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The Contact Lens Centennial 1988

Henry Knoll writes that he is researching the early development of contact lenses. As with any chapter in history, there seems to be many blank pages. If you have any biographical information on Adolf Fick, Eugene Kalt, or August Müller, please forward it to Henry Knoll, Bausch & Lomb, 1400 North Goodman Street, Rochester, New York 14602.

"The upcoming centennial of contact lens development calls forth a number of questions which have never been addressed in the contact lens literature. These questions involve the "climate" surrounding several stages of development. No answers are offered here -- perhaps among our readers there is someone who can provide answers.

1. What was there about the state of the art and science of ophthalmology in the ninth decade of the last century that lead Adolf Fick (1852-1937) of Zurich, Eugene Kalt (1861-1941) of Paris, and August Müller (1864-?) of Kiel to independently develop and write about contact lenses?

2. Is there any evidence that Fick, Kalt, or Müller were aware of the writings of da Vinci, Descartes, Thomas Young, or John F.W. Herschel?

References in the British and American literature do not appear until 3. 40 years after the publications of Fick, Kalt, and Müller! During those 40 years almost 200 contact lens papers were published. Why did it take so long for the British and Americans to get into the act?

4. Why were three (3!) histories written in the 1930's? Much, 1932; Haas, 1937; and Mann, 1938.

Is there any connection between August Muller, M.D., (see 1 above), 5. Leopold Heine, M.D., and Heinrich Wöhlk, all of Kiel, Germany?"

Armin Tschermak was an esotrope:

Dr. Armin Tschermak von Seysenegg (1870-1952) a famous Austrian physiologist, one of several family members of scientific fame, reported observations based on his own esotropia (about 9°) and hypertropia (about 3°). He was also an anisometropic myope (0.D. -5.25, 0.S. -1.75). He could fixate with either eye at will, and he satisfied himself by means of the Haidinger Brush and Maxwell Spot tests that his fixations were foveal. He used both haploscopic and afterimage techniques for studying his anomalous correspondence, which showed both vertically and laterally displaced anomalous projections of the foveal image of the squinting eve. He also gave what may well be the most valid description in the literature of the monocular diplopia phenomenon manifested in circumstances when normal and anomalous correspondence function simultaneously.

His report, "Ueber anomale Sehrichtungsgemeinschaft der Netzhäute bei einem Schielended" (Concerning anomalous retinal correspondence of a strabismic) appeared in 1899 in <u>Albrecht von Graefe's Archiv fuer</u> <u>Ophthalmologie</u>, Vol. 47, pages 508-580. Its thoroughness and sophistication lead one to wonder what more we have learned since then about the nature of squint and anomalous correspondence.

The Cat Experiment

The following paper by William Crawford was mentioned in the January '80 issue of the O.H.S. <u>Newsletter</u>. Due to its unusual content we felt it deserved the members' "historical attention."

The "Cat Experiment" of Jean Mery by William L. Crawford

Including a Translation of Des Mouvens De L'Iris, Et Par Occasion De La Partie Principale De L'Organne De La Vûe Jean Mery (1704)

Historical Background

Jean Mery (1645-1722) was a celebrated anatomist, surgeon, and ophthalmologist, one of the predecessors of Helmholtz in the field of ophthalmoscopy. He spent most of his life in Paris, serving in a number of royal appointments, including assignments to Portugal, Spain, and England. In 1700 he accepted the post of surgeon-in-chief at the Hôtel Dieu (hospital in Paris), and devoted his remaining career to strictly scientific work in surgery, anatomy, otology, and ophthalmology.² An early indication of his dedication appeared during his student days at medical school: Fontenelle writes of Mery, "Not content with his practice during the day, he would steal a cadavre when he could, carry it to his bed, and pass the night dissecting in great secrecy."³

However, Mery will be best remembered for his famous "cat experiment," in which he held a cat under water in order to study the effects of suspended respiration on pupil size, and discovered that he could actually see the fundus oculi of the cat -- the entrance of the optic nerve, and all the colors and vessels of the choroid.^{2,4,5}

What follows is a translation of Mery's most famous paper (written in 1704) which includes his own account of the "cat experiment." It also has some very interesting theories on the mechanism of iris movements and on which part of the eye is the "essential portion of the organ of vision."

