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NEWSLETTER
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Ballot enclosed:

Enclosed with this issue of the Newsletter you will find your ballot for this year's Executive Board election. Although we are running a bit behind, don't let that keep you from sending in your vote. Let's make this tally a large one!

Member eulogy:

One of our most faithful readers and Society members has died. Earl Dablemont enjoyed reading each issue of this Newsletter from front to back. Over the years many of our readers have communicated and worked with Earl's spouse Maria. Maria served for many years as this Society's treasurer and secretary and also as the Director of ILAMO. Earl will be missed.

French eyecare circa 1800:

Louis Orzack, a professor of sociology at Rutgers University, writes us as follows:

While preparing a book review for a scholarly journal in my field, I came across a number of statements regarding various aspects of ophthalmological and optometric behaviors and beliefs that I believe should be of interest and worthy of citations in the Newsletter of the Optometric Historical Society.

The work is Professional and Popular Medicine in France, 1770-1830: The Social World of Medical Practice by Matthew Ramsey, published by Cambridge University Press, Cambridge and New York, 1988.

Ramsey is an accomplished historian, educated both at Harvard and in Paris. His is a major work; I wrote a very positive review. The statements below are culled from his extensive coverage of the subject.

p. 23: Specialization is a relatively recent phenomenon in modern medicine; in Paris, as late as 1845, all but 12 percent of physicians were still general practitioners. ... Experts were not, however, specialists in the contemporary sense, practitioners who limit themselves to a single branch of medicine after completing the usual general training. ... they were essentially artisans who

applied highly developed mechanical skills to certain delicate operations. Before the eighteenth century, . . . , conventional wisdom held that procedures such as couching cataracts were best left to itinerant operators who did little else. The fourteenth-century physician Guy de Chauliac, for example, whose major text on surgery was translated from Latin into French in 1592, made this recommendation for ocular surgery; so, in the seventeenth century, did Lazare Riviere, a professor of medicine at Montpellier, at least for cases in which "a cataract cannot be dissolved by any medicine."

p. 24: In Paris, all the surgical specialists came under the nominal jurisdiction of the King's First Surgeon: a 1776 directory listed 6 oculists, 14 hernia surgeons, and 36 dentists in the capital. The king himself appointed royal experts; in 1787 the royal household had 5 bonesetters. 2 oculists, . . .

p. 25: . . . in 1770 the town of Grenoble paid a certain Dachino, A Neapolitan ocular surgeon, for operating on the poor.

The most fully developed specialty was ocular surgery, whose status was recognized in 1765 with the creation of a chair at the College of Saint-Come in Paris; licensed oculists were thereafter master surgeons. Practice in this field was never completely regularized, especially in the provinces. Paul Delaunay has sketched its history for one district, the region around Le Mans, in the eighteenth century. The only resident oculist was a certain Bizieux of Montdoubleau; the surgeon Levasseur of Le Mans also operated on cataracts. But a series of itinerant practitioners, some of them foreign, also visited the region; they ranged from established specialists to full-blown mountebanks. Louis Beranger, who had been certified at Saint Come, passed through in 1749 and 1751. The lieutenant general of police allowed one oculist/empiric a six-week stay in 1733 and another enjoyed three months of toleration in 1764. Some of these practitioners boasted of lofty connections in France and abroad -- a practice widespread among, though not limited to, itinerant charlatans. The chevalier of Tadin, active in Le Mans in 1754, called himself a count palatine and oculist of the duc d'Orleans, first prince of the blood. . . . In 1785 the surgeons of Le Mans wrote a certificate for the Councillor von Hilmer, "pensioned oculist of the court of Vienna in Austria, and consulting oculist of His Prussian Majesty." And a certain Gleize, when visited in 1786, called himself the oculist of the comte d'Artois (the brother of Louis XVI) and the duc d'Orleans-- . . . A more obvious quack was Mahe de Maisonneux who styled himself "a physician who consults urines and a surgeon-oculist."

p. 87: The medical elite distrusted experts. Well into the nineteenth century, specialization in the treatment of a single disease or disorders of a single part of the body was considered a distinguishing mark of the charlatan, like the "celebrated physician-oculist" Dr. Guenon de la Chanterie, who advertised his services in Paris cafes and restaurants during the Restoration.

