CJO RCO

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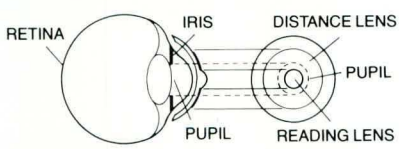

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PRESIDENT'S PODIUM/MOT DU PRÉSIDENT

. . .and now a message from the real world.

On June 14, 1986, in Vancouver, BC, forty of this country's optometric leaders met to hear five speakers address the issue "Franchising in Optometry". The speakers, who came from five different professional backgrounds, dealt with the subject from five very different points of view. The meeting had been planned, in fact, as an exercise in exploration, listening and fact gathering. Judgement and decisions would come later. It was to be a day spent in isolation from past preconceptions (and, indeed, *mis*conceptions) or the attendees' acknowledged future responsibilities of guiding the profession through the next several years. It was to be a day to learn.

The topic — "Franchising" — was purposely restrictive. Franchising isn't yet a major problem in Canadian Optometry — it may never be. But, it is one solid example of how creative thinking by large and powerful entities can shape the course of a profession in an age when professions are neither sacrosanct nor safe from infiltration by the commercial world of the marketplace.

> just defending against the real world will not insure independent professional Optometry's future — it will only postpone its demise.

At the meeting, each speaker talked of the vices and virtues of franchising and, clearly, understood the assigned topic. But as the day progressed, it became ever clearer that the real issues were much broader. "Franchising" was only a stimulus to the creative thought process that the meeting would generate.

Meanwhile, some of the optometric participants had come to the meeting with "blinders" on, that allowed them to say, "No problem with franchising in *my* province; I'm just here to observe and to help others if I can." And some left without removing those blinders. Others had their eyes open, or so they said, and saw with new clarity a number of additional threats to their hopes for Optometry. They, however, found solace in comforting thoughts about solid legislation at home or the protection that future solidarity and political action could offer. Still others went away more aware than ever that just defending against the real world will not insure independent professional Optometry's future — it will only postpone its demise. Hopefully, that message, the real message of the day, will penetrate the thinking of all of us in the months to come.

To me personally, one of the most cherished aspects of my life as a private practitioner in a health care profession, aside from being able to provide a valuable service to my fellow man, is the significant degree of control I have over my own destiny. As optometrists, however, we cannot just assume that private practice (owner controlled) will continue to be the cornerstone of health care, and specifically vision care delivery in the 1990's. Government, for example, in its attempt to control skyrocketing health care costs, is already making significant moves to control health care professions to a much greater extent than in the past. We may be well aware of these threats to our independence, but are we aware that almost as big a threat comes from the private sector? Large, corporate entities, many of these multi-national and each with a financial resource base that staggers the imagination, would not hesitate to subjugate an entire profession if there were an adequate return on the balance sheet. No law or lobby effort we could afford to mount will make us "safe" if a commercial giant decides it wants to invade the profession of Optometry.

There are only two things that can protect us:

1) our not being lucrative enough to arouse their takeover interest (although the figures show that we are, and they have the interest);
2) public support, that is, from the group to whom both Government and business listens.

And we had better listen too!

At that meeting in Vancouver, after a day of hearing from speakers all connected with the vision care field in some way, it was an easy and comfortable trap to feel that we now had inside knowledge of how Optometry should proceed. You could almost hear the "thud" that struck as many of us felt the first, clear jolt of reality from the speaker chosen to represent the public's perception of the franchising topic, Canadian economic futurist Frank Feather. *"And now a message from the real world!"* But how many, I wonder, turned their receivers off?

Big business certainly hasn't

We live in a consumer driven society, a society more confident, better educated, and more affluent than ever before. Today's consumers (our patients!) are no longer content merely to be passive recipients of goods and services, including professional services. Consumers today want, and are demanding, to be involved in decisions about the important things in their lives, one of which is health care. And they are more discriminating than ever about the quality of services received. Since their time

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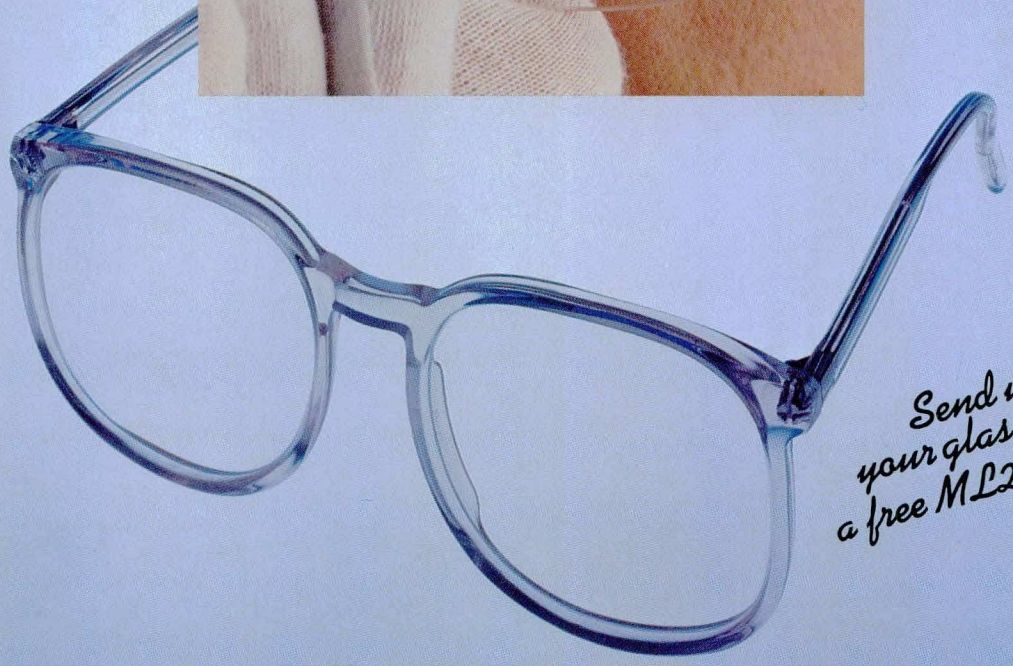

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PRESIDENT'S PODIUM/MOT DU PRÉSIDENT

Message en provenance du vrai monde

Le 14 juin 1986, à Vancouver (C.-B.) quarante dirigeants du monde canadien de l'optométrie se sont réunis pour entendre cinq conférenciers parler du franchisage en optométrie. Ces conférenciers, issus de cinq univers professionnels différents, ont abordé le sujet sous cinq angles très différents. Cette réunion se voulait effectivement un exercice d'exploration, d'écoute et d'information, les jugements et les décisions devant être pour plus tard. C'était une journée où l'on devait écarter les préconceptions et mêmes les fausses conceptions du passé quant aux responsabilités des participants en matière d'orientation de la profession, au fil des années à venir. C'était une journée pour apprendre.

Le sujet, le franchisage, était volontairement restreint. Le franchisage ne pose encore aucun problème pour l'optométrie au Canada, et n'en posera peut-être jamais. C'est toutefois un exemple probant de la façon dont la pensée créatrice de grandes et puissantes entités peut agir sur l'avenir d'une profession à une époque où les professions ne sont ni sacro-saintes, ni à l'abri des incursions du monde commercial, du marché.

Chaque conférencier a parlé des vices et des vertus du franchisage et connaissaient manifestement bien le sujet choisi. Cependant, au fil des heures, il est devenu de plus en plus clair que les vrais préoccupations sont beaucoup plus larges. Le sujet, le franchisage, ne devait que stimuler la réflexion engendrée par la rencontre.

> le simple fait de se défendre contre l'envahissement du vrai monde ne garantira pas l'avenir de l'optométrie professionnelle, indépendante, elle ne fera que retarder sa chute.

D'autre part, certains participants du monde de l'optométrie, ajustant leurs oeillères, se sont permis de dire : «Il n'y a pas de problème de franchisage dans *ma* province; je suis venu simplement pour observer et pour aider les autres si je le puis.» Certains sont repartis avec leurs oeillères. D'autres avaient les yeux bien ouverts, du moins le disaient-ils, et ont pu voir sous un nouveau jour un certain nombre de menaces qui planent sur leurs espoirs pour la profession. Ils ont cependant été réconfortés par des pensées rassurantes au sujet de la protection offerte par la loi et par la promesse de la solidarité et de l'action politique à venir. D'autres sont repartis plus convaincus que jamais que le simple fait de se défendre contre l'envahissement du vrai monde ne garantira pas l'avenir de l'optométrie professionnelle, indépendante, elle ne fera que retarder sa chute. Espérons que ce message, le vrai message que nous a livré cette journée, nous saurons nous en pénétrer au cours des mois à venir.

Pour moi, l'un des aspects les plus chers de la vie du praticien privé dans une profession des soins de la santé, outre la faculté d'offrir un service de grande valeur aux autres, c'est la grande possibilité que j'ai de maîtriser ma propre destinée. Il nous est interdit à nous, optométristes, de supposer que la pratique privée (gérée par le propriétaire) continuera d'être la pierre angulaire des soins de la santé et plus particulièrement des soins de la vision dans les années 1990. À titre d'exemple, afin de réfréner la montée vertigineuse du coût des soins de la santé, le gouvernement prend des mesures importantes pour exercer un plus grand contrôle que jamais sur les professions des soins de la santé. Nous savons peut-être bien que notre indépendance est ainsi menacée, mais voyons-nous venir un nuage presqu'aussi noir du côté du secteur privé? Les grandes entreprises privées, dont plusieurs sont des multinationales et ont des ressources financières prodigieuses, n'hésiteraient pas à mettre toute une profession sous le joug si cela faisait augmenter les profits. Ni la loi, ni la pression politique que nous sommes en mesure d'exercer ne sauront nous protéger si l'un des géants de l'industrie décide d'envahir la profession.

Seules deux choses peuvent nous protéger :

1) que nous ne fassions pas assez d'argent pour réveiller leurs instincts d'acquisition (bien que d'après la statistique, notre commerce est lucratif, et leurs instincts sont bien éveillés);

2) l'appui du public, c'est-à-dire le groupe qui sait se faire entendre du gouvernement et des industriels.

Et nous aussi, nous devons écouter!

Lors de cette réunion de Vancouver, après avoir entendu pendant toute une journée des conférenciers qui provenaient tous du domaine des soins de la vision, il était facile de tomber dans ce piège confortable qui nous fait penser que nous avons une connaissance immédiate de l'orientation à donner à l'optométrie. Le choc de la réalité a été presque audible lorsque l'un des conférenciers, choisi pour représenter la perception publique de la question du franchisage, l'économiste-futuriste canadien Frank Feather, a pris la parole. *«Un message en provenance du vrai monde!»* Mais on se demande combien étaient à l'écoute.

La grosse entreprise ne l'était certainement pas.

Nous vivons dans une société de consommation, une société plus confiante, mieux instruite et mieux nantie que jamais. Les

President's Podium continued

is also valuable, they want fast service, but at a reasonable cost, and yet, still, they crave personal attention. In a nutshell, they want what John Naisbitt calls ''high-tech/high-touch'' service.

> Today's consumers (our patients!) are no longer content merely to be passive recipients of goods and services, including professional services.

Big business is getting the message and is responding. Franchise operations and other innovative marketing techniques are industry's responses to what is important to the NOW generation — time and convenience. Big business, in all its aspects, bases its success upon a recognition that health, fashion and leisure are almost a universal preoccupation among today's consumers.

> Dinosaurs didn't adapt.

And if we, as professionals attempting to exist and grow in these turbulent times, don't recognize and respond to our patients' needs, then we will lose our ''share of the market'' to those who are more willing to adapt, and deservedly so! Dinosaurs didn't adapt.

Optometry, however, *can* respond. We are still the ideal professionals to provide ''high-tech/high-touch'' services. Medicine has already lost so much control over its own destiny to Government that it is questionable whether or not it can provide much ''touch'' at all to offset the cold efficiency of its ''tech''. Dentistry, too, is already well on the way to losing its independence as each year more and more graduates from dental schools go the route of ''retail dentistry'', including franchise practice settings. Optometry still has a chance to adapt and, if we do it properly, the public as well as the profession will be the beneficiaries.

I hope the message that was delivered in Vancouver is starting to come through. It certainly should have hit home by now to all of us who were there. WE, not Government, not legislators, not anyone else, still control our own destiny. But, unless we are prepared to respond actively to Canadian consumers (our patients), we won't be in control for long.

If we have the consumers on our side, we can't lose. And to achieve this, we must listen to them, accommodate them and make them aware of what we are doing so that they are fully informed about our profession. Only when consumers know *why* they should choose Optometry can we expect them to do so. But that's another topic — perhaps another ''President's Podium''.