On the Movements of the Iris, and, Incidentally on the Essential Portion of the Organ of Vision by Jean Mery (1704) Translation by William L. Crawford

The iris is a membranous ring, placed at the front of the eye. It was

thus named because of the various colors which in man appear on its surface through the transparent cornea.

This ring forms in its center a hole, to which was given the name "prunelle" (pupil), apparently because it appeared of the color black. This hole is absolutely necessary for vision, because if it had been closed by the iris which is opaque, the rays of light, without which vision is not possible, would not be able to pass into the eye.

The pupil dilates in darkness and in water: it constricts in air, being exposed to the rays of light, apart from which one would think that the will was a consideration in these movements. When the pupil dilates, the fibers of the iris shorten; when it constricts, these fibers elongate.

Now, since one does not observe any circular fibers in the iris for narrowing the pupil, there is cause to believe that its dilation depends solely on the elasticity of the straight fibers of the iris, which all go to terminate at the internal circumference of this ring.

But, even though it appears that the constriction of the pupil depends absolutely on rays of light, nevertheless these rays can by themselves neither lengthen the fibers of the iris nor constrict the pupil. All that they can do is but to give, by their entry into the eye, opportunity to the animal spirits to flow in the fibers of the iris more abundantly than they could in darkness; these are therefore the spirits which, in lengthening the iris fibers, are effectively the cause of the dilation (sic) of the pupil. From which it follows that this hole must grow or shrink, according as the light, being more or less strong, allows a greater or smaller quantity of spirits to flow in the iris fibers: but respiration must be a part of this effect; because when it starts to be lacking, the movement of the animal spirits stops, and the light becomes useless.

The observation which I am going to report proves this hypothesis in all of its parts. When one plunges the head of a living cat into water, if one exposes its eyes to the rays of the sun, the pupil dilates instead of constricting; on the other hand, exposed in air to the same rays of this star, the pupil constricts instead of dilating.

In way of explanation of the first of these two phenomena which seem to destroy the hypothesis which I want to establish, I am going to demonstrate that the dilation of the pupil depends solely on the elasticity of the iris fibers. As for that of the second I will make known that the animal spirits are the immediate cause of its constriction, and that the light can only provide the opportunity for it.

As for the first phenomenon, one must remark that when the cat's head is plunged in the water, that animal can no longer breathe. Now the movement of all the matter of the animal spirits depends on the circulating movement of the blood, and that of the respiration; it is evident that when it starts to be lacking, the circulation of the blood and the movement of the animal spirits must cease soon after. One observes that in proportion to the amount that the movement of these spirits slows down, the pupil dilates, the animal spirits can therefore not be the cause of its enlargement. It must be necessary therefore that dilation depends solely on the elasticity of the fibers of the iris.

With respect to the second phenomenon, if one pulls the cat back out of the water still living, and if one exposes its eyes to the rays of the sun, one sees the pupil constrict in proportion to the amount to which respiration is reestablished. Thus the animal spirits which, such being the case, begin to flow in the iris fibers, are the immediate cause of the constriction of the pupil: one cannot attribute it to the rays of light; because in the eyes of this animal being plunged into the water, the pupils dilate, although much more light entered their globes than when they were exposed to these rays in air; the light can therefore only be the opportunity for the flowing of the animal spirits in the iris fibers: but it is not possible to take this opportunity if the animal does not breathe; from which it is easy to judge that the light does not stop producing this effect when the cat's head is plunged in the water, that because the movement of the animal spirits is stopped at their source by the absence of respiration on which it depends totally, as well as that of the blood.

That the dilation of the pupil depends solely on the elasticity of the iris fibers, its constriction immediately on the animal spirits, and by opportunity on the light; here are some very convincing proofs of it.

First, when by the obstruction of the optic nerves the animal spirits can no longer flow in the eyes of man, the pupil dilates, it is thus apparent that its dilation does not depend on these spirits; but on the elasticity of the iris fibers, which causes these fibers to shorten in this illness.

Secondly, if during this obstruction of these nerves one exposes the eyes of the man to the greatest light, the pupils remain in the same dilation: the rays of the sun cannot thus be of themselves the cause of its constriction.