Some certified experts ... survived from the Old Regime. ... In the nineteenth century, all types of traditional specialists and members of ancillary occupations continued to practice -- bonesetters, dentists, ocular surgeons, lithotomists, herniotomists, truss makers, pedicures, masseurs, ..., joined by the growing tribe of "magnetizers"....As in the past, itinerant oculists (some, but not all, regularly qualified) continued to couch cataracts, such as Dr. L'Habitant, whose work in 1806 received the approval of the prefect of Ille-et-Vilaine.

pp. 88-89: In the Loire-Inferieure, an Italian oculist named Rabiglia was ... able to obtain authorization from various mayours, subprefects, and prefects; he claimed to have been received as surgeon in 1786. When the medical jury arrived, he moved on; finally, in 1837, when he was an old man, the jury (probably out of compassion) admitted him as a "consulting physician for eye diseases," but forbade him to operate. And at Bondy, near Paris, an oculist claimed in 1848 to have been received eighteen years earlier as a specialized officier de sante, despite the medical corps's hostility to the "ophthalmological specialty."

pp. 131-2: Many surgical experts ...traveled, ..., because their skills (such as couching cataracts) could not be fully employed in any one place. Even in the nineteenth century, the line between regulars and irregulars among the traveling specialists is particularly hard to draw. Some were licensed doctors, like the oculist (ocular surgeon) Forlenze, who received a number of official appointments (among them the post of oculist to the lycees of Nancy, in 1806) ... in 1818 his complaint about inept rivals who followed in his wake triggered a more general investigation of illegal practice by the directeur de la police generale. Others, like the oculist Rabiglia, had more dubious credentials and dabbled in various forms of empirical medicine; some crossed over into frankly criminal activities like Gosset, an ambulatory oculist from Bourges, who was found guilty of "frauds" in Angers and wound up in the house of detention at Tours in 1796.

pp. 136-137: [quoted by Ramsey from charlatans' advertising handbills] The veritable Grassy, Italian, residing at Moissac, in Quercy, near Montauban....He

cures different disorders of the eye, without applying anything, by means of a reflection from liquids that are held in the hand.

[Gosset; arrived at Troyes in 1791, calling himself a botanist]. He cures all eye disorders in general, [and] cures cataracts in a short time by applying a new invention. He performs the operation by extraction.

Citizen Morand, ... ocular surgeon approved by the First Physician of Paris and by several colleges of medicine and surgery, announces to the public that he has arrived in this place...; he has given particular attention ... to finding new remedies to cure several disorders that are regarded as incurable, which have resisted the usual remedies, such as stone, retention of urine, scurvy, dropsy, effusion of milk, bile in the blood, all kinds of darts, powdery and inflamed, [and] all other disorders of the skin.

He ...operates on cataracts by extraction, with knowledge and dexterity, using a single newly invented instrument, without hemorrhage or pain; this operation lasts only three minutes in order to restore vision. He performs all operations and cures all disorders which relate to this part [of the body]. He has also a sovereign Water that cures spots and inflammation of the eyes....

p. 138: Citizen Albertina Drankler, living ... near Strasbourg. ...I heal all diseases of the eye, thus a person who has lost his sight for twelve to fifteen years because of grey cataract provided the eyeball is intact.

p. 140: A few practitioners boasted of appointments as physicians to royalty and the great. The oculist Hilmer said that he was a councillor of the King of Prussia, had been appointed oculist of the Republic of Geneva, and was salaried by the Queen.

p. 179: A tanner from the Perche region who moved to Paris in the early 1780's to sell his eyewash -- an ophthalmological panacea whose ingredients included dog dung, cuttlebone, alum, and green vitriol (iron sulfate) -- soon found his apartment crowded with clients, although according to disgusted correspondent of the Societe Royale de Medicine, he had distributed the remedy in his native Verneuil for years "without anyone at all going into raptures over it."

pp. 184-5: At the end of the eighteenth century,...the town of Dourdan in the Ile-de-France possessed scrofula surgeons. Half a century later, around Allair and Rieux (Morbihan), an "ocular healer" used a horsehair to

operate on pterygium (a thickening of part of the conjunctiva).

p. 234: Other rituals depend on sympathetic magic or magical transfer. ...In some cases the healer may have to obtain a remedy through a special ordeal, imbuing very ordinary objects with the power to cure. ...In lower Brittany, until the end of the nineteenth century, he might attempt to cure eye disease by tracing the sign of the cross nine times on each lid, using each of nine grains of wheat begged from as many different houses.

p. 240: In some regions, old women treated cataract; a child with an eye disorder might be taken to sorcerer qui lui dit la maille (literally, who tells his leucoma)....

p.242: Commentators referred to users of magical healing formulae as "rebouteurs mystiques" and sometimes "charmiers",... (In Alsace, ...Jewish healers, consulted by Jews and Gentiles alike, ...used charms to treat sprains and eye disorders.)