Scott D. Brisbin, O.D., F.A.A.O.
President, C.A.O.

Mot du président, suite

consommateurs d'aujourd'hui (nos patients!) ne se contentent plus simplement de recevoir passivement les biens et les services, y compris les services professionnels, ils exigent de participer aux décisions qui touchent les aspects importants de leur vie, dont l'un est le soin de la santé. Et ils sont plus exigeants que jamais quant à la qualité des services reçus. Leur temps, comme le nôtre, étant également compté, ils veulent un service rapide, mais à un coût raisonnable, tout en insistant sur l'attention personnelle. En un mot, ils veulent ce que John Naisbitt appelle «grande technologie/grande présence».

Le grande entreprise a capté le message et y répond. Le franchisage et les autres techniques de commercialisation innovatrices constituent la réponse de l'industrie à ce que la génération d'aujourd'hui considère important : le temps et la commodité. Le succès de la grande entreprise, sous tous les angles, repose sur la reconnaissance du fait que la santé, la mode et les divertissements sont presque des préoccupations universelles chez les consommateurs contemporains.

> Les dinosaures ne se sont pas adaptés.

Si nous, professionnels, voulons survivre et grandir en ces temps turbulents, nous devons percevoir les besoins de nos patients et y répondre, faut de quoi nous perdrons notre «part du marché», et nous le mériterons, au profit de ceux qui sont disposés à s'adapter. Les dinosaures ne se sont pas adaptés.

La profession d'optométrie *peut* cependant réagir. Notre profession se prête idéalement au service que préconise Naisbitt. La médecine a déjà remis entre les mains du gouvernement une si grande partie du contrôle sur sa propre destinée qu'on peut se demander si elle est encore capable de se rapprocher de ses patients pour contrebalancer la froide efficacité de sa technologie. Les dentistes aussi perdent graduellement leur indépendance car chaque année de plus en plus de diplômés des écoles dentaires se lancent dans le détail, y compris les pratiques en franchise. L'optométrie a encore le temps de s'adapter et, si nous le faisons correctement, ce sera à l'avantage du public comme de la profession.

J'espère que le message livré à Vancouver commence à pénétrer. Je suis sûr qu'il a frappé tous ceux qui étaient là. C'est à NOUS, non pas au gouvernement, non pas aux législateurs, ni à personne d'autres de maîtriser notre propre avenir. Mais à moins que nous ne soyons prêts à nous adapter réellement aux besoins des consommateurs canadiens, nos patients, notre profession nous échappera bientôt.

Il n'y a rien à perdre si les consommateurs sont de notre côté. Pour les avoir de notre côté, il nous faut les écouter, s'accommoder à leurs besoins et leur expliquer ce que nous faisons afin qu'ils soient bien renseignés sur notre profession. Ce n'est que lorsque les consommateurs sauront *pourquoi* ils doivent choisir l'optométrie qu'ils exerceront ce choix. Mais il s'agit d'un autre sujet — peut-être celui d'un autre «mot du président».

Scott D. Brisbin, O.D., F.A.A.O.
Président de l'ACO

ANNOUNCEMENTS/NOUVELLES

Dr. Ted Fisher Awarded Professor Emeritus Title

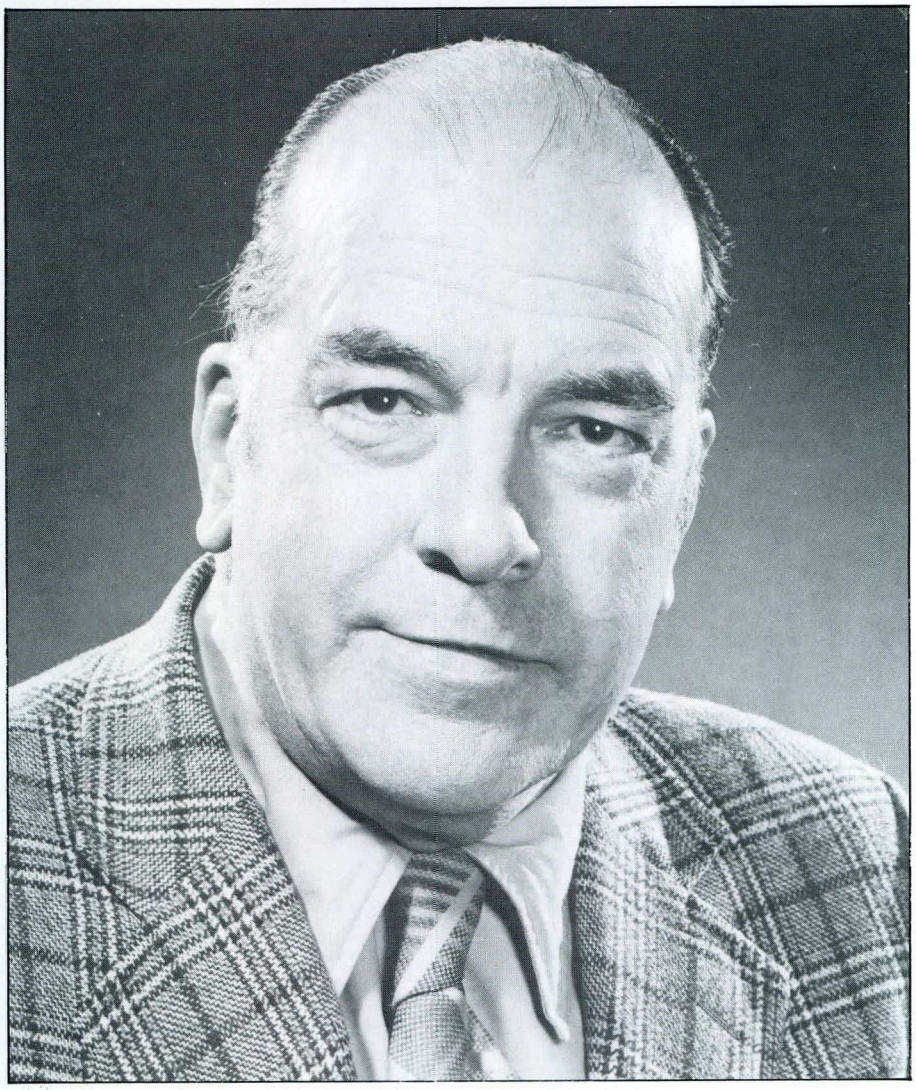
On June 3, 1986, Dr. Edward (Ted) Fisher of the School of Optometry, University of Waterloo, was awarded the title "Professor Emeritus" by the Board of Governors of the University of Waterloo in recognition of his long and distinguished record of service and contribution to the University.

> The fact that the School of Optometry is today a world vision research centre and clinical facility is testament to Professor Fisher . . .

In advising the *CJO* of this announcement, Associate Dean of Science and Director of the School of Optometry, Dr. Jacob Sivak, forwarded a copy of his own correspondence with the Dean of Science which led to the recommendation to the University's Board of Governors. In it, Dr. Sivak stated: "Throughout his career, Professor Fisher fostered and encouraged Optometry graduates to pursue academic careers in Physiological Optics, the Science upon which the profession of Optometry is based. The fact that the School of Optometry is today a world vision research centre and clinical facility is testament to Professor Fisher's success in faculty development."

The nomination to award the title "Professor Emeritus" was a unanimous recommendation from the present faculty of the School.

Dr. Fisher's list of achievements and accomplishments in service of the University and, particularly, the profession and the School of Optometry, are many. He spearheaded the expansion of the professional programme from three to four years; oversaw the relocation of the programme from Toronto to the University and was directly involved in the campaign to include Optometry as an insured service under Ontario's Health Insurance Program. With Optometry's move to the University of Waterloo on July 1, 1967, he became the first Director of the School, a position he held until 1975 when he was succeeded by Dr. Emerson Woodruff.



Always a selfless individual, Dr. Fisher also was instrumental in establishing several unique programmes through which optometrists in Canada could share their professional skills to the advantage of third world practitioners and patients. From 1970 to 75, for example, the School operated the Caribbean Aid Programme and, as a visiting Professor, Dr. Fisher himself participated in the development of the Optometry programme at the University of Benin in Benin City, Nigeria.

Although officially retired as a professor of Optometry, Dr. Fisher remains active in the School as Curator of the Museum of Optometry and is presently working on a book documenting the history of the profession in Canada.

Effective immediately, the formal acknowledgement and presentation of Dr. Fisher's "Professor Emeritus" title will take place in conjunction with the School's 20th anniversary convocation ceremonies in the Spring next year.

The Editors and staff at *The Canadian Journal of Optometry* join with the School, the University and the profession at large in offering our sincere congratulations to Dr. Fisher for this latest in a long list of well-deserved awards and honours.

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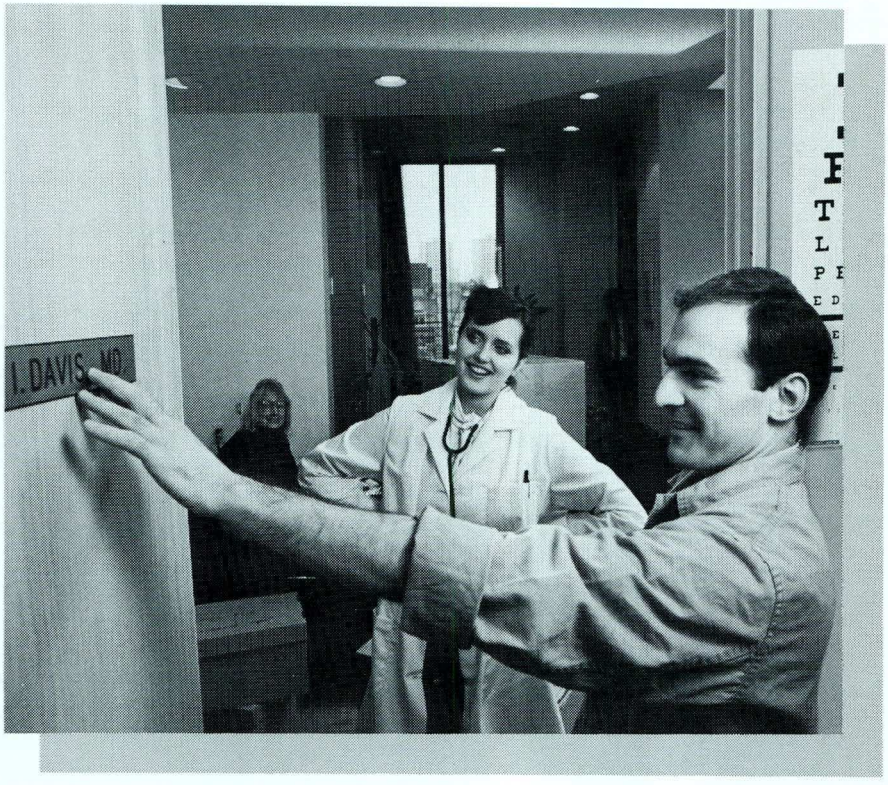

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A Review of the Pathogenesis of Corneal Vascularization

J.D. Jantzi *

Corneal vascularization is a subject of importance not only to research scientists but also to optometrists who in daily clinical practice are responsible for monitoring the ocular health of their patients. Contact lens patients in particular must be examined regularly and on a continuing basis for signs of pathological corneal changes such as vascularization which indicate an intolerance to their contact lenses. The purpose of this paper is to review what is presently known about the pathogenesis of corneal vascularization since an understanding of this condition may give us insight as to why it occurs in certain patients; for example contact lens wearers.

According to Duke-Elder[1], vascularization of the cornea is the response of a tissue in difficulty, primarily as a defence mechanism against disease or injury. The manner in which disease, injury of other factors may bring about blood vessel growth into the normally avascular cornea has been the subject of many investigations. Over the years a wide variety of methods have been developed to study corneal vascularization in experimental animals.[2] Typically, live rabbits are used whose anesthetized corneas are subjected to some form of injury, usually by chemical or thermal means. The response of the injured corneal tissue is then monitored by suitable laboratory techniques on living and enucleated eyes. Investigators have also studied the effect of drugs and environmental conditions on corneal vascular responses.

In one of the earliest studies, Cogan[3] observed the growth of new blood vessels into edematous corneal tissue but not into non-edamatous tissue. He concluded therefore that the decrease in compactness of the corneal stromal which occurred under conditions of corneal swelling was sufficient to allow the growth of new capillaries into the swollen stromal tissue from the limbal arcades. Expanding on this work, Campbell and Michaelson[4], Michaelson[5], Maurice, Zauberman and Michaelson[6], and Klintworth[7] showed that while edema was a necessary condition in the vascular process, it was not a sufficient stimulus per se. They postulated that corneal lesions released an unknown but essential chemical mediator or "X-factor" (perhaps as a result of anaerobic metabolism) which diffused from the site of the lesion thereby acting as a chemical stimulus to vascularization.