Thirdly, if one removes the obstruction of the optic nerves, and if one then exposes the eyes of this man to the rays of light, the pupil constricts; it is therefore evident that the animal spirits, which in that moment begin to flow in the iris fibers which they lengthen, are the immediate cause of the constriction of the pupil, and that the light can only be the opportunity: from which it follows that the force of elasticity of the iris fibers being in equilibrium with the power of the animal spirits, the pupil must remain in a mid-dilation; but for that only a medium amount of light is necessary: because when it is too weak or too strong, the equilibrium is broken, and then the pupil dilates or constricts considerably.

A weak light, such as it is in shadow, allowing a small amount of animal spirits to flow in the iris fibers, their elasticity gets the better of these spirits, and in this moment the pupil further enlarges. On the other hand a strong light allows the animal spirits to flow more abundantly in the iris fibers, these spirits surmounting by their power the force of elasticity of these fibers, and then the pupil constricts much more.

From these proofs supported by experiences so evident, one can finally conclude. 1. That the animal spirits are the immediate cause of the constriction of the pupil. 2. That the light can only give the opportunity to the spirits for flowing. 3. That the will has no part in it at all. 4. That the elasticity of the iris fibers is the only cause of the dilation of the pupil.

In this system, although based on unquestionable observations, nevertheless, three considerable difficulties are presented to the mind, of which the first is: To know if less light enters the eyes when they are in air, than when they are in water exposed to the rays of the sun.

Now one can discern no parts contained in the eyes exposed in the air, (but) submerge so that they are in water: one sees them very distinctly, except the humors and the retina, which disappear in such a way that the inside of the globes of the eyes seems to be filled only with a luminous air. Therefore many fewer rays of light enter the eyes exposed to air than submerged in water; this is arrived at by the reasons which I am going to report.

As smooth as the exterior surface of the transparent cornea appears, it is established that it has many imperceptible imperfections, which, not being at all flat, reflect in the air a large number of rays of light which fall on this membrane.

Moreover, when the eyes are exposed in air to the rays of the sun, the pupil constricts considerably. It is thus possible in this state for only a very small number of its rays to pass into the eyes; that not being sufficient for lighting their globes, it is not unusual that one can discern none of the parts which are contained therein.

However is it not also extraordinary to perceive them when the eyes are plunged into the water, because of the imperfections of the cornea being smoothed out by this liquid, and the pupil quite dilated, all the rays of the sun which fall on the transparent cornea pass through, and entering into the globes of the eyes, they light them so strongly, that one can then see very distinctly the extremity of the optic nerve, and the choroid with all of its colors and its vessels. But, one can perceive neither the humors nor the retina at all; because, being transparent as water, they seem to have a similar composition ot it, which makes it such that one cannot distinguish them from water.

That the surface of the cornea, as polished as it appears, is filled with imperfections which the water smooths out; herein is a very sensible proof. In amaurosis the pupil of man dilates completely, and his eyes being exposed to the greatest light, this hole cannot be constricted.

Now if the surface of the cornea was perfectly smooth, all of the rays of light which it received would have to pass into the eyes of the man exposed to air, as they are in those of the cat plunged into water, and one would discover the choroid equally well in the one and other. One cannot at all perceive this membrane in the eyes of the man, one does see it in those of the cat; it must therefore be that there are on the surface some imperceptible imperfections which the air cannot smooth out, but which the water flattens. And it is for this reason that a man, if ever he has his eyes submerged in water, perceives an object at the bottom of a river, which he can no longer see when he, out of the water uses his eyes at a minute distance from its surface. It is also by the same reason, life being extinguished, that the choroid of a cat that one sees in the water cannot be perceived in the air, although the pupil remains equally dilated in these two elements after the death of this animal. The smoothing out of the imperfections of the cornea by the water, is verified again by the example of glass. There always remain in the most polished (glass) some rough parts which reflect in the air, when they are exposed, a large part of the rays of light which arrive give themselves up at its surface; but when it is submerged in water, all these rays pass through; because of all the imperfections of the glass being flattened by this liquid, there are no longer reflections into the air of any part of the light.

It is therefore certain by all these experiences, firstly, that the imperfections of the cornea cannot be flattened by the air when it is exposed there: they must repulse the greatest part of the rays of light which come to strike this membrane; this is what allows such a small amount of light into the globe of the eye, that one cannot see the choroid, even when the pupil is completely dilated in broad daylight.