My personal favorite is the ophthalmological panacea that includes dog dung, quoted from p. 179. I hope these may seem appropriate for citation in the Newsletter.

Rimless, at least seemingly:

With the compliments of Jennifer Taylor, Librarian of The British College of Optometrists, we reproduce the following item in toto from the February 8, 1957, issue of The Optician, vol. 133, p. 90:

A BARONET OPTICIAN

Did He invent Rimless Spectacles?

The name of Dr. Samuel Molyneux of Castle Dillon, Co. Armagh and Dublin as one well versed in the science of optics is well known, but that of Sir Thomas Molyneux, Baronet, who was born in 1661 and became Physician-General to the Army in Ireland has passed to the limbo of the forgotten, though according to family muniments at Castle Dillon it was he who invented the first rimless spectacles.

Due to his interest in the medical world Sir Thomas made a special study of the eyes of many soldiers. He is claimed to have been the "father" of army optics and in 1725 he invented rimless spectacles for officers.

In the 18th Century spectacle frames were mostly cumbersome horn or tortoiseshell mountings and Sir Thomas's invention was indeed an innovation. Each of the lenses of his spectacles had a groove ground in its edge

after the manner of a sheave wheel, we are told, and inbedded in this groove a gilded brass wire formed the invisible frame. The wire was bent sixfold to form the bridge on the nose. It was continued to form sides and extended with hook bends around the ears. For personal use the optical baronet had a gold frame made with an arched boss to serve as the bridge. He considered that this frameless type of spectacle was better than the goggle type for military use. A letter formerly in the family muniments refers to an improved lens but there are no details of this extant. Sir Thomas died in 1733. May we grant to him the honour of devising rimless glasses?—
C.J. Robb.

Another centennial offering:

"Hundert Jahre Kontaktlinse" (a century of contact lenses) by A. Brachner, 1988, is an attractive stiff-cover 23 x 21 cm book of 120 pages with more than a hundred illustrations. It is published by the Vereinigung Deutscher Contactlinsenspezialisten, Blumenstr. 37, 8000 Munich 2, West Germany. Its seemingly anachronistic subtitle, "Lesestein zur Kontaktlinse" (from reading lens to contacts) actually broadens the historical scope of the book to include a very wide range of vision-related developments beginning with the opening chapter evidences of handheld transparent magnifying stones (Lesesteine) between 3000 B.C. and 1300 A.D.

The second period, Intermezzo 1300-1650, includes the contributions of Philippe de la Hire, René Descartes, and Leonardo da Vinci. Unfortunately, as persists erroneously in the contact lens literature, the incorrect identification of da Vinci's contact lens concept is made with the "fishbowl" experiment instead of with his marginal notations and minute drawings describing the making of a contact lens from a tiny spherical glass ampule.

Subsequent era's are numerically encompassed by the years 1650-1850, 1850-1880, 1880-1889, 1889-1945, and 1945-1988. The book's centennial theme is identified with Adolf Eugen Fick's publication of his doctoral thesis "Eine Contactbrille" in the March 1888 issue of Archiv für Augenheilkunde, vol. 18, pp. 279-289.

Most of the text is devoted to the events and developments in ophthalmic optics pertinent to contemporary contact lens background and to advancements in instrumentation, lens optics, chemistry, anatomy, manufacturing, patents, statistics, professional organization, biographical details, research, and professional schools, primarily though not exclusively as occurring in Germanic Europe.

Included is an extensive bibliography but no index, though the table of contents is very detailed. The book is a convenient historical resource for one who reads German.

From the other side:

The recent death of Mrs. Sophia Lois Suckling (1893-1990), the first woman in New Zealand to qualify and to practice as an optometrist, reminded Professor Theodore Grosvenor to call our attention to a 1980 book in his library entitled the "History of the New Zealand Optometrical Association, 1930-1980." The blue cloth-covered 198 pages were compiled by the late Frank Owen Davis (1912-1979) and put into final form by his wife Cath as a jubilee publication of the Association.

