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NEWSLETTER  
OF THE  
OPTOMETRIC HISTORICAL SOCIETY  
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OHS annual meeting:

The 1990 annual meeting of the Optometric Historical Society will be held in Nashville, Tennessee, on Saturday, December 8, from 6:00-7:30 p.m. in the Centennial B room of the Opryland Hotel. This annual event is held in conjunction with the annual meeting of the American Academy of Optometry and provides an opportunity for OHS members and friends to meet, discuss matters of common interest, and hear an historical presentation. This year's speaker will be OHS Newsletter managing editor Doug Penisten. He will give a talk concerning the large variety of untapped sources on the history of optometry in America entitled, "The History of Optometry in America: Information Waiting To Be Found."

Be sure you reserve this time to come and join us. In fact, bring a friend. We'll show them that history can be contagious!

Call for nominations:

It is time for you to send in your nominations, or renominations, for the two positions on the OHS Executive Board which will expire at the end of this year. The two members whose term will expire are Bridget Kowalczyk and Meredith Morgan. By all means, do not hesitate to include yourself as a candidate if such responsibility interests you. Please send your nominations to: Doug Penisten, College of Optometry, Northeastern State University, Tahlequah, OK 74464-7098.

Final Reminder:

This will be the last issue mailed to OHS members who have not paid their annual dues. An updated membership list will be included in the January 1991 Newsletter.

Optometry and world history:

Elsewhere in this newsletter appear two passages from "The Columbia History of the World" published in 1972 (reprinted 1986) by Harper and Row under the editorship of John A. Garraty and Peter Gay. These excerpts were my total findings in any way related to the eye, vision, or optometry. In the 1,257 pages brilliantly authored by forty prominent historians tracing the history of human development and civilization such mundane topics as spectacles, eyeglasses, and optics are quite totally ignored.

In my perusal I was repeatedly impressed by the youngness of so many of the early movers of society, well under the presbyopic threshold of forty years. Today's movers, in contrast, whether in the Senate chamber, the corporate board room, or at military headquarters, are already wearing bifocals or carrying them in their most accessible pockets. In other words, before the Renaissance the fate of society seemed largely in the hands of youth, e.g. Christ, Nero, et. al., whereas today it is most common even for sixty and seventy year olds to run for high political office. Their optometric visual aids are surely their primary preservers of competence. Should not such facts be weighed in our interpretations of historical developments?

Our opinion polls repeatedly demonstrate significant differences of judgement at different age levels. It seems to me likely, therefore, that the invention of spectacles, and indeed the total contributions of optometry, have had impacts on society at least comparable to many a famous political coup or military victory. The role of technological developments of all kinds--whether railroads, rubber tires, barbed wire, pharmaceuticals, electricity, textiles, or paper, ad infinitum--each has greatly affected social movements, political decisions, migratory trends, and moral philosophy just as retinoscopy, cylindrical lens power, ophthalmoscopy, plastic lenses, contacts, and many other ophthalmic developments have dictated significant changes of modes of optometric practice. Historically, these can be identified with the sight-testing spectacle peddlers beginning in the 14th century, evolving into the guild pattern in the 16th century, through the Daza de Valdez modernity style of the 17th century, the frontier jeweler-opticians of the 19th century, and the necessitated university-level qualifications of the 20th century. Each of these phases can be attributed as logically to contemporary technological developments as to any other single category of influences. Surely every other social order is comparably influenced by technological and, of course, environmental changes.

That this may be true does not seem to be very obvious to the forty contributors to this opus, probably a manifestation of what C.P. Snow called the two cultures. In contrast, I happen to be convinced that optometry, even in its most primitive stages, has played a significant and identifiable role in the history of the world.

H.W H.

#### Antiques bought and sold:

An unsolicited airmail envelope addressed correctly to me (H.W H.) at my home but without a return address contains an attractive folder advertising "Optische Antiquitäten, 1650-1950" from Gotz & Hannelore Remus, Affentorplatz 18, 6 Frankfurt 70 (West Germany), Tel. 069/617324. Categorically listed are spectacles, lorgnettes, opera glasses, telescopes, loupes, microscopes, ophthalmic instruments, trial lens sets, and other original pieces

with optical motifs. The recipient is invited to call or write to consult on starting or expanding an optical collection. An attached sticker indicates a scheduled display at the Weltmesse der Augenoptik (optometric world fair) in Cologne on April 21-24, 1990. Also on the back of the folder is a very legibly inscribed note in English. "If you want to buy or to sell antique optical items, please inform me. Best regards. [Signature illegible.]"