Ashton and Cook[8], investigating the role of tissue hypoxia, suggested that the cornea is normally in a peculiar state of "sub-oxidation" so that in the event of a decrease in tissue compactness in the limbal region for a sufficient period of time, vascularization would regularly occur. However Baum and Martola[9] subsequently demonstrated limbal edema without vascularization; and Kaiser and Klopp[10] found that vascularization was not diminished in animals exposed to hyperbaric levels of oxygen.

In a study of retinal neovascularization, Ashton[12] believed that the stimulus to neovascularization was present in hypoxic retinal tissue; probably a chemical byproduct of anaerobic metabolism. The role of one such anaerobic chemical byproduct — lactic acid — was investigated by Imre[12] who provided evidence to show that neovascularization of the retina was indeed caused by a buildup of lactic acid in hypoxic retinal tissue. Levene, Shapiro and Baum[13] went on to measure the lactic acid concentration centrally and in the region of the limbus in normal healthy corneas and in corneas which were undergoing vascularization. They discovered that normal corneas had less lactic acid peripherally than centrally, probably as a result of the proximity of the limbal vessels which would allow for greater oxygen utilization in this area and therefore less accumulation of lactic acid. In vascularized corneas however, they found that the peripheral lactic acid concentration was the same as that found centrally. This, they believed, was the result of impaired aerobic metabolism in the limbal area. Morley and McCulloch[14] reported a similar increase in peripheral corneal lactate after contact lens wear. Lactic acid then could be an example of Campbell and Michaelson's "X-factor".

Later, other chemical substances were found which also stimulated corneal vascularization. Zauberman, Michaelson, Bergmann and Maurice[15] for example, were able to stimulate blood vessel growth into the cornea by using the biogenic amines acetylcholine, histamine, serotonin and bradykinin. They thought these substances might be vasostimulating factors or the precursors of as yet unidentified vasostimulating factors. Collin[16] however showed that histamine and heparin were not directly responsible for corneal vascularization but rather were involved in the limbal inflammatory process which immediately precedes it.

Examining the role of the immune system in corneal vascularization, BenEzra and Sachs[17] found that lymphocytic inhibitors were normally present in the aqueous of rabbits: thus perhaps lymphocytes were somehow involved in the vascular process. Fromer and Klintworth[18, 19] and BenEzra[20] later found that leukocytes and possibly lymphocytes were necessary for corneal vascularization by producing one or more vasostimulating factors. However Sholley, Gimbrone and Cotran[21] demonstrated that corneal vascularization could still occur in animals whose blood leuko-

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cyte counts had been depleted by whole-body X-radiation, although the magnitude of the vascular response would be less than in non-leukopenic animals. Eliason[22], who later duplicated these results, suggested that the corneal epithelium itself may be the source of the vasostimulating factor. Thus the source or sources of vasostimulating factors still remains uncertain.

Corneal vascularization has been shown to be inhibted by various chemical substances. Brem et al[23] using a substance found in the vitreous, and Goren et al[24] using an extract of bovine aorta were able to inhibit the vascular response in experimental animals. Eisenstein et al[25] went on to show that bovine aortic extract not only inhibited corneal vascularization but also enhanced the regression of newly-formed vessels. Regression of newly-formed secondary and tertiary vessel branches in the rabbit cornea by the clearing action of macrophages was observed by Ausprunk, Falterman and Folkman[26] one week after the causative stimulus to vascularization had been removed. After three weeks, the primary branches were thinner and devoid of blood. They pointed out that regression of corneal blood vessels which they had observed in rabbits does not occur in humans: blood vessels may remain indefinitely as "ghost" vessels even after the causative stimulus has been removed.

Prostaglandins were later discovered to play a mediating role in vascularization by BenEzra[27, 28] who provided evidence to show that they were neovascular mediating substances. He also showed that leukocytes produced a neovascular attracting factor which he felt may be identical to "tumor angiogenesis factor" or Campbell and Michaelson's "X-factor". BenEzra[29] later went on to demonstrate that prostaglandins of the E-series were the most potent neovasculogenic activators. Additional support for the role of local prostaglandin synthesis in the pathogenesis of corneal vascularization was provided by Robin, Regis-Pacheco, Kash and Schanzlin[30] who discovered that the corticosteroid prednisolone and the non-steroids indomethacin and flurbiprofen, which were known to inhibit prostaglandin synthesis, were also potent inhibitors of corneal vascularization in experimental animals. Together, this evidence seemed to indicate that prostaglandins play an important albeit intermediate role in the pathogenesis of corneal vascularization.

Recently, Cassel and Grodin[31] introduced a new perspective on the subject of corneal vascularization by showing that experimental animals with denervated corneas experienced significantly less vascularization than animals with intact corneal nerves. Thus the possibility of a neural control of corneal vascularization must also be considered.

The results of these studies have given us a better although still incomplete understanding of the pathogenesis of corneal vascularization. In summary, it is certain that edema is a necessary condition in the vascular process although some unknown "X-factor" is also required. Lactic acid or perhaps leukocytic neovascular attracting factor may be the vasostimulating substance: the as yet unidentified "X-factor". It appeaars that the corneal epithelium itself could also be a source of this vasostimulating factor. The biogenic amine, histamine, is involved with the preliminary inflammatory phase of limbal injection which precedes corneal vascularization; and prostaglandins, in particular those of the E-series, play an intermediate role as potent neovascular mediating substances. In addition, the neural integrity of the cornea itself affects the magnitude of the vascular response. It remains for further research to explain the manner in which each of these factors relate to one another and to the overall vascularization process.

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Effects of Alcohol on the Human Vision System

Presented to:
The Alcohol Drug Education Association of Alberta
By
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Introduction

Alcohol and alcoholism affects us in many ways. It affects the social and economic fabric of our society, the physiology of the human body, and perhaps most importantly, the effectiveness of the mental processing of the human mind.

One of the most important avenues through which the mind receives, analyzes and processes information is through the sense of sight. Vision is often referred to as our "window to the world". When we recognize that over 70% of our learning takes place through the medium of vision we begin to glimpse the significance of vision in our daily lives. There is incontrovertable evidence that the ingestion of alcohol hampers the sense of sight and slows down the visual processes. Realizing the importance of vision, we understand the great threat which agents such as alcohol have upon our ability to perform and to cope effectively in the social, economic and physical arenas of life. That this is an issue which must be of high priority is clear from the large number of adverse ocular affects reported due to ethyl alcohol and due to the fact that the volume of man's consumption of alcoholic beverages is second only to his consumption of water.

Following is a brief outline of the ocular side effects of Acute Intoxication, Chronic Intoxication and Fetal Alcohol Syndrome. Also included is a new visual Sobriety Test, being used in the conviction of motorists who are intoxicated while driving. Immediately following this outline is a more detailed discussion of these ocular side effects with appropriate references to the bibliography.

It is not the purpose of this brief to dwell on the moral, social or economic implications of the distribution and consumption of alcohol. However, as the Association representing the Doctors of Optometry in Alberta, we hope this brief which provides a summary of some of the research on the effect of alcohol on vision, will be a useful resource to those in both the public and private sector who must make decisions or take stands concerning the public availability and distribution of alcoholic beverages.

This brief also contains research data of interest to those responsible for law enforcement, specifically the Alcohol Gaze Nystagmus Test. This is a sobriety test based on visual reaction. As the report indicates, studies identify the nystagmus test as the most valuable index of intoxification. It also has the advantage of requiring relatively involuntary, uncontrollable response and does not require expensive equipment or extensive training.

Ocular Side Effects of Alcohol

A. **Systemic Administration — Acute Intoxication**
(Consumption Over a Short Time Interval)

1. Diplopia
2. Nystagmus
3. Esotropia
4. Impaired Saccadic Eye Movement
5. Impaired Smooth Pursuit Eye Movement
6. Blurred Vision
7. Problems with Color Vision
8. Decreased Dark Adaptation
9. Prolonged Glare Recovery
10. Constriction of Visual Fields
11. Decreased Depth Perception
12. Temporary Blindness

B. **Systemic Administration — Chronic Intoxication**
(Consumption Over a Long Term Interval)

*Chronic intoxication may include any of the side effects listed under Acute Intoxication along with the addition of the following)

1. Central Scotoma
2. Problems with Color Vision
3. Optic Neuritis
4. Alcohol Amblyopia

C. **Fetal Alcohol Syndrome**

1. Narrow Palpebral Fissure
2. Hypertelorism
3. Micro Opthalmia
4. Epicanthus
5. Ptosis
6. Strabismus
7. Retinal Vascular Tortuosity
8. Pseudo Papilledema

Visual Sobriety Test

A. **Alcohol Gaze Nystagmus Test**

Alcohol and Vision
Alcohol and Vision
Alcohol and Vision
Alcohol and Vision
Alcohol and Vision
A Summary of Research

Ethyl alcohol, a central nervous system depressant, can give rise to muscle weakness with diplopia (double vision) and on occasion, blurred vision. In some instances it may aggravate pre-existing ocular defects or cause nystagmus (involuntary oscillating movement of the eyes).[11] In relation to automobile driving there has been considerable interest in the influence of alcohol on the function of the eyes. An investigation and review by *Gramberg-Danielsen* indicated that vision could be effected by alcohol and result in nystagmus, poorly controlled eye movements and diplopia.[7] *Newel and Ernest* report that ethyl alcohol in large amounts causes an esophoria with an accompanying diplopia that the intoxicated individual may not recognize.[11] An unrecognized doubling of the vision by an intoxicated driver or employee working around high speed machinery in the workplace or on the farm could well be a tragedy in the making.

The effect of alcohol upon both saccadic eye movement (movements in which the eyes are moved rapidly from one object of interest to another) and smooth pursuit eye movements (where the eyes follow a relatively slow moving target) is of importance when considering the performances of any skilled task which requires rapid perception of stationary and moving visual objects. *Wilkinson, Kime and Purnell* found an impairment in saccadic eye movement with increasing blood alcohol levels. At blood alcohol levels of 80-100 mg percent, velocity of saccadic eye movement was reduced by 20%.[22] Smooth pursuit eye movements became impaired at relatively low blood alcohol levels. *Bittencourt, Wade and Richens* in a separate study found smooth pursuit eye movement reduced by 25% at BAL's (Blood Alcohol Levels) of 80 mg/dl.[3] This impaired movement reduces the time an object is perceived in the central part of the visual field, with a presumed reduction in clarity of vision. This indeed appears to take place as the subjects in *Wilkinson, Kime and Purnell's* study commented that the target seemed blurred as they tried to follow it.[22]

Color vision may also be effected by alcohol ingestion. Acute ingestion of ethanol has been reported to temporarily cause poor color discrimination in all spectra, but with significantly more errors in the blue-yellow range as reported by *Russell, Carney and Feiock.* Thus ethanol appears to act as a toxin to inner retinal layers, which could account for the higher incidence of tritanopia color blindness found among alcoholics.[17] Chronic alcohol consumption may in some cases result in optic neuritis (inflammation of the optic nerve) with associated red-green color blindness.[10]

Relatively low doses of alcohol significantly slow down recovery time (the time required for the eye to readjust to the detail and illumination level of a previously looked at target) following exposure to a bright light. These changes can be seen for several hours following alcohol ingestion.

The longer glare recovery time and dark adaptation time produced by alcohol intoxication must be viewed as critical from a practical point of view. The period of recovery is a period of relative blindness for the individual and as such is potentially hazardous. Soon after sunrise and just before sunset the sky may act as an extended glare source for the automobile driver. In certain circumstances a driver will intermittently view the bright sky or be subjected briefly to high luminance glare from light scattered by the windshield. Following glare, important features of the driving environment must be seen against average background levels. The possible consequences of an additional 30-50% delay in seeing critical detail in such circumstances is obvious. Alcohol induced delays in glare recovery have been demonstrated at surprisingly low BAL's (approximately one cocktail on an empty stomach) and is dose related.[1]

In Acute Intoxication, constriction of the visual fields and decreased depth perception have been noted. A study by *W.M. Grant* has reported cases of hallucinations and instances of temporary blindness lasting for up to five days.[8]

In Chronic Intoxication, the condition known as alcohol amblyopia may develop. This is a nutritional deficiency secondary to the alcoholics poor general health and debilitated condition. It has an accompanying Optic Neuritis[11] (inflammation of the nerve sending visual information to the brain) that causes reduced vision due to the formation of a Central Scotoma[8] (blind spot). This in turn can lead to defective color vision. If treated soon enough, the condition can be reversed.