Secondly, that the imperfections of the cornea being smoothed out by the water, that all the rays of light which are received by this membrane must pass through, and in entering the globe of the eye render the choroid visible with all of its colors and vessels.

The second difficulty consists in knowing if the rays of light which enter the globe of the eye by the pupil, actually cause the animal spirits to flow in the iris fibers, or if these rays penetrating the fibers do nothing but rarefy that which the fibers contain of the spirits; which can produce the same effect, that is to say, to lengthen the iris fibers, as the animal spirits can do by their effusion.

To respond to this difficulty, it is only necessary to examine if the substance of the animal spirits is exhaled from the iris fibers when the fibers' movement comes to the point of stopping. As it does not appear that it dissipates before death, it is easy to decide the question by the experience of the head of the cat which I have just reported.

When the living cat's head is plunged into water, its eyes exposed to the sun, it is a fact that many more rays of that star enter into their globes than when they are in air exposed to its light.

In the water the pupil dilates, and the movement of the animal spirits ceases. Thus all the rays of the sun which enter into the cat's eyes are not capable by themselves of rarefying the matter of these spirits contained in the iris fibers, since these fibers shorten in the water.

On the other hand, if one pulls the head of the still-living cat from the water, and if one exposes its eyes to the rays of the sun, the animal spirits resume their flow, and then the pupil constricts. Thus the small amount of light which enters into the globe of the eye actually gives rise to the animal spirits' flow in the iris fibers, since these fibers lengthen in air.

Someone will ask me perhaps how the rays of light can cause the flow of the animal spirits in the iris fibers. Here is my conjecture.

I have just remarked that it is not at all by rarefying the material of these spirits. One can thus think that at the same time that the light rays enter the globe of the eye, they penetrate into its nerves, and render the matter of the animal spirits more fluid than it is naturally, which causes the spirits to flow in the iris fibers more abundantly than they do in darkness.

The third difficulty which presents itself to the mind against the hypothesis which I support, is that one has difficulty comprehending that the iris fibers can lengthen in proportion to the amount of animal spirits which they receive, because one is prejudiced, since all muscles shorten all the more when they are imbued with a greater amount, instead of which the iris fibers lengthen all the more when they receive more.

In order to resolve this difficulty which appears the most embarrassing, I consider the structure of the iris fibers similar to that of the corpus cavernosum of the genitalia, which lengthens according to whether it receives more or less animal spirits. The iris fibers must therefore extend themselves according as they are more or less filled, if their structure is the same as that of the corpus cavernosum.

What seems to further confirm this idea is that it is certain that the shortening of the iris fibers depends, as does the corpus cavernosum, on their elasticity.

Moreover, experience has taught me that the humors of the eye disappear when they are in water exposed to the rays of the sun, which furnishes me a sure means of resolving this problem; to know what is the essential portion of the organ of vision.

One does not doubt that this portion is that on which is portrayed the image of objects. Now the three humors of the eye allow passage to the light rays, it is a fact that the image of objects cannot be formed on any of these humors: none of them can therefore be the essential portion of the organ of vision.

And because these same light rays which enter the globe of the eye also pass through the retina, it does not seem that this membrane can be the essential portion of this organ either at which one must report vision; since the image of objects can also not be formed on this membrane, which, as the humors, disappears in water being exposed to the rays of the sun; which confirms the observation of M. Mariotte.

This learned academician remarked a long time ago that when the light rays reflected by objects fell on the extremity of the optic nerve where the choroid is pierced, one cannot perceive the object from which they originated; because these rays sink into the body of the optic nerve, where they are damped down and extinguished.

Now the retina being only a very superficial development of its tissue which the rays can pierce much more easily, cannot stop them; thus this membrane cannot be the essential portion of the organ of vision.

Besides, this same experience which disclosed to me that the light rays traverse the humors and the retina, also taught me that these same rays are finally stopped by the choroid which is opaque; it thus strongly seems that it is on the surface of this membrane rather than on the retina, which is transparent, where the image of objects is formed: the choroid is therefore the essential portion of the eye. This is the manner by which vision will be made easily understood.