Also included in the envelope is a self-addressed postcard on which one can express an interest in any of 21 categories of ophthalmic antiques merely by circling or checking the listed items.

### Early industrial optometry:

The August 1929 issue of The Executive's Magazine, Vol. 13, no. 3, pp. 25-26, 40-41, includes an editor's interview of the late Felix A. Koetting, O.D., in a feature article entitled, "Can the Medical Profession Profitably Adopt Commercial Methods?"

In support of his views Dr. Koetting quotes the remarks of then Secretary of the Interior Ray Wilbur indicting the healing professions, including Optometry, for their unjustifiable and inefficient business management.

As President of the Eyesight Survey Corporation Dr. Koetting offers an answer to Wilbur's criticisms by describing the carefully planned services of his corporation. He points out that in two years the corporation's optometric staff had surveyed 45,000 employees in 285 industrial plants in and near the St. Louis area. They found 39.4% of the workers with some degree of defective vision and not wearing glasses. Another 10% were wearing obsolete or improper spectacle corrections.

It is not clear how the program was paid for but an actuarial approach is implied by the statements that "The worker is free to accept or reject the recommendation" and that, "About 23 percent accept and the volume of work thus created is sufficient to pay for our staff of ten specialists, carry our overhead, and make it worthwhile for us to continue in business."

Various benefits are described in terms of productivity, safety, and liability. Dr. Koetting also described his concept of how an analogous system could be applied comprehensively to all areas of health services.

### Who owns Zeiss?

A gift from Florence Gaynes from the collection of her late husband Ernest Gaynes, O.D. is an unusual 280 page, 24 x 18 cm. hard-cover book entitled, "The Zeiss Works and the Carl Zeiss Foundation in Jena" by Prof. Felix Auerbach, translated into English from the 5th German Edition by R. Kanthack, published in

London but printed in Germany. The precise date of publication is not shown, but several entries are dated 1924 and one of the 255 illustrations is a 1926 folded, paste-in aerial view of the huge plant.

A subtitle explains that the text deals with "their scientific, technical and sociological development and importance popularly described." It is pointed out in the foreword that, in addition to its appealing to "those interested in the manufacture and development of optical instruments and their uses", the extensive detail of Abbe's scheme "for the solution of the eternal problem of capital and labour. . . will interest a much larger circle of readers".

The author's philosophical springboard is his division of practical optical history into three undulatory periods, - - - scientific, unscientific, and scientific, identified approximately with, (1) the Moors and early Western opticians, (2) the rule-of-thumb era of optical craftsmen, and (3) the age of scientific research as exemplified by Fraunhofer (1787-1826). Then arrived Zeiss (1816-1888), the optical businessman, Abbe (1840-1905), the optical scientist and technologist, and Schott (1851-?), the optical glassmaker, successively joining the Jena complex as a team.

Almost two-thirds of the book describes the key personalities and the well explained technical and developmental details of 150 or more Zeiss, optical and ophthalmic instruments and products including their application and utilization in laboratories, industry, and the military. Most of the remainder relates to the industrial philosophy, functions, and involvements of the relatively unique organization operating under the Zeiss rubric.

The sequence of ownership may be cursorily described as follows: 1846-1875, Carl Zeiss was the sole owner; 1875-1881, Zeiss and Abbe were joint owners; 1881-1888, Carl Zeiss and his son Roderick and Abbe were in partnership; in 1888 Carl died and Roderick retired leaving Abbe as the "captain" or sole owner; in 1891 Abbe created the "Carl Zeiss Foundation" and deeded the total assets of the company over to it. He personally authored the provisions of the charter in such thorough detail as to win him an honorary doctor of laws degree from a university faculty of law (plus some criticism that he had deprived his widowed wife and daughter of a share of his estate). The charter was officially approved by the grand-duke of Saxony in 1896.