Only in recent years have the adverse effects of alcohol on the fetus been widely recognized. It is now generally felt that even two drinks a day can have an undesirable effect and the risk of alcohol related problems increased markedly at higher consumption levels.[16] A study by *Altman* revealed the following eye anomalies associated with alcohol ingestion during pregnancy: Narrow palprebral fissues (narrow eyelid opening); Micro-opthalmia (eye abnormally small in size); Strabismus (one eye or both eyes look in a direction other than where they should be looking); Ptosis (drooping of the upper eyelid); Paleopticdiscs; Retinal Vascular Tortuosity (twisted and wavey blood vessels on the retina of the eye).[2] In a separate study by *Gonzalez* there was also noted epicanthus (a fold of skin cover-

ing the inner angle of the eyelids) in approximately 47% of the subjects studied.[6] In their research on Fetal Alcohol Syndrome, *Miller, Isreal and Cutlone* found low incidence anomalies of corneal opacities and cataracts.[9]

To this point we have dealt only with how the results of excessive alcohol consumption and its associated ocular side effects have affected the intoxicated individual. Unfortunately, the intoxicated individual is not the only person to bear the side affects of his excessive drinking. It is well known that the drunk driver is a source of great misery on the nation's highways.

The latest statistics indicate that in the United States alone during the period from 1975-1985, alcohol related accidents injured 650,000 people per year and caused a total of 250,000 fatalities.[20] In their attempts to identify and arrest drivers who are intoxicated beyond the legal limit, many law enforcement agencies are turning to a new visual sobriety test called the *Alcohol Gaze Nystagmus Test.* Based on reviews of the sobriety test literature and observations of police officers in various locales around the country, certain physiological and behavioral tests were singled out for laboratory evaluation. The initial report of this work was published by the NHTSA (National Highway Traffic Safety Association) in 1977.[4] The report indicated that three psychophysical tests gave data which correlated well a suspect's BAC (Blood Alcohol Concentration). These tests were the walk-and-turn, the one-leg stand and lateral gaze nystagmus.

The nystagmus test, which is sometimes called the alcohol gaze nystagmus test has three components: 1) assessment of the smoothness of lateral pursuit movements; 2) the severity of the nystagmus produced at the end point of gaze (when the eye is turned all the way to the right or left; and 3) the degree of lateral gaze required to produce nystagmoid movements. Smooth pursuits have been shown to deteriorate into saccadic fixations (jerky movements of the eyes) under the influence of alcohol[22] and the severity of end-point nystagmus (a small back and forth oscillating movement of the eye) increases significantly with increasing BAC. The degree of lateral gaze required to produce nystagmus begins at about 40 degrees for a BAC of 0.10% and even earlier for higher BACs.[19] In administering the nystagmus tests, no specific target is required, but the use of a penlight or fingertip is common. Officers are trained to administer the test with the driver's spectacles removed (officers are instructed to ask if the suspect is wearing hard contact lenses and not to perform the test if they are for fear of dislodging a lens) and to hold the target at 12 to 15 inches from the suspect for "ease of focus". Instructions to the suspect are: "I am going to check your eyes . . . keep focusing on this until I tell you to stop".[21]

During training, each officer learns to determine a 45 degree horizontal gaze angle by using a template, but no instrumentation is used in the field. The officer scores the test on a six point scale with three points possible for each eye. The right eye is observed on right gaze for all three signs (smoothness of pursuit, magnitude of nystagmus at end-point and nystagmus onset angle relative to 45 degrees), and then the left eye is observed on left gaze. Any failed test (jerky pursuits, excessive end-point nystagmus or nystagmus onset prior to a 45 degree deviation) for either eye counts as one point. A suspect who scores four or more points can be classified as having a BAC of 0.10% or above with approximately 80% accuracy (plus or minus 3% depending on which NHTSA study is referred to).

Of the three tests recommended by NHTSA for field sobriety testing (walk-and-turn, one-leg stand and nystagmus), each was tested alone in a laboratory setting to determine its ability to predict if a suspect's BAC was above or below 0.10%. The walk-and-turn test provided a correct diagnosis 75.1% of the time, the one-leg stand was correct 75.5% of the time and the nystagmus testing was correct 81.8% of the time. For all three tests administered together, a correct classification was made 83.4% of the time. These results are in agreement with a Finnish Study[15] regarding the importance of the nystagmus testing. Both studies identified the nystagmus test as the most valuable index of intoxication. The importance of this visual test is further heightened because it requires a relatively involuntary, uncontrollable response that suspects cannot practice (as might be possible for the other two tests in the battery).

1986.05.22

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Brief To The House Of Commons Legislative Committee On Bill C-96

An Act To Amend the Federal-Provincial Fiscal Arrangements and Federal Post-Secondary Education and Health Contributions Act 1977

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May 29, 1986

Introduction

The Canadian Association of Optometrists (CAO) would like to express its thanks and appreciation to the Chairperson and Committee for this opportunity to present its views on the issue of Federal-Provincial fiscal arrangements as they apply to post-secondary education and health contributions.

A national Association, CAO represents 2,500 optometrists in Canada who are members of ten provincial Associations. Through them, a total of 14 million Canadians receive vision and eye care services, services which are included, at present, under the provincial health insurance program in nine of Canada's provinces (only Prince Edward Island still does not include optometric services as insurable under its health insurance plan).

Incorporated in 1948 by Royal Proclamation, the Canadian Association of Optometrists has, for nearly forty years, applied its administrative efforts towards the growth and improvement in the quality of vision and eye care services made available to Canadians. A direct result, in fact, of our Association's submissions was the inclusion of optometric services under the terms of the original Medicare Act in Canada in 1966 and again under the terms of the 1984 Canada Health Act.

The goal of CAO remains essentially the same in 1986. As expressed in the Introduction of our 1984 Brief to the House of Commons Standing Committee on Health, Welfare and Social Affairs in response to the proposed Canada Health Act:

> "We recommend other specific amendments . . . to avoid disruption of present optometric services to Canadians under the present existing programs.
>
> Over 60 per cent of vision care utilization is performed by optometrists. Because of the wide dispersement of

Mémoire au Comité législatif de la Chambre des Communes sur le Projet de loi C-96

Loi modifiant la Loi de 1977 sur les accords fiscaux entre le gouvernement fédéral et les provinces et sur les contributions fédérales en matière d'enseignement postsecondaire et de santé

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le 29 mai 1986

Introduction

L'Association canadienne des optométristes tient à remercier le président et le Comité de lui avoir donné l'occasion de faire valoir son point de vue sur la question des accords fiscaux entre le gouvernement fédéral et les provinces quant aux contributions en matière d'enseignement postsecondaire et de santé.

L'ACO est une association nationale qui représente 2 500 optométristes du Canada, membres de dix associations provinciales d'optométristes. Les membres de l'ACO offrent à 14 millions de Canadiens des services oculo-visuels qui sont actuellement inscrits aux programmes provinciaux d'assurance-santé dans neuf provinces du Canada (l'Île-du-Prince-Édouard étant la seule province où les soins optométriques ne sont pas assurables).

L'Association canadienne des optométristes, constituée par proclamation royale en 1948, s'applique depuis presque quarante ans à la croissance et à l'amélioration des services oculo-visuels pour les Canadiens. En fait, c'est grâce à l'action prise auprès des instances publiques par notre association que les services d'optométrie ont été inclus dans la Loi sur les soins médicaux du Canada de 1966, puis encore dans la Loi canadienne sur la santé en 1984.

Le but de l'ACO demeure essentiellement inchangé en 1986. Nous reprenons ici les termes de l'introduction de notre mémoire de 1984 au Comité permanent de la santé, du bien-être social et des affaires sociales en réponse au projet de Loi sur la santé au Canada :

> "Nous recommandons d'autres modifications . . . de façon à éviter toute interruption des services actuellement

Canadians, the population finds optometrists more accessible because we are equally well dispersed and therefore capable of providing vision care services to everyone.

We share the Minister's concern that freedom of choice in health care be maintained. Monopoly in health care, we feel, is not in the public's best interest. *It is the service that should be insured, not the provider.*''

The focal point of our presentation in 1984 was (and is, in 1986) the continued access of Canadians to health care services in general, and vision care services in particular, *of their own choosing,* and, it follows, of the continued availability of that choice.

Continued accessibility, continued universality and *increased* portability of the present system of insured health service in Canada — those are the goals which CAO feels must be achieved in the health care delivery system in this country. And those are precisely the areas which we feel may become at risk, should the federal government reduce in future its agreed health and education fiscal commitment to the provincial governments.

We share the Minister's concern that freedom of choice in health care be maintained. Monopoly in health care, we feel, is not in the public's best interest.

Principles

That is why we are here today. That is why we are submitting to you, the Legislative Committee on Bill C-96, the following list of principles developed by the Canadian Association of Optometrists with regard to health care insurance and education.

Principles of Health Care Insurance and Education

The Canadian Association of Optometrists believes that:

1. **Patients should have reasonable access to the health care practitioners of their choice.**

2. **Patients' rights, including the right to choose a health care practitioner without loss of benefits, the right of confidentiality and the right to reasonable access, should be maintained under any health care insurance program.**

3. **Health care facilities should be accessible to, and staffed by, all health care practitioners.**

4. **Patients have a right to portability of benefits when any health care services are received outside their home provinces.**

5. **All optometric diagnostic services rendered by optometrists should be included in the health care insurance plan.**

offerts par les optométristes aux Canadiens en vertu des programmes existants.

Plus de 60 % des soins de la vue sont dispensés par des optométristes. En raison de la dispersion de la population, les Canadiens jugent que les optométristes sont davantage accessibles, car, eux aussi étant dispersés, ils sont en mesure de fournir les soins requis à tous et chacun.

Nous partageons la volonté du ministre que la liberté de choix dans les soins de santé soit maintenue. Nous sommes d'avis que le monopole dans les soins de santé n'est pas dans l'intérêt public. *Ce qui doit être assuré, c'est le service, et non le professionnel.*''

Ce que nous voulions surtout faire ressortir dans notre présentation de 1984 (et nous reprenons le thème en 1986), c'est que les Canadiens doivent continuer à avoir accès aux services de santé en général et aux services oculo-visuels en particulier, suivant *leur propre choix* et, partant, que les Canadiens continuent à pouvoir exercer ce choix.

Le système actuel d'assurance-maladie du Canada doit demeurer accessible, continuer d'être universel et doit être *encore plus transférable* — voilà, au sens de l'ACO, les buts que l'on doit rechercher pour le régime des soins de santé dans notre pays. Ce sont précisément les aspects que nous croyons menacés si le gouvernement fédéral choisit de réduite son engagement fiscal vis-à-vis des provinces en matière de santé et d'éducation.

Principes

Voilà pourquoi nous sommes devant vous aujourd'hui. Voilà pourquoi nous tenons à soumettre au Comité législatif sur le projet de loi C-96 la liste suivante des principes élaborés par l'Association canadienne des optométristes en matière d'assurance-maladie et d'éducation.

Principes relatifs à l'Assurance-maladie et à l'Education

L'Association canadienne des optométristes est d'avis que :

1. **Les patients doivent avoir un accès raisonnable aux professionnels de santé de leur choix.**

2. **Dans tout programme d'assurance-maladie, il faut protéger les droits des patients, y compris le droit de choisir un professionnel sans perte de prestations, le droit à la protection des renseignements personnels et le droit d'accès raisonnable.**

3. **Les établissements de santé doivent être accessibles à tous les professionnels de santé et leur effectif doit être constitué de professionnels.**

4. **Les patients doivent avoir le droit de transférer leurs prestations lorsqu'ils reçoivent des soins de santé hors de leur province de résidence.**

5. **Tous les services de diagnostic optométrique rendus par des optométristes doivent être inclus dans le régime d'assurance-maladie.**

L-R: Dr. Roland des Groseilliers, (then) President Dr. Bruce Rosner and CAO Executive Director Gérard Lambert at the presentation of CAO's Brief on Bill C-96.

de g. à dr. : Le Dr Roland des Groseilliers, le président (d'alors), le Dr Bruce Rosner et le directeur général de l'ACO, Gérard Lambert, lors de la présentation du Mémoire de l'ACO sur le projet de loi C-96.

6. Federal funding should include provincially covered health care services.

7. Bill C-96, as proposed, is perceived by the Canadian Association of Optometrists as having a potential negative effect on provincially funded health care plans and optometric services in particular. Any decrease in federally agreed funding for insured services will have a consequential effect on provincially funded health care services if no other sources of funding are identified.

8. Any potential cutback in optometric education would translate into more expensive vision care services to the public in the decades ahead. Optometric services have proven to be the most cost effective and efficient means of delivering primary vision care to the people of Canada.

Conclusion

The Canadian Association of Optometrists has espoused these principles because of the desire of our members — the optometrists of Canada — to ensure the continued availability of a wide choice of health care options for Canadians.

