitled "Kalt, Keratoconus, and the Contact Lens" in the September 1989 issue of Optometry and Vision Science, vol. 66, no. 9, pp. 643-646, includes the translation of an 1888 report by Professor Photinos Panas (1832-1903) of the work of his junior colleague Dr. Eugene Kalt (1861-1941) on the use of contact shells in keratoconus. In his incidental discussion of the report Pearson not only cites numerous original sources and corrects several historical errors but he also provides much contemporarily related background about the earliest ophthalmological observations and interpretations of the potential significance of contact lenses for whatever purposes as well as contemporary surgical attempts to manage or correct

keratoconus and the status of the lens fabricating technology of the day.

For me the article was especially fascinating in relation to the fact that only a few years later, 1910, a landmark malpractice suit involving a case of keratoconus in Manchester, England, served as a turning point in the professional role of optometrists (then called opticians) in the whole English speaking world. This was the case of Markham vs. Wood, Abrahams, briefly described in this newsletter in April 1971, vol. 2, no. 1, pp. 3-4 and January 1972, vol. 3, no. 1, p. 8. The contrast of the Continental ophthalmological view of keratoconus as portrayed by author Pearson's documentation with that expressed in testimony at the English trial reminds one that our historical concepts depend more on the historian than on the facts. Pearson seems to have dug up the facts.

H.W H

The other OHS:

The annual meeting of the Ocular Heritage Society will be held on May 11 and 12th, 1990, in New York City at the Barbizon Hotel, 63rd and Lexington. There will be two half-day papers sessions and tours of optical museums. Contact Dr. E. J. (Ted) Fisher for further details at: School of Optometry, University of Waterloo, Waterloo, Ontario N2L 3G1, Canada.

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