One of the many conditions of operation in the charter was a directive that no employee, chief or otherwise, may receive a salary greater than 10 times the average annual wages of employees over 24 years of age with three or more years of seniority. Other provisions covered problems of work administration, piecework pay, work week length, welfare, pensions, patent rights, etc. Financial beneficiaries of the foundation included the University of Jena, the optometry school, numerous local institutions, and municipal projects. The university and municipality both had advisory

representation in the foundation's administration, as did the employees.

The foundation owned the Zeiss works lock, stock, and barrel, but who owned the foundation? Who appointed the governing board? The author devoted dozens of pages trying to answer these questions but, if he did, I missed it. Yet it was no minor issue in German industry, for the firm had a peak of 9,300 employees in 1916.

Readers of this newsletter may recall that, briefly reviewed in the January 1973 issue, Vol. 4, No. 1, pp. 7-9, was a celebrated federal court case attempting to resolve the question inasmuch as there are presently two Zeiss firms, one in East Germany and one in West Germany, and both claimed rights to the name Zeiss!

H. W H.

### Perspective history:

In the chapter entitled, "Renaissance Art" of "The Columbia History of the World," 1986, Professor Eugene F. Rice, Jr. comments on perspective primarily as an invention and only metaphorically as a functional perceptual attribute as follows:

The most distinctive artistic invention of the Renaissance was perspective. It distinguishes Renaissance painting from medieval painting. But not only that. Exact geometrical perspective is uniquely found in Western art between the early fifteenth and the early twentieth centuries. Wall painting and mosaics from Pompeii suggest that an approximation of it was known to Hellenistic and Roman artists. Many Chinese and Japanese landscape painters were able, by empirical means, to achieve breathtaking illusions of distance. However, exact perspective construction--and more important the wish itself to depict objects in a unified space--was invented in Florence about 1420, remained perhaps the most important single characteristic of Western art until the Post-Impressionists, was unknown to any previous culture, and is absent from the art of all non-Western civilizations.

The invention of perspective threw open a window on the world. "I describe a rectangle of whatever size I please," wrote Alberti, "and I imagine it to be an open window through which I view whatever is to be depicted there." In the Renaissance the painting surface lost its opacity and became a clear pane through which we look into a world of rationally related solids, where the objects represented seem to have the same sizes, shapes, and positions relative to each other that the actual objects located in actual space would have if seen from a single viewpoint. Using a geometry of converging visual rays, perspective projects the illusion of a

unified, continuous, and infinite three-dimensional space upon a two-dimensional plane. Probably invented by the architect Brunelleschi, with the sculptor Donatello and the painter Masaccio one of the seminal trio who founded the Renaissance style in Florence, and in Italy, and first described by Alberti, its principles and methods were fully worked out during the fifteenth and early sixteenth centuries by painter-theorists like Piero della Francesca, Leonardo, and Albrecht Dürer. The earliest surviving work of art that uses the new technique is Masaccio's fresco of the Trinity in the church of Santa Maria Novella in Florence, painted about 1427.

There is a suggestive parallel between the discovery of perspective in art and the renewed sense of historical distance which enabled Renaissance scholars and artists to understand antiquity more exactly and objectively. Medieval men had very little perspective on antiquity because no chronological line divided it from their own age. They knew only two great periods, one of light and one of darkness, before Christ and after Christ.

This bit of historical commentary reminds me of a psychological study in South Africa brought to my attention about thirty years ago showing a high dependency of perspective appreciation on literacy. The experiment showed that illiterates were unable to judge two-dimensional portrayal of distances by the relative size of trees, people, etc. whereas literate control subjects had no difficulty. I had some misgivings about their experimental results, but in the light of Professor Rice's commentary, I now wonder if perspective is not a bit more complex than ordinarily implied by our conventional geometric explanation.

H.W H.

#### Ancient Near East:

In the chapter entitled "Mesopotamia" in "The Columbia History of the World," 1986, Professor Elias J. Bickerman comments on the laws of Hammurabi (ca. 18th century B.C.) as follows:

In pre-Hammurabi laws a bodily injury was compensated by the payment of damages; 60 shekels for a lost eye, and so on. In the laws of Hammurabi the system remained the same for a mušhkenum, a free man of lesser degree, but if a "gentleman" blinded an eye of another "gentleman" the principle of exact retaliation was applied: An eye for an eye, a tooth for a tooth. Hammurabi does not say anything about the bodily injury inflicted on a "gentleman" by a mušhkenum, but we can be sure it brought dire consequences. Hammurabi's point of view was pragmatic. The bodily integrity of a rich man was worth more than that of a poor man, and conversely a rich man could afford bigger medical expenses. Thus, the legal

fee for an eye operation on a "gentleman" was twice as much as the fee to be paid by a muškenum.