When the light coming directly from the luminous body strikes the choroid, its rays reflected by this membrane against the retina move the fibers of the latter, and give to the animal spirits, with which they are filled, a particular modification which produces in the mind the sensation of light.

When on the other hand the light coming from the luminous body is carried to an object capable of reflection, and that by reflection it falls upon the choroid, its rays repulsed by this membrane also give to the animal spirits contained in the fibers of the retina, which they move on their return, a different modification which causes in the mind the sensation of color.

And because the light in being reflected reveals the shape and the size of the body which sent it, that means that with the color one also perceives the shape and size of the object, and in that consists all of its image.

Against the function of the choroid which I have just established on sensible experiences, one could nevertheless make this objection to me.

The manner by which you explain vision shows that it depends on the moving of the small nerve fibers of the retina, and on the modification of the animal spirits contained therein. That being the case, the light rays are thus capable, being reflected only by objects, of giving this particular movement which you say is necessary for sensation, to the fibers of the retina and to the animal spirits on first entering the eye. The retina is thus by your principles, the essential portion of the eye which serves vision, and not the choroid.

In response to this argument, I say that if the light rays reflected by objects were not reflected a second time by the choroid, we would not be able to see the objects. That is what experience shows us: because when the light rays modified only by the bodies which send them toward our eyes, fall on the center of the optic nerve where the choroid is pierced; we cannot, as was very well shown by M. Mariotte, perceive the objects: we see them when these rays come to strike the choroid. It is therefore this membrane, which repulses the light rays against the retina for a second time, modifying the nerve fibers of the retina in a manner proper to cause light and objects to be sensed by the mind. The choroid is therefore, finally, the essential portion of the organ of vision.

BIBLIOGRAPHY

 Mery, Jean, "Des Mouvemens de L'Iris, et par occasion de la partie principale de l'Organne de la vûe," <u>Histoire de L'Academie Royale</u> <u>Des Sciences, Annee MDCCIV (1704), avec les Memoires de Mathematique</u> <u>et de Physique, pour la meme Annee, Tirez des Registres de cette</u> Academie, 1704.

- 2) Shastid, T.H., <u>History of Ophthalmology</u>, <u>American Encyclopedia of</u> <u>Ophthalmology</u>, Vol. 10, pp. 7657-7659, 1917.
- 3) Fontanelle, Bernard le Bouvier de, "Eloge de Monsieur Mery," Oeuvres de Fontanelle, Tome VI, pp. 168-181, 1767.
- 4) Hofstetter, H.W, Optometry -- Professional, Economic, and Legal Aspects, The C.V. Mosby Co., St. Louis, 1948.
- 5) Hoefer, Le Dr., Nouvelle Biographie Generale, Tome 35, pp. 134-5, M.M. Firmin Didot Freres, 1861.

100 years of light bulbs:

If you find a light bulb that can be dated back to before the turn of the century, or if it has other than the regular Edison screw base, it may be old enough to have some value. Presently with little or no cash value, however, are the thousands of still extant light bulbs dating back only 50-60 years.

A good reference, with illustrations of bulbs dating back to 1880 and suggestions for determining their age, is "Old light bulbs - treasures of the past?" by James Jensen in the July 1980 issue of <u>Lighting Design and Application</u>, Vol. 10, no. 7 pp. 41-45.

Snappy ILAMO service:

Praiseworthy indeed is the action of the staff of the International Library, Archives, and Museum of Optometry and certain friends in fulfillment of a rather unusual overseas request for a long out-of-print but not yet The book is Philip Pollack's 1956 "The Truth about Eye Exercise", rare book. hardly a classic but nevertheless occasionally cited. The July 9th request came to me (Hofstetter) on July 15 from Robert Sandor, the head of SYNINFORMATION in Stockholm, in behalf of the University at Lulea, Sweden, about 100 kilometers from the Arctic Circle. Yes, there is a single copy at Indiana University, and I telephoned ILAMO on July 15 and learned that it had only one copy also. One of these could be xeroxed, but ILAMO Librarian Maria Dablemont believed she could do better by running an appeal in the next optometric periodical to be issued. This happened to be the July 28-August 4 issue of Affect/Effect, an American Optometric Association newsletter previously unknown to me which apparently goes out to an inner circle On July 28 Sandy Smith, Assistant Librarian at ILAMO, received a clientele. call from Dean Jack Bennett of the Ferris State College of Optometry in Big Rapids, Michigan, to say that he owned a copy which he was quite willing to relinguish. He promptly mailed it to ILAMO in St. Louis, and on August 1 Sandy Smith forwarded it PAR AVION to Stockholm.