CAO recognizes the continued need to reduce the long standing federal deficit in Canada and is ready to participate

6. Le financement fédéral doit inclure les services de santé assurés par les provinces.

7. Le projet de loi C-96, dans son état actuel, risque d'avoir un effet contraire sur les régimes d'assurance-maladie financés par les provinces, et plus particulièrement les services optométriques. Toute diminution de la contribution convenue par le gouvernement fédéral au titre des services assurés aura un effet sur les services financés par les provinces s'il n'existe aucune autre source de financement.

8. Toute compression éventuelle des services d'éducation en optométrie se traduirait par une augmentation du prix des soins oculo-visuels offerts au public dans les décennies à venir. Les services optométriques se sont avérés la façon la plus rentable et la plus efficace d'assurer des services oculo-visuels primaires à la population canadienne.

Conclusion

L'Association canadienne des optométristes a adopté ces principes parce que ses membres, qui sont les optométristes du Canada, veulent que les Canadiens continuent de jouir d'une variété d'options en matière de soins de santé.

actively with governments in attempting to reduce these fiscal deficits. We also feel, however, that any application by the federal government of reductions in the areas of post-secondary education and health service fiscal support, while contributing to a reduction in that deficit, would also contribute to a corresponding reduction in the range and choice of health care services we presently enjoy in this country.

We would respectfully ask the Committee to examine closely those aspects of this decision which will have a bearing on future provincial government funding programs in Health and Education. A reduction of the options presently available to them cannot but have an effect on the number of options available to the population of Canada. And that, we feel, as expressed in our preceding principles on health insurance and education, can only translate into *increased* costs.

CAO believes, for example, that Canadians should continue to have a choice of health care services, indeed an increase in that choice to include preventive health care programs, through qualified, competent health care professionals and not just medical practitioners. Enlarging these options in the future, based on current statistical evidence, *will* result in an overall reduction of health care costs.

Recommendation

We therefore recommend to the Legislative Committee that:

(i) *the current federal health insurance transfer payment formula be amended to include optometric service as a fully insured service and that*

(ii) *funds be identified for the establishment of another School of Optometry, preferably in Western Canada.*

In conclusion, Mr. Chairman and members of the Legislative Committee, the Canadian Association of Optometrists can do no better than to offer you a position started by the Hon. Jake Epp during the debates leading to the passage of the 1984 Canada Health Act. Then Health Critic for the Progressive Conservative Party, Mr. Epp said,

> "What they (the health care professionals) are deeply concerned about is the demographic reality that we will face as Canadians. They are concerned about care and the better use of health care professionals, and most of all, that the medical system can only survive and be enhanced if there is cooperation between the federal Government and the provinces and health care professionals."

Respectfully submitted,

The Canadian Association of Optometrists

Dr. Bruce Rosner, President
Dr. Roland des Groseilliers, Past President
Mr. Gerard Lambert, Executive Director

L'ACO reconnaît qu'il faut continuer de tenter de réduire l'éternel déficit fédéral et est disposé à participer activement, avec les gouvernements, à tout effort en ce sens. Nous croyons également, toutefois, que toute compression d'origine fédérale dans le domaine de l'enseignement postsecondaire et de l'appui financier des services de santé, tout en contribuant à la réduction du déficit, entraînerait de même coup une diminution correspondant de la variété et de l'étendue des soins de santé dont jouissent actuellement les citoyens de notre pays.

Nous demandons respectueusement au Comité d'examiner avec attention les aspects de la décision qui auront un effet sur les programmes futurs de financement provincial dans le domaine de la santé et de l'éducation. Toute restriction imposée aux options qui leur sont présentement accessibles ne peut que faire diminuer les options dont jouit la population canadienne. Cela ne peut se traduire que par une *augmentation* des coûts, tel que nous l'avons exprimé dans nos principes sur l'assurance-maladie et l'éducation, énoncés plus haut.

À titre d'exemple, l'ACO est d'avis que les Canadiens doivent continuer de pouvoir choisir leurs services de santé et même que leur choix doit être élargi pour inclure les programmes d'hygiène préventive exécutés par l'entremise de professionnels compétents et qualifiés de la santé et non pas uniquement par les praticiens de la médecine. À la lumière des statistiques actuelles, tout élargissement futur de ces options aura *assurément* pour résultat une réduction générale du coût des soins santé.

Recommandation

Nous recommandons donc au Comité législatif :

(i) *Que l'on modifie la formule actuelle de paiements de transfert fédéraux au titre des régimes d'assurance-maladie afin d'inclure les services optométriques comme services entièrement assurables, et*

(ii) *Que l'on affecte des fonds à la création d'une autre école d'optométrie, préférablement dans l'Ouest canadien.*

En conclusion, monsieur le président et membres du Comité législatif, l'Association canadienne des optométristes ne peut faire mieux que de citer la position prise par l'honorable Jake Epp durant les débats qui ont précédé l'adoption de la Loi canadienne sur la santé en 1984. En effet, alors qu'il était critique de la santé au Parti progressiste-conservateur, M. Epp avait déclaré :

> "Ce qui (les professionnels de la santé) préoccupe profondément, c'est la réalité démographique qui nous attend comme Canadiens. Ils se préoccupent des soins et d'un meilleur emploi des professionnels de la santé, mais surtout du fait que le système médical ne peut survivre et s'améliorer que s'il y a coopération entre le gouvernement fédéral et les provinces, d'une part, et les professionnels de la santé, d'autre part."

L'Association canadienne des optométristes

Dr Bruce Rosner, président
Dr Roland des Groseilliers, président sortant
M. Gérard Lambert, directeur général

A CJO Interview

Part II of a Conversation with Edward B. Higgins, the first Director of the Canadian Association of Optometrists

Introduction

In our last issue, we presented Part I of an interview conducted with Mr. Higgins. In Part II, the interview takes on a somewhat different flavour, becoming instead a roundtable collection of reminiscences by Mr. Higgins, Drs. Irving Baker (IB), the Registrar of the College of Optometrists of Ontario, Maurice Belanger (GMB), Senior Editor of the ***Canadian Journal of Optometry*** and Ron Macpherson (RM), a Napanee optometrist and a past President of the Canadian Association of Optometrists.

Prominent in this discussion is the recollection of Optometry's first tentative foray into a self-managed insurance program and Mr. Higgins' thoughts on the role of the national Association.

This section concludes the interview with Mr. Higgins but, in a future issue, the Higgins Report and its recommendations, alluded to many times in the course of this interview, will itself be explored. Although the report has been on paper now for some thirty years, the profession is only now entering some of the phases that were forecast in the report.

But for now, once again, Mr. Ed Higgins . . .

(HIGGINS INTERVIEW — PART II)

GMB: During your many years in Optometry, what would you consider to be the biggest problem the profession had to face?

EBH: To my mind, it was to secure the recognition of Optometry as an integral part of the health care service by Medicine and other health groups and politicians and bureaucrats who had been brought up on a diet that only Medicine knows or cares about health matters. The general public did not share this view because Optometry was doing 70 to 75 percent of all vision care services in those years. If the general public had mistrusted optometrists, the profession would not have survived. It did survive because it was rendering quality vision care.

If the general public had mistrusted optometrists, the profession would not have survived. It did survive because it was rendering quality vision care.

GMB: Do you think that Medicine, more particularly Ophthalmology, was ready to accept Optometry?

EBH: Medicine, although biased, had a more open mind than Ophthalmology, but the parent group could not be seen to openly oppose Ophthalmology's narrow approach to vision care. And this anti-Optometry attitude was evident in the propaganda released — "cannot examine eyes without drops" — "optometrists cannot recognize disease, particularly glaucoma" — the glaucoma days when optometrists could not participate, brainwashing the school nurses, educators that only Medicine could be trusted with children's eyes.

GMB: Soon after the war, social attitudes began to change with respect to health care and its availability to all. Can you account for this change in attitude and what effect would this have on Optometry as a health care profession?

EBH: Part of this change must be attributed to Prime Minister Mackenzie King who was always somewhat of a socialistic mind, generated by his universality training and his first years as a newsman and also as a civil servant in the Department of Labour before becoming involved with active politics.

He was aware of socialistic trends throughout the world and probably any reports revealing successful projects drew his attention. The socialized health care activities in Sweden particularly struck him.

In 1939, he set up a commission of enquiry to report on all national or social health care projects in existence the world over. This enquiry resulted in what is commonly known as the Haggerty Report in 1944.

This report, however, received little publicity, apart from politicians, health care professionals and bureaucrats involved in health care matters at federal and provincial levels. In fact, it was

aimed at informing sitting Members of Parliament on these matters.

In those early years, health care plans were called medical plans because it was felt health care involved only the medical profession as the purveyors of health services. Discussions for a plan in Canada conveyed the idea that only "catastrophic expenses" would be paid, as recommended by the Haggerty Report.

Discussions among the professions were mixed, but the concensus of all groups at that time would have favoured "free enterprise". A national plan seemed to be a first step into "socialized medicine". The proponents of free enterprise felt the practitioner would lose his freedom and become simply a civil servant.

IB: In those pre-war, war and immediate post-war years, no private medical plans existed except those classed as "indemnity plans". These plans would reimburse the subscribers' part of their medical expenses. Benefits were not tied to specific illnesses, but to expenses incurred. The Ontario Association had such a plan with the Continental Casualty Assurance company.

Who the father was of comprehensive prepaid health care plans, I am unaware, but it could likely have been some member of the Ontario medical fraternity.

In those days of PSI and COSI (Physicians' Services Incorporated and Canadian Optometric Services Incorporated: Ed.), we did not realize it then but, retrospectively, when we look at it, we were going through a tremendous learning process.

> If one were to record these changes strictly as events in isolation from the times, for people reading them today, they would make no sense at all.

EBH: You are quite correct and we are able to profit from the process and use it for our own benefit.

IB: The discussions and trends brought about by the Haggerty Report, as Ed just mentioned, were only the beginning. We were going through a period of widely ranging social and political change. If one were to record these changes strictly as events in isolation from the times, for people reading them today, they would make no sense at all.

Our going to PSI and being booted out, our attempts to sell COSI, the positions of Optometry throughout the nation, all of this makes sense only if you put it in the context of what was happening at the time.

We had to work to study the situation to see what effect it would have on the profession — and we were not the only profession uncertain of the future. Even Medicine was in a quandary, as is evident by their founding PSI.

> The rationale behind PSI was an attempt to provide coverage as comprehensive as possible to as many people as possible.

Medicine perceived these trends correctly and sat down and said, "Look, how we can meet the change without having government authority over us?" That's the genesis of PSI. It does seem motivated by the concept of "wanting to help our fellow man".

The rationale behind PSI was an attempt to provide coverage as comprehensive as possible to as many people as possible. It was not gone into voluntarily, but was an attempt to subvert any government plan.

If Medicine could show that private enterprise could meet the needs of the public in health matters, then a government sponsored health care plan was not required and the professions, mainly Medicine, would remain free enterprises and control fully their destinies.

RM: But some provinces viewed federal funds as interference. Did not Premier Robarts say, "Give us the money and we will administer it ourselves"? Did he not include Optometry out of provincial funds? Was PSI in effect at the time?

IB: Oh, yes. PSI came into being in Ontario in response to a recognized trend and the trend was that people wanted this coverage. So the OMA developed PSI within the medical structure.

EBH: The OMA financed the plan and formed a lay corporation to develop and market it to any group which was interested: business firms, manufacturers, labour unions, even individual government departments.

And, of course, only physicians' services were reimbursed in any of these plans. Dental, optometrical, chiropractic, nursing care were all excluded.

IB: Had it remained at this level, optometrists would not have been seriously hurt, except in cities like Oshawa and Windsor where the UAW had PSI or WMS plans covering all GMC, Chrysler or Ford employees and the smaller parts manufacturers.

But it soon spread. Most large life insurance companies had group plans offering life insurance and indemnities and accident coverage to a very wide spectrum of the public. The subscribers to these plans, when comparing their own plans to PSI, found them to be less comprehensive and requested their unions or employers' cooperatives to copy the PSI coverage, which meant only medical services would be covered.

EBH: The extension of these exclusively medical plans became a serious problem because all offered "a refraction benefit", that is, an eye test for glasses, and excluded Optometry.

They soon spread across the country. Manitoba Medical Services was started as well as Maritime Medical Inc. Moreover, the insurance companies did not confine their sales activities to Ontario.

IB: Ontario did take some steps to counter these discriminating or biased plans.

GMB: I can remember that, when I graduated in 1945, PSI was operating, but not extensively. In a matter of two, three years, it expanded dramatically.