The principle that social status determined one's rights and obligations also applied to slaves and women. The slave's function was to work for his owner. A citizen who blinded the eye of a slave paid a half of the latter's value to the owner.

### Book review:

Spectacles, Lorgnettes and Monocles. D.C. Davidson. 1989, Shire Publications, Cromwell House, Church Street, Princes Risborough, Bucks, England HP17 9AJ. 32 pp. 47 figs. (ca. \$3.50).

This is a well written summation of the history and development of eyewear through the centuries. While there will be little that is new for any serious student of the topic, the excellent arrangement of material, splendid photographic illustrations and typography make this an interesting handbook. It is written in simple, clear language which any lay person can understand. An attractively printed coloured cover makes this an appealing and useful booklet to own.

Mr. Davidson, the president of the Ophthalmic Antiques Collectors Club, is highly qualified to produce such a fine booklet. He is a Fellow of the Worshipful Company of Spectacle Makers, and has practiced as an ophthalmic optician in England for many years. Mr. Davidson has an extensive collection of early spectacles. His book makes a worthy addition to the growing literature on the history of eyewear.

Every optometrist would find this an attractive and educational addition for his waiting room. Its low cost makes it possible to give it to any who show an interest or to casual friends. I'd suggest you order two or three to have them on hand.

- E.J. Fisher

### "Restoring Ophthalmic Antiques":

This is the title of what must be a unique booklet of friendly advice and instruction by Ronald J.S. MacGregor, the new editor of the newsletter of the Ophthalmic Antiques International Collectors Club, 47 Chapelwell Street, Saltcoats, Ayrshire, KA21 5EB, U.K. It consists of a 40-page, paper-covered 14 X 21 cm. easy-to-read manual of procedures and helpful hints on cleaning, repairing, gluing, gilding, electroplating, and otherwise restoring and preserving almost every conceivable material of which ophthalmic antiques have been made. Collectible ophthalmic items include lenses, metals, shell, documents, leather, shagreen, eye baths, cases, and instruments. The booklet is a 1990 publication of the Club on a nonprofit basis and is available from Mr. MacGregor at £2.50 plus £0.68 (surface) or £1.70 (air) in U.S.A.

Collectors meet:

Mr. Ronald J.S. MacGregor, 47 Chapelwell Street, Saltcoats, Ayrshire, KA21 5EB, Scotland, U.K., sent us a copy of the July 1990 issue of the Ophthalmic Antiques International Collectors Club Newsletter, No. 32. He is the new editor, replacing Derek Davidson of eight years tenure. He informs us that he has practiced optometry for 34 years, is the son of an ophthalmic optician, has two optometric sons, and has become a collector of ophthalmic antiques.

The newsletter includes an article entitled "Antique Collector's Dream" by octogenarian Hugh Orr, Honorary Curator of the B.O.A. Foundation Museum in London. In the article he reports finding a pair of spectacles made by Edward Scarlett in about 1730. He describes them in meticulous detail together with substantial information about Mr. Scarlett, Optician to His Majesty King George the Second and Master of the S.M.C. (1720-1721).

Another item in the newsletter relates to a trip made by five club members in a three-day visit to the Optisches Museum in Oberkochen and to the private collections of Udo Timm in Hannover, West Germany.

The listing of several publications about antique spectacles plus the minutes of the annual general meeting of 20 May 1990 rounded out the newsletter. According to the minutes, sixteen were in attendance (membership totals 102), officers were elected for 1990-1991, and the traditional annual auction brought the vendors a total of £1,439.

The newsletter will be forwarded to ILAMO, Inc.

E.J. Fisher writes:

In browsing through some early trade papers, I came across something which might be of interest to the Newsletter.