Believe it or not, all of this happened <u>almost</u> between sunrise and sunset in Lulea!

Who was Dennett?

Many an ophthalmic textbook identifies the centrad, symbolized by an inverted Greek letter delta (∇) , as a term coined by Dennett, to represent a hundredth of a radian, approximately 0.573° . But who was Dennett, and when did he coin this term?

The only clue I (Hofstetter) have found in what may be called a somewhat superficial search through perhaps twenty books, cyclopedias, and directories is a brief notation in one book that it was introduced by "Dr. Dennett in 1891." This was in OPHTHALMIC LENSES BY H.H. Emsley and Wm. Swaine, Hatton Press, London, 1951. In a footnote they added, "It was recommended by the American Academy of Optometry in 1941 that the centrad be the unit adopted for prisms and eye movements." They gave no identification of Dennett except that in the index of the book they show "Dennett, W.S.", indicating the page on which "Dr. Dennett" is mentioned.

Suspecting from the "Dr." title and the academy action that Dennett might have been an American, I checked the 1923 <u>Red Book of Eye, Ear,</u> <u>Nose, and Throat Specialists</u> to find listed in New York City a William S. Dennett, an 1874 graduate of Harvard University, identified as an "Eye specialist."

I found nothing in the published report of the 1941 meeting of the American Academy of Optometry in the <u>American Journal of Optometry</u> to suggest that the centrad was even under consideration, but the published report was extremely brief, hardly the official minutes of the meeting.

Any further clues or information will be most appreciated.

From our Australian historian:

Excerpts from a personal letter from Charles Wright of Springfield (near Adelaide), Australia:

"I am grateful to you for your offer to contact any of our people who are now working in the U.S.

"I have been Historian of the Australian Optometric Association for, oh, I suppose 10 years now and have collected enough paper to fill five filing cabinets. I could spend all my time arranging all that paper, but I am writing some pieces now.

"The Waterworth Memorial Lecture which is what I was researching was duly delivered during our optometric participation in our Association for the Advancement of Science. I believe it is to be printed in our <u>Australian</u> <u>Journal of Optometry this month (July)</u>. It may not seem very good to professionals but it was the best I could do."

The Louis B. Marks Memorial Library

A library of unusual visual science significance is the collection of hundreds and hundreds of volumes related to illumination belonging to the Illuminating Engineering Society of North America, familiarly abbreviated I.E.S. The continuously growing collection is shelved at the I.E.S. headquarters in the office space made available to the Illuminating Engineering Research Institute in the United Engineering Center at 345 East 47th Street, New York, New York, 10017. It may well be the world's most frequently consulted resource on lighting during the present century. Starting as Mr. Marks's personal collection years before the turn of the century, and conveniently located in New York City, it was regularly used by many as an illumination reference source. Shortly after the Residence Lighting Forum of the New York Section of the I.E.S. established a circulating library of some 75 volumes in 1938, Mr. Marks placed his entire library at the disposal of the Forum, and arrangements were then made to place these volumes at I.E.S. headquarters and to provide suitable new facilities for shelving them. On display is a handsome bronze placque identifying the collection as the Louis B. Marks Memorial Library.

Mr. Marks (1869-1939) was one of the signers of a December 13, 1905, letter suggesting a meeting to discuss "the formation of a society to represent the art and science of illumination." On January 10, 1906, he was elected first President of the Illuminating Engineering Society. Inventor, designer, consultant, author, and organizer, he contributed extensively to the science and technology of lighting nationally and internationally.

A senior optometrist reminisces:

Some months ago George G. Litsinger, O.D., of the Park Ridge suburb of Chicago, Illinois, contributed a copy of a "round robin" letter he had written for his daughters and other relatives so that they might know something of the wide range of episodes and contacts he, especially as an optometrist, had had with the world inside and outside of his office door over the years. The following are excerpts.