At that time, I was a member of the OAO Council and was appointed Chairman of the Association's Insurance Committee. This was quite an education and made me very conscious of the growing popularity of health plans and the attempt to offer ever more comprehensive benefits, including eye care or, as then called, "refraction or eye examination" benefits.

My Committee, with Ed's help, prepared a Brief to the Life Officers Association describing our training, our services, our availability and our distribution. We hoped to sell the idea that the insurance firms, represented by the Life Officers Association, should expand the eye care benefits to cover optometric

services. But we did not succeed. We assumed our lack of success was due to pressure from the Chief Medical Officers of the insurance companies and the medical fraternity in general. But also, there was the factor of cost. These companies had statistics on all sorts of health claims and their frequencies, but none on vision care outside pathology or injury cases. They could have been fearful of costs due to increasing demand on such a universal need. They may have felt that premiums could not be set properly and claims would outstrip the revenue. If premiums were too high, the plan would not sell.

Whether or not the possible institution of a national plan had anything to do with the refusal of the Life Officers Association to implement our proposals is conjecture at this late date.

EBH: We had two meetings with them, an exploratory one and a second during which we presented our Brief. Nothing came of this despite some subsequent conversations to enquire as to the state of things.

The medically sponsored groups, however, eventually disbanded or were absorbed into the provincial plans.

IB: But to answer the questions more directly, what did happen was that, in spite of the plans sponsored by medical groups or insurance firms, there was still a very large number of people who had no coverage whatsoever. When the government plan became effective, the insurance companies continued with their programs for some time, at least in Ontario, as attested by the different claim cards with which practitioners had to bill each firm separately.

The medically sponsored groups, however, eventually disbanded or were absorbed into the provincial plans.

IB: The whole point to the discussion is that the things that Ed was involved with make sense, but something needs to be said about the conditions of the time, because when you look back at the things you voted for, the things in which CAO got involved, like Optometry's three submissions to the Royal Commission and the supplementary Briefs, they are pretty good submissions. The fact is, we knew that we were unlikely to change very much of anything. But one of the things Ed said early on is that you spoke the truth, you spent a lot of time on the research of it and you came up with the unarguable facts. This probably accounts for some of our successes and people have been having trouble shooting us down ever since because what we said, we meant and they cannot argue that. They can make a lot of noise, but they couldn't discredit the statements.

EBH: Our efforts were well rewarded as is evidenced by the very favourable reception we got at the time of the presentation of our submissions to the Commission and by the comments made to us by the commissioners subsequent to our appearance before them.

GMB: When the Life Officers Association turned down our Brief to include Optometry to their group plans, what reaction did CAO have?

EBH: In 1951, the Ontario Association's Insurance Committee had already prepared a preliminary draft. This was taken to the CAO Council meeting held in Winnipeg at the time of the Association's 2nd Biennial Congress.

CAO voted in 1954 to set up an insurance corporation of its own to design a plan offering vision care benefits and to market it ourselves.

Council, at that time, did not embark on any project, but voted rather to wait and see what happened in Ontario with the Life Officers and their exclusively medical group plans.

When nothing occurred with the Life Officers, CAO voted in 1954 to set up an insurance corporation of its own to design a plan offering vision care benefits and to market it ourselves. It was the same plan proposed to the Life Officers, but CAO would hire a salesman to organize and sell the plan to industry and other groups.

It was at this point that Col. James Duffy became involved with Optometry. I had gotten to know him as a result of other work involving some other clients of mine with insurance firms.

A non-profit corporation was set up with appropriate by-laws, objectives and a federal charter was obtained in 1957.

I hired Jim Duffy to do the marketing of COSI — Canadian Optometric Services Incorporated.

IB: I think COSI was a response to try to develop an optometric system in which Optometry had two obligations. One was the fact of pure dollars and cents. But equally was the fact that, in those days, as I remember, we had prepaid programs that were medically responsive in insurance companies.

EBH: I remember contracting some of those . . .

IB: The idea of COSI was Optometry's attempt to become part of the Health system from which it was excluded and, in that sense, it was positive.

EBH: But we never had the full acceptance of all optometrists.

IB: That's true and there are many instances where I can recall that the problem was that, philosophically, Optometry was prepared to accept that concept, but we were concerned that even what little practice we have today would be adversely affected by its presence and I can remember it was undercut by local optometrists even after the system had been sold. Certainly, down in this area, some of the optometrists took a bit of a bath on it to try and get it off the ground.

GMB: Yes, particularly optometrists in the Brockville area. I remember a Sunday meeting which I attended in Brockville — a meeting called by the local group affected by our first sale of a COSI contract.

Jim Duffy attended, and the meeting was called to discuss problems encountered with the implementation of the contract.

Members voted to continue for a while longer, but the situation did not improve, so the members withdrew and, eventually, the plan became ineffective.

The basic problem, as I recall, was that subscribers were opting for the industrial aspects and no longer were interested in obtaining personal eyeware. The plan set out fixed fees lower than the usual fees so members were obligated to accept these fees.

GMB: But you mentioned some time ago that COSI should not be discussed

as it was a negative aspect of our history — a failure. Do you still believe this after the discussion today?

EBH: No, I guess not, because it showed that Optometry was prepared to act to counter the serious predicament in which it found itself as a result of the growth of medical plans, not only in Ontario, but across the whole country.

GMB: Can you account then for the failure of COSI?

EBH: It would appear, in retrospect, that there are three causes. One: continued discussion of a national plan. Although the Hall Commission was appointed only in 1961, COSI was chartered in 1957. This small interval of time may be important as a national health plan was then gaining in popularity.

Secondly: restricted finances on our part — insufficient to really mount a country-wide marketing programme.

Thirdly: people were not yet fully convinced of the value of a truly comprehensive vision care plan. In short, our project was premature compared to the state of the people's attitude on vision care, despite the growing popularity of insurance company plans and PSI, with their "refraction benefit" clauses.

GMB: Optometrists often ask me what has CAO done for them? Why should they continue their contributions to CAO?

EBH: CAO came into existence to serve the needs of the public, but also to protect practitioners from discrimination and to enhance the image of Optometry in the public eye. These three objectives summarize the objectives set out in our charter, obtained in 1948.

And you can say without fear of contradiction that any project outside of provincial jurisdiction is likely to be a CAO responsibility.

However, some problems which are neither legislative nor jurisdictional, but national in effect, are better handled by the national body. I am thinking, for example, of a *Weekend Magazine* article some years ago which accused optometrists of prescribing needlessly.

But to answer the query more specifically, what has CAO done? The list is long, but not headline catching, so practitioners are apt to overlook these accomplishments.

The first was accomplished before our charter and its success was more a Saskatchewan accomplishment than a CAO project, although all provinces were concerned. It concerned a court case — a practitioner fought the income tax department who had, up to that time, considered Optometry as a retail trade and was taxed accordingly. He won his case to be considered a private professional like other professions. This was in 1943-44.

Negotiating with DVA for recognition of our services is another accomplishment, although the fees arranged were ridiculously low.

The same applies to arrangements with the Department of Indian Affairs where, previously, only medical practitioners would provide such services.

During the Diefenbaker years, we obtained a ruling which made expenses for optometric services, including glasses and contact lenses, deductible medical expenses for income tax purposes, like drugs or dentures.

The question of technicians in the armed forces doing optometric work still exists.

One of our major problems then and apparently even today is the absence of optometric consultants in the various departments related to health care. It was necessary to maintain constant contact with bureaucrats in the department of National Health and Welfare to make Optometry known. This required frequent trips to Ottawa.

The question of technicians in the armed forces doing optometric work still exists, and has ever since enlisted optometrists were discharged after the war. We did succeed in having two veterans commissioned, but they were never replaced. CAO is still active in this area.

Another area in which we were active was with the Canadian Labour Congress, particularly the then President — Claude Jodoin and the Research Director, Andy Andras, both of whom are now deceased. Our approach was to inform the Congress people about our services and training and our distribution across the country. We were often consulted on industrial vision and protective eyewear and other aspects of vision and vision care of interest to Labour and Management.

CAO still acts as a clearing house for ideas coming from all provinces, a coordinator of activities and projects like Save Your Vision Week or back to school days.

Optometrists have always felt spurned not to be officially recognized as guarantors or endorsers for passport applications. This, I understand, is still a problem today.

Recognition of optometrists as vision examiners for civilian pilots was a project we worked on. It did come to fruition after my term in office.

Contacts with the Bureau of Statistics to assure that Optometry and optometrists are properly classed was frequent in our early years. The changes obtained then still prevail today.

Not a frequent request, but one that can be a problem to the individual concerned, is the import duty for equipment not made in Canada. This meant contact with the Excise division of Revenue Canada. We were not always successful. If needed, CAO still remains the proper channel today.

A lesser known aspect of CAO is the constant contact with all federal departments and agencies to keep tabs on any new legislation proposed to assess its effect on our scope of practice and professional activities. The 1964 Medicare Act and the recent new Canada Health Act are examples of what we mean, as well as the changes in the directives covering commercial airline pilots.

Commissions for optometrists in the armed forces must be sought as the illegal use of refracting technicians in the forces was a major problem and still is, I am informed.

I personally did not participate in all the above activities as many occurred after my departure, but these are areas where CAO can and must be active and, as the years roll by, many more will appear while others will fade away.

GMB: During your many visits to public officials, to medical groups or other Associations on behalf of Optometry, can you recall any incidents of note?

EBH: Yes, I remember two, maybe three very strongly in the City of Toronto and Belleville. Irving Baker and myself went to a Board of Directors Meeting of PSI (Physician's Services Incorporated) in Toronto. While we were very nicely received, nevertheless, we made little, if any progress in terms of establishing a working relationship. We were attempting to get PSI to pay for optometric services and PSI was never open to any

profession other than Medicine. I think this is probably due to most of the Doctors on the Board knowing very little, if anything, about our Association. They were surprised to learn, for example, that members of your profession did 65 to 70 percent of all the refractions in Canada.

They didn't believe me when I said that I had never graduated from a School of Optometry and, indeed, had never attended any courses at a School.

This, at first, did not make them very comfortable and, after half an hour, Irving Baker and myself were ushered out very politely and the matter was temporarily dropped there. It was later on picked up when Sid Rose of Belleville, a member of the Ontario Council at that time, and I met with the President of PSI in a hotel room in Belleville. After an hour and a half of very detailed discussion, I was amazed to be asked by the President of PSI as to where I had received my optometric training. They didn't believe me when I said that I had never graduated from a School of Optometry and, indeed, had never attended any courses at a School. To this day, I don't think he ever believed my story but it was certainly gratifying to know that, in one respect, at least I was able to communicate with Medical Doctors and ophthalmologists in a way that indicated that I knew something of the subject about what I was talking.

Another time, I met with the President of the Ophthalmologists' Society in Toronto. This was a little different kind of meeting and it was very nice on the surface. At that time, ophthalmologists seemed to understand or accept in their minds the fact that Optometry was actually competing and making inroads into the heart of the practice of Ophthalmology, i.e. the refraction end where the optometrist referred a medical condition to the ophthalmologist for his/her study and action, since it was a medical problem and not a physical problem involved. To a certain extent, I ran into the same kinds of problems in many of the provinces although I was pleased to find out at a later date that, in some provinces, such as Saskatchewan and New Brunswick, and to some extent, Nova Scotia, there were quite acceptable relationships developing. This was very pleasing to find out.

In terms of federal departments, such as DVA, Deputy Minister of Health, Deputy Minister of Welfare and the Minister of Finance, I found a greater understanding of the role of our profession that I expected to find. This method of approach was to be very valuable in the years to come.

There were a few touchy meetings with Judy Lamarsh when she was Minister of Health. Meetings were never long — our presentations usually were only a few pages and never produced any really tangible results.

We were astounded to get the reply, "The Navy is above the law".

On another occasion, John Mulrooney and I met with the Chief Medical Officer of the Halifax Naval Base. We pointed out to him that the use of "sick bay attendants" to carry out refractions contravened the Nova Scotia Optometry Act. We were astounded to get the reply, "The Navy is above the law". Needless to say, our visit was a waste of time. This arrogance was typical at the time among such individuals as medical practitioners and members of Canada's "senior service".

But, as a side issue, may I ask do not our laws apply to all segments of the population and since when are armed forces beyond the effect of civil laws?

GMB: The relationship between Optometry and Ophthalmology has never been "good" and sometimes I feel personally that we have to become a little more aggressive in our relationship with them. What do you say to this?

EBH: The only way you can become more aggressive on a professional basis is to strike very indirectly at the root of the problem. You have to recognize that ophthalmologists are a very necessary part of any vision care delivery system. On the other hand, you function, I suspect, to screen something on the order of 70 percent of the population to ascertain those who have vision problems that involve medical care. This, of course, is the field of Ophthalmology and we should constantly strive to cooperate with them. I don't think the situation is as bad as you have indicated to me, rather I feel that there is a hiatus in the development of the relationship. Let us not forget that, at the local level, many optometrists have a very fine working relationship with their local ophthalmologists.