Very briefly the optometrist author summarizes the pre-1900 years by pointing out that, because the early settlers were generally young and manually occupied, the visual demands were few and largely met by the spectacle-assembling skills of jewelers and goldsmiths. A biography of Mr. A. Levi is cited to show his setting up business in Wellington in 1897 "as a Consulting and Manufacturing Optician" in a "single storey wooden building of 600 square feet with a beautiful room equipped with all the latest appliances in sight testing etc."

At a meeting on Feb. 1, 1912, the New Zealand Optical Association was formed, and on March 27-28, 1913, a national conference was held in Christchurch. The organization continued to survive somewhat stagnantly until replacement by The Institute of Optometrists of New Zealand, Inc., in 1922, a voluntary membership organization with a qualifying examination program and a regular annual conference. On October 6, 1928, the New Zealand parliament passed the "Opticians Act" which, strangely, identified the optometrists as "opticians" and effectively made the designation optometrist "redundant and illegal", a legislative concession to medical opposition. In response, the previously incorporated Institute was liquidated and the Institute of Opticians of New Zealand, Inc., was formed to operate from January 1, 1930. It is this date with which the 1980 jubilee of the book is identified.

Not until 1951-52 was the reversion to the earlier identity of optometrist seriously debated, leading eventually to the adoption of a motion in 1959 in favor of changing the name of the Institute to the New Zealand Optometrical Association. It was not until 1976, however, that Parliament was prevailed upon to amend the law to make the title optometrist again legitimate.

The above chronology of events was a bit laboriously extracted from at least a thousand bits of history told in a very rambling and anecdotal style. They apparently were gleaned from a combination of organizational minutes, documents, committee reports, periodicals, correspondence, memoranda, and, of course, personal memory. The author was quite evidently more intent on including every available detail than on developing or tracing trends or themes, though his twelve chapters deal with several different eras and broad topical categories such as the war years, supply houses, the Opticians Board, biographical synopses, contact lenses, etc. Very remarkable is the inclusion of seven panoramic

group pictures of conference attendants between 1925 and 1970 with everyone identified by name.

Especially impressive is the optometrists' apparently persistent and dedicated organizational concern for education, ethics, and professional obligations. This impression is clearly not induced by the author's style of writing but rather by the very casual and unadorned accounts of efforts and activities involving publications, contests, exhibitions, school vision, refresher courses, research support, low vision care, drug policy, ophthalmic material quality, military service, social functions, and more. It is especially obvious that the author wrote the book for the edification of his New Zealand colleagues rather than as a public relations piece. It is an excellent documentary resource except that it lacks a very seriously needed index.

Sichel on refraction

In a commentary on page 20 of the April issue of this Newsletter, vol. 21, no. 2, attention was called to Jules Sichel (1802-1868), a physician born and educated in Germany who emigrated to France at the age of 27 and became one of France's most outstanding ophthalmologists. It was further pointed out that he "dedicated one day a week to refraction errors."

In 1848 Sichel published a book in French which was translated into English by Dr. Henry W. Williams and published in 1850 in Boston under the title SPECTACLES: THEIR USES AND ABUSES IN LONG AND SHORT SIGHTEDNESS; AND THE PATHOLOGICAL CONDITIONS RESULTING FROM THEIR IRRATIONAL EMPLOYMENT. A copy was given to the Indiana University Library by the Indiana Optometric Association Library in 1958 and is now in the rare books collection. It is cloth bound, 202 pages, 24 X 16 cm, and in fair shape.

Sichel's preface, and in fact the whole text, is clearly and respectfully addressed to both physicians and opticians. In that vein he declared, "The latter have it in their power, yet more than the former, to diminish the number of these maladies by judicious advice, or to augment it by the unseasonable concession of too powerful glasses." The identified maladies include "presbytic amblyopia", muscae volitantes, various amauroses, undue accommodative deficiencies, and myopic increases. The style of writing is grossly expository, heavily anecdotal, and rather redundant but very easy to follow, there being no figures, tables, graphs, or diagrams.