The recollection I am most amused by goes back to Toledo, Ohio, in 1925. Brother Frederick had used his last penny to purchase an Atwater-Kent crystal radio, operated with several 6 volt wet-cell batteries, the acid of which ate the varnish off the floors. A huge horn amplified the sound, but if the station was too far away, or the sound too weak, one would use earphones.

Emma Albertine Gunter Litsinger would listen nightly to an inmate at the Indiana State Prison sing: ..."If I had the wings of an Angel, I'd fly over these tall prison walls". Tears would roll from her eyes. The inmate was Harry Snodgrass, and billed on radio as "King of the Ivories".

Twenty-one years later (7-17-1946) I examined the eyes, and furnished glasses for a Mrs. (Maryellen) Albert DeGitis, of Chicago. I learned that she was the former wife of Harry Snodgrass!

1929... The first year of college optometry had ended, and I was about to shove off for Burbank, California, to visit my parents. But I had reason first to seek a reference book at the huge main Chicago Public Library at Michigan Boulevard and Randolph Street. I was seated inside, at that very corner, when I heard gunfire coming from the underpass to the opposite side of Michigan Boulevard. I ran outside in time to see a policeman, with gun in hand, chasing a man east on Randolph Street. I followed close behind; both turned through an alley, then on to Wabash Avenue, where the assassin vanished into the crowd. He had gotten away. I returned to the underpass to see the body.

Leo Brothers was arrested much later. It was alleged he murdered Jake Lingel, a <u>Tribune</u> reporter who was passing information (for money) between two opposing gangs, Capone's and Bugs Moran. A movie, some years ago depicted this very scene. That was my closest approach to gangland activities in Chicago!

One of my first jobs as an optometrist (1931) was located in a Jewelry Store near the corner of Cicero and 22nd Street in Cicero, IL. Al Capone operated a Night Club across the street on 22nd, and his brother Ralph had the same kind of a deal a mile west. His body guards were often pointed out to me, but I never saw the real Capone.

One of the henchmen, however, offered me \$60.00 if I could make a pair of glasses that would magnify enormously the backside of a playing card. This, of course, was impossible. They were marked cards.

In 1927 a news item appeared on the front page of the <u>Toledo</u> <u>Blade</u> "... Fred Litsinger and gang arrested for robbing a mail train in Chicago." We and our friends were duly shocked, because our Fred was studying optometry in Chicago at that time, and we had not had a recent letter. Turned out that it was a Virgil Litsinger! There are several Litsingers in Chicago, and I wonder where they fit into the genealogy. One Edward Litsinger was defeated for Mayor of Chicago by "Big" Bill Thompson, sometime near 1927.

After this episode, my first trip to Chicago was to convince my parents that our Fred was not in jail. On the coach were two men singing and playing string instruments. The conductor told me they were "Sam 'n Henry" of radio fame. They were later known as "AMOS 'N ANDY."

In 1931 I worked as an optometrist in Peoria, IL., and it was there that I met Joseph Correll, whose brother Charles was the "ANDY" of radio. Joe and I were both magicians and performed together at many gatherings. It ended a year later when I returned to Chicago, and I have been here ever since.

Writing local history

Throughout the United States, local historical societies are springing up by the dozens, the hundreds. The newest directory published by the American Association for State and Local History lists something close to ten thousand historical groups.

The form in which history is most effectively preserved for the ages is the written word. This requires work, dedication, time, and awareness of the potential sources of information. It is extremely unlikely that a local history undertaking in any given town or community will zero in on the history of optometric or vision care beyond naming the person or persons who may have offered the services. Further, the volunteer persons researching and recording the local history, unless they are optometrists, are unable to interpret correctly the nature and quality of optometric services in any given time period or circumstance.

If, then, optometry is to have its own history properly and comprehensively recorded it is essential that there be at least a few optometrists who will undertake to research the history of optometry in their own They will find it necessary, and exciting, to pore through old communities. newspapers, interview old-timers (cautiously aware of pitfalls of recollection), explore the county courthouse through such documents as marriage licenses, abstracts of real estate deeds, tax records, sheriff's and police records, automobile license lists, etc. Similarly the city hall as records, and at the federal level there are the census tables and special records relating to agriculture, commerce WPA-type projects, and the like. 01d scrapbooks, school annuals, and church bulletins may also reveal something of optometric interest. One may well learn that the local spectacle retailer in the middle 1800's was an itinerant German immigrant twice arrested for drunkenness, owner of an apple orchard, a member of the school board, husband of a physician's daughter, and local campaign manager for A. Lincoln who imported eyeglasses from Germany and provided free glasses to persons approved for charity by the local ministers.