GMB: You made frequent trips to the American Optometric Association offices to discuss matters. Do you recall some of them, particularly the ones when talk of Medicare was started in Canada? What attitudes, what impressions and what did the AOA expect to get from you when you made these trips?

EBH: The American Optometric Association at that time and subsequently was very broad minded in terms of its relationship with optometric groups all over the world. It was a very valuable relationship as far as I was concerned because I was able to use them as a sounding board to discuss ideas which might have some application in Canada.

More particularly, I remember speaking to the annual meeting of the AOA one time and I forecast that a national plan of Health would come to Canada and the United States. I remember being interviewed on television in its early days by a station in Boston and even the interviewer refused to acknowledge that my statement on Medicare had any validity. Subsequently, of course, it turned out that my sources of information were better than his and, indeed, national health care has subsequently become a fact in Canada and also in the United States in terms of their Medicare and Medic-Aid.

The AOA was most helpful through all the years that I was acting on behalf of CAO. I was constantly receiving information and ideas, meeting with the Secretaries or Managing Directors of the various State Executives. The Association of Executive Directors was probably the most useful contact situation I could have expected to find. The sharing of ideas with people with similar problems was always valuable and inspiring as far as I was concerned.

GMB: During your terms as an advisor to the OAO, you helped prepare a number of Briefs. Do you recall the presentation to the Toronto Board of Education relative to the use of the Snellen Chart as a screening device for school children? This would have been in 1952 or 53.

EBH: No, I cannot at this particular moment recollect this particular Brief but I do recall working for months with Arthur Hurst of Newmarket preparing a Manual on Guidelines for Vision Screening of Children.

Demonstrating the failings of the Snellen Chart to school and health authorities in order to change the system was a project in itself.

At that time, children's vision had become a crusade on the part of some optometrists and optometric Associations across the country, much to the benefit of school children and Optometry as a whole.

I remember well the outstanding work of Dr. Hurst. At times, he seemed to be out of the league of his colleagues in terms of his concerns for the young children in our schools. Demonstrating the failings of the Snellen Chart to school and health authorities in order to change the system was a project in itself.

Another frontrunner in this area was Brian Cox, of Langley, BC. He was the first and I think still is the only optometrist to be a salaried vision consultant to a School Board in Canada. It would be interesting to hear, today, from others who are consultants to School Boards. The appointment of optometric consultants to School Boards would be a real breakthrough.

GMB: What project would you say was the major undertaking during your term as Executive Director of CAO?

EBH: There is no doubt that it was the preparation and presentation of the Brief to the Royal Commission on Health Services in Canada — known as the Hall Commission, the major project for Optometry in the late 50's and early 60's.

Had we failed to get our point across, there is little doubt in my mind that Optometry would not exist today.

I credit Harold Arnold and Irving Baker as the main authors, but many others were involved — Ted Fisher, Clair Bobier, Austin Forsyth and Marvin Langer were some of these and an untold number whose names I cannot recall.

I was involved in integrating their comments and their findings into the report and was present at the session at which we made our presentation to the Royal Commission. Harold and Irving were the main spokesmen for Optometry at that presentation. Emmanuel Finkelman was also present as the President of CAO.

IB: It should also be recalled that Optometry presented three Briefs, all well coordinated, presenting different approaches to the problem. The Ontario Board of Examiners, on behalf of the College of Optometry and the Ontario Association of Optometrists were the other two. I also had a hand in these, but to a lesser extent. All three Briefs were written in Toronto so participation of faculty and Association members made our three presentations a corporate, unified whole.

EBH: Subsequent to our presentations, we met socially for an evening with the members of the Commission. It was a very interesting two hours. It was with almost impressive ease that we found ourselves talking about the intimate problems of Optometry and the public to the members of the Commission.

It was an in depth exchange of ideology at that meeting, perhaps not fully spoken, but it certainly was at an intellectual level. There was a high rate of exchange of ideas. The Commissioners were talking to us and we were listening, no doubt about that.

That, in my book, was probably one of the most important meetings CAO ever had. And it probably remains true today that you can accomplish more in this sort of a gathering than you can around a boardroom table.

ERRATA

In our last issue, a paper entitled "Conrol of Glare for VDT Operators" was identified as having been authored by Drs. G.Y. Mousa and M.E. Woodruff.

The *CJO* has since been advised by Dr. Woodruff that he, in fact, was *not* a co-author of this paper.

Announcing the 1987 CAO Biennial Congress Photography Contest

Open to all registrants at
CAO's 20th Biennial Congress
(Optometrists, Spouses, Junior Delegates)

Categories

1. "Land, Sea and Air": Scenic landscapes, seascapes, flowers, clouds, etc.

2. "The Face is Familiar . . . ": Portraits or photos in which the human body and its actions play the major role.

3. "To boldly go . . . ": Let your imagination soar. Multiple exposures, macrophotography, abstracts, darkroom tricks, etc.

Rules

1. Prints only. Sizes 5×7, 8×10, 11×14; mounted, but not framed.

2. Photos must have been taken by the entrant between June 1, 1986 and June 1, 1987. Name, address and category entered must be printed clearly on the back of the entry.

3. Technical data *may* be included but is *not* required.

4. A maximum of two pictures in each category (total six photos) may be submitted by each entrant.

5. Entrants are responsible for the recovery of their own photos at the *conclusion* of the Congress. Photos not claimed will be returned by CAO with postage/packaging invoiced to the entrant.

6. By submitting photos, all entrants automatically grant to CAO the rights to publish any or all winning entries in *The Canadian Journal of Optometry* and, further, represent that the photo(s) have/has never been previously published and that publication in the *CJO* is not a violation of any existing copyright.

7. Prizes for the winners will be announced later.

8. All photos will be judged by a special contest committee in advance of the Congress and a selection of entries displayed on site in Saint John.

9. *Deadline for Entry:* All entries must be *received* no later than midnight, July 1, 1987 and are to be sent to: Dr. Arnold Brown, Optometrist, 14 King Square South, Saint John, NB. E2L 1E5.

Participez au concours de photographie du Congrès biennal de l'ACO de 1987

Ouvert à tous les inscrits au
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(Optométristes, conjoints, jeunes)

Catégories

1. "Terre, mer et ciel" : paysages terrestres et marins, fleurs, nuages, etc.

2. " . . . dans un corps sain . . . " : portraits ou photographies dans lesquels le corps humain et ses mouvements sont le point central.

3. "Le grand défi . . . " : donnez libre cours à votre imagination. Expositions multiples, macrophotographie, abstractions, manipulations en laboratoire, etc.

Règlements

1. Photographies seulement. Dimensions 5×7, 8×10 ou 11×14; les photos doivent être montées, mais non pas encadrées.

2. Les photos doivent avoir été prises par le participant entre le 1er juin 1986 et le 1er juin 1987. Le nom et l'adresse de la personne et la catégorie doivent être en lettres moulées au verso de chaque photographie.

3. Les données techniques sont *permises,* mais *facultatives.*

4. Chaque participant peut présenter un maximum de deux photographies par catégorie (c'est-à-dire un total de six photos).

5. Les participants doivent venir chercher leurs photographies à la *fin* du Congrès. L'ACO retournera aux participants par la poste les photos qui ne sont pas réclamées, à leurs frais.

6. En présentant une photographie, le participant donne à l'ACO le droit de publier celle-ci dans la *Revue canadienne d'optométrie* et donne à entendre que la photographie n'a jamais été publiée antérieurement et que sa parution dans la *Revue* n'enfreint aucun droit d'auteur.

7. Les prix seront annoncés plus tard.

8. Toutes les photographies feront l'objet d'une présélection par un comité spécial avant le Congrès et certaines seront affichées au Congrès, à Saint-Jean.

9. *Date limite :* envoyez vos photographies d'ici le 1er juillet 1987 à minuit, à l'adresse suivante : Dr Arnold Brown, Optométriste, 14 King Square sud, Saint-Jean (N.-B.) E2L 1E5.

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Report on the International Symposium on Low Vision

Introduction to Abstracts

The International Symposium on Low Vision held at the School of Optometry, University of Waterloo, June 25th to 27th was a major event in Canadian Optometry. It was the first of its type ever held but, no doubt, it will not be the last. The rapidly rising demand for low vision services will ensure that.

As the longevity of our population steadily increases so too does the number of potential consumers of low vision services. Advances in technology and understanding of the nature of low vision problems have dramatically increased the range and effectiveness of the services available to the people. Low vision is a frontier area of vision care. Optometry, appropriately, is a key pioneer and leader in this field.

Aside from the obvious benefits of the Symposium that will filter down to the low vision service consumer, there are other, more subtle, but very significant pluses that I observed during those June days in Waterloo. One of the most striking of these was the international and interdisciplinary interaction. It was exciting to see professional jealousies, prejudices and politics set aside as all focused on how to best help those in need of our combined knowledge. In my more optomistic moments, I can see this trend spreading to other aspects of the vision care and health care fields. Perhaps symposia such as this are keys to opening the communication channels that too often hinder progress and patient welfare in the name of protecting some perceived professional turf.

Topics and discussions ranged from highly technical to socio-economic, from clinical to pure research. There was something for everyone who attended. All the comments that I have since received were positive and enthusiastic.

I attended as a representative of Canadian Optometry and as a private practitioner with an interest in low vision. I learned a great deal and met many dedicated people. I came home feeling proud — proud that Optometry was the host and leader in this significant event; proud of our outstanding facility at the University of Waterloo, the School of Optometry, which was seen and appreciated by so many leaders in this special field of vision care; proud of the tremendous job that Dr. George Woo and his Committee did to make the occasion the success it was.

The Symposium was a major step forward in bringing help to people with low vision, in the sharing of knowledge in the field by great minds from around the world (fourteen countries were represented by those presenting papers at the Symposium), and in developing closer interprofessional relations. I can hardly wait for the next step.

Scott D. Brisbin, O.D., F.A.A.O.
President, CAO

Colour Vision in Optic Neuritis

Kathy T. Mullen, Ph.D.*, Gordon T. Plant, M.D.+

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Patients with a past history of optic neuritis were selected with differing degrees of stable residual deficits and with marked interocular differences in sensitivity. Firstly, a comparison was made of contrast sensitivities to chromatic and to luminance stimuli in ten subjects. Contrast sensitivities were measured to sinusoidal luminance gratings, and to both red/green and blue/yellow chromatic gratings (1 cycle/degree, 0.5 Hz). Detection of the chromatic gratings was solely on the basis of their colour differences. Results suggest that colour contrast sensitivity can be more severely impaired than luminance contrast sensitivity. Secondly the suprathreshold nature of the deficit was investigated. Suprathreshold hue, saturation and brightness matches were made between the more and the less severely affected eye in five subjects, using Munsell colour patches. The results indicate that the most predominant deficit is a loss of saturation (chroma) perception. In addition, marked changes in perceived hue were found to occur.

Contrast Sensitivity Function Evaluation of Low Vision Patients Using the Vision Contrast Test System

Arthur P. Ginsburg, Ph.D.*, Bruce P. Rosenthal, O.D.+, Jay Cohen, O.D.+

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Low vision patients can often exhibit losses in functional vision that are not evident from standard acuity measurements. The discrepancy between the "quantity" of vision and patient performance as measured by acuity has long been noted by low vision practitioners. Contrast sensitivity is emerging as a more complete performance-related measure of the "quality" of vision. A new vision contrast test system (VCTS) is a quick, simple, standardized chart system for measuring contrast sensitivity. Here we report the results of testing 55 low vision patients using the VCTS. The contrast sensitivity values of a low vision population are compared to those of a normal population. The differences in contrast sensitivity between the left and right eyes of the low vision patients revealed that the preferred eye had higher contrast sensitivity rather than best acuity. Contrast sensitivity data identified 95% of patients who were able to perform well with visual aids. Although the VCTS can provide a contrast sensitivity function from five spatial frequencies in about one minute, the question arises as to whether measurements of fewer spatial frequencies are equally diagnostic. For example, suppose only the peak and highest spatial frequency (acuity) values are used. It is shown that such reduced data great-

ly reduces the diagnostic power of contrast sensitivity analyses. Contrast sensitivity data from the VCTS is a better indicator of potential reading ability than visual acuity.

New and Improved Contrast Sensitivity Approaches to Low Vision

Robert Hess, Ph.D.