He describes accommodation, myopia, presbyopia, and effects of convex and concave lenses functionally and phenomenally rather than analytically, mathematically, or graphically. Almost an exception is his explanation that lens numbering in continental Europe was based on the radius of the surface curvature of a biconvex or biconcave lens, that of 48 French inches being numbered 48, the higher numbered lenses, e. g., 72, 80, and 96 being weaker, and the lower numbered lenses, e. g., 36 and 24, being stronger, whether

concave or convex. He points out that the English and American system was reciprocal, the 48 being no. 1, the 36 no. 2, etc. He discusses other forms of lenses and lens sizes, periscopic, meniscus, etc., in terms of wearing desirability, mounting distance, types of frames, alignment, etc. as though he might have had some dispensing experience or at least a collegial relationship with opticians. He adds that he has not yet made up his mind about the efficacy of cylindrical lenses. Apparently quite deviant from the typical concerns of other eye physicians of that era he discusses occupational vision problems, proper lighting and lamps, the use of colored lenses, correct reading distances, etc. He identifies the need for auxiliary lenses occurring at about the age of 40, "that age when the critical changes in the constitution of the two sexes begin to operate."

His underlying theme is that lenses should be regarded as a last resort, that the weakest possible lens, whether concave or convex, should be prescribed, and that the patient should use the spectacles sparingly. As prior treatment to alleviate presbyopia, for example, he suggests applications of certain liniments and collyria. However, he cautions against myotomies, such as section of the inferior oblique, as a treatment for presbytic amblyopia.

In numerous instances he describes vision in terms of distances at which large and small print may be seen, but in no way does he express acuity quantitatively. He discusses myopia at some length but the condition seems to baffle him. He is puzzled by the observation that the need for concave lenses are typically at higher powers than the need for convex lenses. He does not mention myopia increase as a preadult phenomenon.

Dr. Sichel's style of writing is nicely exemplified by the following paragraphs:

In March, 1844, I was consulted by a law student aged 21, moderately myope from birth. There was no suspicion of acquired myopia. No species of convex glasses ameliorated his vision. Without spectacles he could prolong his studies as much as he wished, without experiencing any fatigue. Concave glasses from No. 24 to 18, prolonged his visual focus a little. However, neither these glasses held further from the eyes, nor others of a stronger focus, gave any appreciable increase of clearness to his sight. But he presented this singularity: when he held these same glasses, No. 24 to 18, obliquely before his eyes, almost parallel to the surface of the ground, he saw distant objects much more clearly. I was unable to notice any other peculiarity in his eyes, except that they were small and a little soft.

When, by the medium of his half-closed eyelids, a gentle pressure was exercised upon the globe, the pupils were deformed as in commencing hydrophthalmia, as we have decribed in S XXVIII. The iris was blue.

I could give no other advice to this patient than to counsel him not to employ concave glasses below No. 22 to 18, and to incline them obliquely the least, and the most seldom possible; to exercise his sight in looking at a distance without glasses, and to work with the naked eye, with short interruptions, and at the longest distance which he found to be possible.

Was this a particular species of myopia? Was there a complication with a certain degree of hydrophthalmia or synchysis? It is easily seen that optical glasses no longer produce their normal effect, when they form an angle with the vertical axis of the eyes, and we recommend to all those who wear them to place them parallel to the plane of the iris. But how can we explain, according to physical laws, this extraordinary effect of the oblique position of the spectacles?

Coins and medallions:

A noteworthy collection of early coins and medallions featuring spectacles is that of the Zeiss museum in Jena, Germany. Some of them date back to the 15th century, with the greatest number dated in the 16th and 17th centuries. The symbolism of the spectacles varies from portraying the wisdom of the owl to the transitoriness of the skull and hourglass, or even as a token of derision.

A brief column in the July/August 1990 issue of *Augenoptik*, Vol. 107, No. 4, p. 128, by H. Beez mentions several examples with historical details. Included is a photograph of 1572 "Geusenpfennig" on display at the museum.

More on exemption licensure:

The discussion of licensure by exemption in the October 1989 issue of this Newsletter, vol.20, no.4, pp.45-47, may well have prompted your curiosity as to how such a politically delicate procedure might have been carried out. A part of the answer was found by Sandra Smith of ILAMO in the October 1908 issue of The Optical Review, Vol.2, no.7. pp.55, reproduced on the page following this.

The details of information and documentation requested of the applicant are particularly interesting as one might wonder which ones were essential for establishing legal eligibility and which ones were designed to deter applicants. Of significant interest, too, is the stipulation that the applicant had to include evidence of prior engagement in the practice of optometry as of May 21, 1906, (a Monday) even though the registration was not enacted until 1908. Perhaps the 1906 date was the date of introduction or initiation of the legislation.

Text of Application for Certificate of Exemption for Optometrists in the State of New York.

New York State Education Department, University of the State of New York.