The Trader and Canadian Jeweller was published first in 1879 and appeared as a monthly publication. In August 1890, an "Optical Department" was added. The material for this in its earliest days was provided by Dr. John S. Owen, President of the Detroit Optical Institute at 142 West High Street, Detroit, Michigan. Owen is listed as an M.D. and by 1900 had moved to 23 East Adams Avenue. This was even before the days when Ford made Detroit such a motor metropolis!

In the February, 1900 issue, there appears an article "The Care of the Human Eye" and it is indicated that this was a paper given to the New York State Optical Society by B.T. Clark. Although not indicated, this must have been presented late in 1899, or in January, 1900. The New York State Optical Society was only a few years old at that time. While I enclose a copy of the entire



paper, there are a few quotations from the paper which may be of some interest.

"It is at this point that those who practice optometry are called upon for assistance and relief." (The word 'optometry' was relatively new in February, 1900!)

"Were we to treat each case, young or old, in the same way, with that theoretical application which we are taught and which we acquire by habit, without looking for or considering the causes leading up to the present condition as we find it, we shall soon fall into error and perhaps defeat, for no one can successfully practice this branch of ophthalmology with any fair degree of success without first making a diagnosis which goes back to the apparent or manifest trouble, and to do this we need to be as familiar along certain lines of pathology, as we are with errors of refraction and the use of the most approved instruments for the detection and correction of these errors." (Some of our optometrical ancestors were really "with it". Note too the use of 'ophthalmology'.)

"I will add that it has been said very recently by an oculist (sic) of prominence in this country, that this branch of ophthalmology is just as separate and far removed from the practice of medicine as dentistry or pharmacy." (Quite advanced thinking for 1900.)

#### For appearance sake:

Theodore Grosvenor adds a human touch to the story of how the Optometry curriculum at the University of Auckland came about by writing as follows:

One of the most interesting aspects of the history of New Zealand is that Henry Atkinson (a practitioner with British qualifications who was a very busy man in the NZOA) and Harry Scott (University of Auckland Psychology Department chairman) just happened to be neighbors in Titirangi, and had some conversations, over the back fence, about Optometry and Psychology. Psychology at that time was very much into "Sensation and Perception", and particularly into vision, so Scott was quite willing to have his department take on optometry. When Scott was killed in a climbing accident on Mt. Cook, before the deal was consummated, the NZOA National Education Committee (I have been told) worked very hard to make sure that the new Psychology chairman would be someone who would take on Optometry. Thus, Barney Sampson, who was at Canterbury University in Christchurch at the time, got the job. And as Albert Rose said many years ago, Barney liked Optometry in his department because he wanted Psychology to be looked upon as a science, and having Optometry in the department made Psychology look scientific.

Ewalt honored:

The H. Ward Ewalt Medal for Service to Optometry is the third medal established by Optometric Educators, Inc. to recognize contributions to the profession in the area of service. The first recipient is Dr. Ewalt himself with the presentation scheduled at the September alumni banquet of the Ohio State University College of Optometry.

Historical lecture:

"Contact Lenses: From da Vinci to Disposables" was the title of the ninth annual John E. Neill Memorial Lecture by Sheldon Wechsler, O.D., before a gathering of Pennsylvania College of Optometry alumni on May 6 in Philadelphia. The theme was the historic connection between the knowledge derived from both research and technical development.

Emendations:

The ever meticulous A.G. Bennett calls attention to a number of misstatements that crop up now and again in historical commentary. His article is entitled "A Commentary on the 'History of Spectacles'" and appears in the November 10, 1989, issue of the Optician, Vol. 198, No. 5225, pp. 11-13. Involved are the design of Wollaston's periscopic lenses, the identity of Fuller of Ipswich, J.T. Hawkins' role in the construction of the trifocals he invented, the identity of the French optician Biette (not Beetle) of Lyon, the details of the solid upcurve bifocal invented by Schnaitman (not Schnaitain), details of the crossed cylindrical lenses of Marie-Nicolas-Joseph Chamblant, the range of dioptric lens powers expressed in reciprocals of inches of focal length as proposed by Burow, F. Monoyer's role in the adoption of the metric diopter unit, and de Valdes' unit of lens power, the grado.

In referring to Daza de Valdes' 1623 Spanish book Bennett is obviously unaware that a manuscript of an English translation is on file at ILAMO.