What may be especially rewarding is the discovery that local persons who become aware of one's effort want to help by calling to his or her attention bits of information, even old handbills, receipts, albums, and lens cleaners, which may add a revealing detail or two about the early nature of optometry in the town.

To save or not to save:

Before the advent of mimeographing, carbon paper, xerography, electronic read-outs, and innumerable other document duplicating systems, and before the concepts of biodegradability and planned obsolescence were taken seriously, there were few needs to destroy documents and records. The world was a bit roomier then and, except in instances of desired secrecy, letters and other documents typically accumulated almost endlessly, or at least until someones' demise or an institution's termination occurred. In such circumstances documented history had a pretty favorable chance to evolve.

Today, however, the historian and archivist are faced with documentgathering difficulties not unlike trying to seize a selected leaf in a windstorm. That this must be so is undeniably brought to our attention by a recent, quite disposable, uncopyrighted, four-page document entitled RECORDS RETENTION TIMETABLE complimentarily inserted with a monthly mailing from the headquarters of a state optometric organization. Directly under its title is the notation, "Revised and printed by Electric Wastebasket Corp., 1977", suggesting to me that this was to be a humorous exposition. It was not. A company with such a name is duly listed in Thomas' Register of American Manufacturers. The significance of the document is made further evident by its coded identification as "vj #103 6/17/80", a fair indication that it is officially supported by the corporation. The timetable lists 119 types of records, such as "Accounts Payable Invoices", "Travel Expense Reports", "Contracts", "Health and Safety Bulletins", "Photographs", "Correspondence", and "Employee Case Files", and the period of time each should be retained. Almost exactly onethird of the items are marked for "permanent" retention. A very few are earmarked for variable retention periods depending on circumstances, such as when superseded or obsolete. The other 70 are given retention periods ranging from a half to 30 years, with a mean of four years and a median and mode of three years, before consigned for destruction in an "electric wastebasket" or shredder.

The logic or rationale of the various suggested retention periods is not immediately obvious. For example, "Dividend Checks" and "Rough Work Papers" are to be retained two years, whereas "Personnel Attendance Records" and "Public Information Activity" are to be held for seven. Presumably the determining factors are matters of security, legal compliance, insurance requirements, and the like. It is doubtful that archival considerations enter into the recommendations at all.

What is the solution? Certainly the indiscriminate preservation of records and documents is impossible. On the other hand their systematic and complete destruction in terms of nonarchival criteria can well blot out the facts of significant developmental periods. What this points to is the need for more of us to acquire a highly sensitive appreciation of what to save and what not to save, an archival sense, not unlike the appreciation of good music, cleanliness, courtesy, and honesty.

Historical Interest

The following clip from the <u>Wall Street Journal</u> (Aug. 20, 1980) was forwarded by Henry Knoll.

Notable and Quotable

(Robert Penn Warren, novelist and poet, in an interview with editors of U.S. News & World Report:)

One sign of our loss of humanity is the declining interest in history. History is the story of how man became man; it is the investigation of values that make man human. But history today is almost ceasing to be studied.

The human story is not what people flock to. How many people coming out of college now know any American history? And if they know American history, do they know about the history of any other country?

There's an appalling ignorance and contempt for history. It is considered a dead subject. People are not interested in the past; they are not interested in understanding human nature.

Studying history is not just a question of having nice anecdotes to tell. Thomas Jefferson wasn't studying history to tell stories by the fireside; he wanted to use it to understand human nature. He was a real politician.

> D.K. Penisten H.W Hofstetter, Editors

October 1, 1980

This is your ballot

Two candidates were duly nominated for a full five-year term on the five-member Executive Board of the Optometric Historical Society beginning January 1, 1981, as follows:

_____ Jerome J. Abrams

_____ Maria Dablemont

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Please make your choice and mail this ballot promptly to:

H.W Hofstetter School of Optometry University of Waterloo Waterloo, Ontario, Canada N2L 3G1