Application for certificate to practice optometry without examination.

I hereby apply for certificate of exemption to practice optometry in the State of New York under the laws of 1893, chapter 661 as amended by the laws of 1908, chapter 460, section 209d, and submit the following proofs and fee as required.

- (1) Certificates of moral character.
- (2) Photograph certified to before a notary public, and duplicate thereof.
- (3) Evidence of practice.
- (4) Certified check, post office order, or express money order for \$5. Make checks, drafts, etc., payable to New York Education Department.

Competency and qualifications (statement of applicant):

- (1) Full name.
- (2) Date of birth.
- (3) General preliminary education.
- (4) Special education for the practice of optometry.
- (5) I am engaged in the practice of measuring the static refraction of the eye, including differentiation of astigmatism, and of measuring the amplitude of accommodation, in connection with their respectively associated proportions of visual acuteness and have been continuously engaged in such practice of optometry in the State of New York, as follows: [Dates and towns or cities are to be given here.]

And I am at present engaged in such practice at [street and city to be given].

- (6) Give name and present address of at least three persons that employed you professionally in each place of practice mentioned.

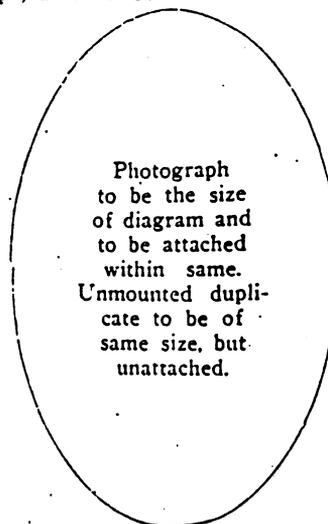
- (7) Is it your custom to preserve records of the formulas for glasses for persons upon whom you have practised optometry?

- (8) Do you conduct any other business upon the premises where you are engaged in the practice of optometry? Give particulars.

- (9) Do you practice optometry in any other place than the one mentioned above, as your principal office?

On the reverse of the application is a form of affidavit, in which the applicant "being duly sworn says he is the person referred to in the foregoing application for license to practise optometry in the State of New York. That the statements therein contained are in his own handwriting and are strictly true in every respect. That the attached photograph and the accompanying duplicate are a true likeness of himself, and were taken not more than two years prior to the date of this application. That he has complied with all requirements of law and that he has read and understands this affidavit."

Then comes the oval for the photograph, as follows:



The certificates of good moral character then follow. They must be signed by not less than two optometrists in good standing, or licensed physicians. Each signer certifies that he has been personally acquainted with the applicant for a specified period of time and continues: "That I know he was in active practice on May 21, 1906, in the State of New York and that he has been continuously engaged in practice in said State since that date; that I believe him to be of good moral character and I hereby recommend him to the Regents of the University as entirely worthy to be licensed to practise optometry in the State of New York, pursuant to law."

Refer cautiously:

A reprinting of an editorial of 100 years earlier appears in the May 9, 1990, issue of JAMA, vol. 263, no. 18, page 2517. It deals with ocular muscle over-exertion as a cause of certain functional nervous diseases, a theory espoused by several prominent eye physicians of that era. The theory had been supported by the observation of higher frequencies of hyperopia and muscular imbalance among cases of epilepsy, chorea, and hysteria. The editorial cited the more cautious interpretations by Drs. D. B. St. John Roosa and C. S. Bull, who pointed out the comparably high frequencies of hyperopia and muscular imbalance among persons not suffering these diseases or even having ocular difficulty.

The resulting editorial advice was that, "... in the present state of our knowledge, it would be better not to send the patients to an enthusiast on the subject of graduated tenotomies."

A triple optical whammy:

Enthusiastic comment on "Isaac Barrow's Optical Lectures 1667", recently translated and published by the Worshipful Company of Spectacle Makers, was made in the January 1990 issue of this newsletter, vol. 21, no. 1, pp. 8-9. Two years earlier, vol. 19, no. 1, p.13, your attention was called to its review by B. Ralph Chou and Melanie C.W. Campbell in the December 1987 issue of the American Journal of Optometry and Physiological Optics, vol. 64, no. 12, p. 952, very different but equally fervent. More recently Dr. Chou published another hearty review of the same book in the May 1990 issue of the Journal of the American Optometric Association, concluding with, "This book well deserves a place in the collections of all who are interested in the history or study of optics."

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