A "spectacular" greeting:

Possibly our most responsive reader, Charles Letocha, M. D., sent us a colorful greeting card from England which he purchased at the museum of the British College of Optometrists, the British Optical Association Foundation. On the picture side are shown two pair of late 18th century silver spectacles with hinged folding sides. Printed on the message side is the explanation that these were designed to fit over a wig, with loop ends for cords and the tortoiseshell insets on the lenses of one pair was the invention of Benjamin Martin, optician (1704-1782).

Clever!

Wisconsin chronology:

A 364-page, soft-cover book entitled "Wisconsin Optometric Association, A Chronology" by Raymond L. Guenveur, O.D., gives us minute details of the optometric organizational activities for the hundred year period 1890-1990 as they relate to Wisconsin.

To the mild annoyance of this reviewer (H.W H) the author states, "Like the early history of medicine, optometry came from modest beginnings." Also he dates optometry's beginnings in the jewelry store "as far back as 1890." Modesty is not documented in the wealth of organizational details in the book, nor is any recognition given for the relatively sophisticated status of sight-testing for the better part of four centuries in Europe. With the exception of these casual assertions, however, the book is truly a contribution to optometry's archival literature.

The author's resources are mainly the files of the Wisconsin Optometric Association, early issues of the Optical Journal and Review of Optometry, almost six decades of WOA periodicals, and ILAMO, Inc.

As indicated by the title the contents are quite chronological in 17 chapters identified often as eras. In the earliest chapter the point is made that before 1900 optometry in America was serially covered only in jewelers' periodicals. The first decade of this century in Wisconsin was almost exclusively concerned with the formation of a professional association. In 1906 potential members were supplied with a list of 100 questions (all included in the book) from which ten would be randomly selected for each applicant to answer. No. 1 was, "What is refraction, reflection, diffraction?" No. 100 was "Define trichiasis, distichiasis, and entropion."

In 1909 the decision was made to seek the enactment of a law to register optometrists, resulting in passage of an act in 1915. The trials, tribulations, and maneuvers are reported in well documented detail, including the complex processing of exemption licenses for existing practitioners by a special examination "limited to practical optics."

Subsequent history describes battles with medicine and ophthalmology, optometrists' use of the doctor title, impact of the Great Depression, contributions of E.B. Alexander, A.M. Sheffington, and Ralph Barstow of the Optometric Extension Program, the shock of the infamous 1937 Reader's Digest article, the commendable educational programs for practicing optometrists, the drive to eliminate corporate practice, the influence of the AOA Professional Advancement Program, the agenda of the World War II years, reactions to federal regulations, the effects of American Medical Association policy, the drive to bring graduates into associate professional practice, and dozens of other issues. In a real sense the book is a detailed current century history of American optometry from the point of view of a leading Wisconsin optometrist and as implemented by the Wisconsin Optometric

Association. The role of every participating individual is carefully identified. It is only unfortunate that an index was not included.

The 1990 edition is available from the Wisconsin Optometric Association, 5721 Odana Rd., Madison, WI 53719-1288 at \$35.00.

Spectacle iconography:

A gift from Günter Ueberschaar of Jena is a 1988 cloth cover, 180 page, glossy paper, 20 x 23 cm., book entitled "A Spectacle of Spectacles". In English, published by Edition Leipzig of East Germany, and edited by Wolf Winkler, it is a catalogue of a 1988-89 exhibition in Scotland of an historic collection of eyeglasses and graphic art works in which they are depicted. The total project was sponsored by the Carl Zeiss Foundation Jena.

The text includes a three page history of the Carl-Zeiss-Stiftung Jena by Joachim Toppler of the Jena Optical Museum, an excellent eight page review of the 100 year history of spectacles by G. L'E. Turner of London, and a very sophisticated nine page discussion of "Eyeglasses and Art" in which Claus Baumann of Leipzig reviews and interprets the graphic iconography of spectacles in classic works of art.

Most of the volume consists of 108 fully identified illustrations of eyeglasses and 77 examples of artwork in which the eyeglasses are seen. For the information of your librarian or bookseller the ISBN number is 3-361-00250-8.

Contributing Editor:

Henry W Hofstetter  
2615 Windermere Woods Drive  
Bloomington, IN 47401  
USA

Managing Editor:

Douglas K. Penisten  
College of Optometry  
Northeastern State University  
Tahlequah, OK 74464  
USA