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Cambridge, United Kingdom

The contrast sensitivity approach which has enjoyed much success in the field of normal vision research has been applied to clinical vision investigations over the last decade. Its clinical success has been less than expected and it is now clear that there are some important deficiencies in the initial approach. These deficiencies will be outlined with reference to amblyopia, optic neuritis, medical opacities and retinal degeneration. In each case they suggest important modifications that need to be made to this approach before it can fully realize its clinical potential. From these studies emerge a number of specially modified contrast sensitivity approaches adapted to solve specific clinical problems.

The Role of X and Simple Cells in the Contrast Transducer Function of Low Vision and Normal Observers

Teri B. Lawton, Ph.D.

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The defining property of retinal X cells and cortical simple cells is that they exhibit a *null phase* at which grating stimuli produce little or no response. It follows that for such "linear summation" cells a masking stimulus at the null phase should have no effect on detection of a stimulus at the optimum phase (90° from the null phase). When the stimuli are in phase, however, we expect the masking stimulus to reduce sensitivity according to the power law of the contrast discrimination function. Thus, if the psychophysical discrimination function was determined by either retinal X or cortical simple cells, the degree of masking should be markedly affected by background phase relative to the test. I examined this hypothesis in low vision and normal observers by presenting brief contrast increments, for a 2 octave range of test frequencies, at 0° and 90° phase to a steady background grating, consisting of single or multiple spatial frequencies at a background contrast of 10%. A 2AFC procedure was used to measure the contrast threshold. For both low vision and normal observers *no* difference was found between the contrast discrimination functions for 0° and 90° increments at any combination of spatial frequencies. This shows that the psychophysical contrast discrimination function is *not* determined by the responses of either retinal X or cortical simple cells. I will evaluate the alternative hypotheses that i) the contrast threshold is mediated by cells with non-linear spatial summation properties, or ii) the masking effect of the background occurs after a phase-insensitive combination of simple cell responses in the cortex.

Paradoxical Cases of Visual Improvement Offered by Above-Average Lighting Levels in Cases of Albinism and Retinitis Pigmentosa

Sudhir Patel, B.Sc.

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It is generally accepted that patients suffering from albinism and retinitis pigmentosa are photophobic (see, for example, Falls, M. (1966), 'Retinitis Pigmentosa-like Syndromes' in *Retinal Diseases*, Ed. S.J. Kimura, W.M. Caugill (Kimpton, London); and Taylor, W.O.G. (1985), 'Aiding Vision in Albinism', *Trans. Ophthal. Soc.* (UK), *104*, 309-314). The argument put forward as an explanation for this phenomenon is a lack of pigment in the albino and above average intraocular light scatter in the pigmentosa sufferer. Cases are presented where visual performance is vastly improved when above average lighting levels are carefully employed in conjunction with refractive error and low vision correction. The need for careful application and patient education during the examination period is highlighted.

Quantifying the Magnitude of Visual Impairment with Multi-flash Campimetry

Mike Dixon, B.Sc., Edward M. Brussell, Ph.D.

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Multi-flash campimetry is a static perimetric technique used to assess temporal resolving power in 120 points per eye in about half an hour. Using these data, two and three dimensional visual field maps can be created to visually discriminate among the fields of low vision patients and those of normals. An experiment involving the sensitivity of normals to flicker revealed that the amplitude of the fundamental Fourier component is directly related to flicker detection thresholds, and can be used to empirically quantify the degree of impairment depicted within the multi-flash fields. The output of an algorithm based on the ratio of the amplitudes needed by a patient to detect flicker with the multi-flash technique and a normal with the sensitivity paradigm will be presented.

Spatial vs Temporal Information about Suspected and Confirmed Chronic Open Angle Glaucoma Patients

Jocelyn Faubert, M.A.*+, Gordon A. Balazsi, M.D.+, Olga Overbury, Ph.D.+, *Edward M. Brussell*, Ph.D.*, Mike Dixon, M.A.*

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Concordia University, Montreal, Canada
+Low Vision Center, Dept of Ophthalmology
McGill University, Montreal, Canada

Temporal resolving power and spatial contrast sensitivity were assessed in early glaucoma patients and glaucoma suspects, using techniques developed at the Concordia University vision labs. These methods are called multi-flash campimetry and the "Anticipated Threshold Technique" respectively. Multi-flash campimetry is a computer implemented algorithm which allows the sampling of temporal resolution in 120 points per eye of a 40 degree field in a half hour. Two- and three-dimensional density maps are produced from the data providing an easy interpretation of the results for clinical use. The "Anticipated Threshold Technique" is also a computer implemented algorithm which allows a 6 point contrast sensitivity function to be generated in less than 10 minutes. Both temporal resolving power and spatial contrast sensitivity are decreased for the suspects and the early confirmed open angle glaucoma as opposed to normal controls. More patients, however, demonstrated deficits in multi-flash campimetry than deficits in spatial contrast sensitivity. These results may be due to the fact that multi-flash campimetry samples information throughout a 40 degree visual field while the "Anticipated Threshold Technique" creates sine wave gratings within a 8 X 8 degree window.

Differential Retinal Structural Damage Exhibited by Image Enhancement of Fundus Photographs

Sunanda Mitra, Ph.D., Steven Whiteside, B.S.E.E., Thomas Krile, Ph.D.

Department of Electrical Engineering/ Computer Science
Texas Tech University
Lubbock, Texas, U.S.A.

Non-invasive evaluation of retinal structural damage caused by various ocular diseases such as macular degeneration is an extremely difficult task. No quantitative method of such evaluation is available at present. We have demonstrated that a rather simple interactive damage of the retina in specific cases. Interactive image enhancement techniques such as histogram modification and pseudocoloring using point to point mapping have been found to be extremely useful in demonstrating differential structural damage in the retina by using digitized fundus photographs. Such differential structural damage has been correlated with the loss of visual function measured by spatial contrast threshold perimetry (Mitra, 1983-1985) and may provide a quantitative and non-invasive technique for differential diagnosis of specific types of mascular degeneration.

Localization of Defect in Cortical Visual Impairment using Topographic Mapping

Peter K.H. Wong, B.Eng., M.D., F.R.C.P.(C), James E. Jan, M.D., F.R.C.P.(C)

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Cortical Visual Impairment (CVI) has recently been described in the literature (*Dev. Med. Child Neurol.* Dec 1985). These children often have multi-

ple neurological handicaps, and encompass a rather wide clinical spectrum of disorders. They have in common retro-chiasmatic visual loss due to defect in the optic radiation (OR), striate cortex (primary) or secondary visual association cortical areas (secondary). Clinical examination of these patients is often difficult, and attempts to localize the neurological defect have not always been successful.
We report our experience with topographic visual evoked potential mapping (VEPM) in 50 children with CVI. Their age ranged from 3 months to 18 years. They all had extensive neurologic and ophthalmologic exams, CT and EEG. Traditional visual evoked responses were not useful. Using strobe stimuli, 200 epochs of 512 ms. were averaged, from 20 simultaneous scalp channels. Multicolour potential maps were created 2 ms. apart and analysed. Our preliminary data supports the hypothesis that there are 2 distinct VEPM patterns, corresponding to dysfunction of the primary or secondary visual areas.

Visual Field Detection Using Topographic Evoked Potential Mapping

Peter K.H. Wong, B.Eng., M.D., F.R.C.P.(C)
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The clinical examination of visual field defects in young children is a difficult procedure. Due to lack of cooperation, formal testing using Goldmann Perimetry and hemi-field pattern visual evoked potential (VEP) is not often possible or accurate. Traditional 2 to 5 channel flash VEP and routine EEG have also not been particularly useful. We wish to report our experience with the use of VEP mapping on 12 children with clinically obvious hemi-field defects.
Using 20 simultaneous scalp electrodes, 200 epochs of 512 ms. of EEG following strobe stimuli were averaged, with on-line artifact rejection. Digital conversion was at 500 Hz. with 8 bit accuracy. Data was displayed both in voltage-time tracings and in potential field maps. Our preliminary observations identified patterns of differences between the affected and unaffected hemispheres. Thus, VEPM may complement clinical visual field testing.

Low Vision Management in Selected Eye Diseases

Eleanor E. Faye, M.D.

New York Association for the Blind
New York City, U.S.A.

Management of low vision problems is influenced by the type of eye disorder and the degree of involvement of the various structures of the eye that are responsible for image formation. This presentation will consider the characteristic functional impairments in prevalent eye conditions and will relate the level of function to performance with visual aids and devices.

The Clinical Profile of a Young Visually Handicapped Population

Jacques Gresset, M.Sc., L.Sc.O., Pierre Simonet, M. Sc., L.Sc.O.

Institut Nazareth et Louis Braille
Montreal, Canada

In 1977 in Quebec, a governmental program was begun for the rehabilitation of visually handicapped persons. This program permits the distribution of free visual aids to eligible persons. Initially an age limit of 18 years, later raised to 36 years, was applied to those eligible for the program. The *Institut Nazareth et Louis-Braille* is one of the centers accredited for this program. A sample of 500 records of patients examined at this institution was randomly selected from among the 2000 available, and computerized for analysis. The results permit a determination of the clinical profile of this population, in which 73% of the patients are less than 40 years old. The distribution, the nature and etiology of the functional deficiencies could be established, the type of visual aids used and the visual improvement will also be discussed.

Visual Impairment and Disability: Enhancement and Substitution

Jacques Gresset, M.Sc., L.Sc.O.*+, *Julie-Anne Couturier*, M.A., M.Sc.*

*Institut Nazareth et Louis-Braille
Montreal, Canada
+Ecole d'Optométrie, Université de Montréal
Montreal, Canada

By means of a descriptive study made on approximately 300 visually impaired persons seen for rehabilitation services at the Institut Nazareth et Louis-Braille, the authors present and compare the characteristics of the low vision and blind population according to the WHO's classification of impairment and the dimensions of visual performance suggested by Colenbrander in 1977. The frequency of use of vision enhancement aids and techniques and/or vision substitution aids and techniques are discussed for each of the 6 categories of impairment, along with the specific modes of written communication utilized by the patients. The authors further explore the relationship between the categories of impairment and disability and stress the need for new tools and means to evaluate and describe the different levels of disability.

Vision Examinations of Handicapped Children at Oregon State School for the Blind

Sandra K. Landis, O.D.

Pacific University College of Optometry
Forest Grove, Oregon, U.S.A.

During May and June 1984 fifty residents of the Oregon State School of the Blind were given a vision examination at their facility in Salem, Oregon. This on-site process was chosen to eliminate transportation costs and fears related to "going to the doctor". The objectives were to evaluate the visual needs and detect the unmet visual needs of the residents at OSSB, to prescribe low vision aids and other refractive materials as required, to establish the need for a low vision clinic and optometry services at OSSB and to introduce the institution to Optometry and Pacific University College of Optometry, so the services of the profession might be available to Oregonians.
Each child was given an individual vision assessment, including a visual evoked potential, a visual acuity assessment, retinoscopy, direct ophthalmoscopy, cover tests (distance and near), and ocular motilities. Results revealed that 2 children (4%) required new low vision aids, 19 (38%) required an updated lens prescription, and 25 students (50%) would benefit from a vision therapy program. A repeat of this study is planned for the Spring of 1986 to increase the patient base.

Accommodation in Visually Impaired Children

Eva Lindstedt, M.D.

University Eye Clinic, Karolinska Sjukhuset
Stockholm, Sweden
"TRC", Tomteboda Resource Center for Visually Handicapped Children
Solna, Sweden

In the visually impaired child there is often dysfunction of accommodative function, resulting in greater disability of vision at near. There seems to be a disturbance of the normal physiological development during early months of life of the sensoro-motor reflexes regulating the accommodation of the lens. A simple clinical test of accommodation in visually impaired children is presented. The importance of treatment/compensation of the accommodative defect in the young child is discussed.

Assessment of the Vision of the Deaf-Blind

Lea Hyvärinen, M.D.

Departments of Ophthalmology
Universities of Oulu and Tempere
Finland

Although patients with a double sensory impairment are relatively few in number, there are several subpopulations within this group with differing communication needs during the clinical examination.
1) visual difficulties (small visual field, poor central vision) resulting in poor compliance
2) restricted vision-related vocabulary in spoken or sign language
3) vision examination preventing visual communication
These problems can be solved if the ophthalmologist, optometrist and rehabilitation personnel learn some basic skills in communicating with the deaf. The visual examination can be structured so that tactile information is used to replace visual signs and lip reading when the patient cannot perform testing and simultaneously see the interpreter, and care should be taken to assess the luminance level and distance that are optimal for the patient.
Visual function should be assessed in different daily situations as an adjunct to the clinical examination.

A unique Model for a Resource Rehabilitation Centre for Consumers with Low Vision

William Shalinsky, D.S.W., Peter Shaw, O.D., Bill Carroll, B.A.

Low Vision Association of Ontario
Toronto, Canada

A consumer based low vision service delivery model is proposed which is scheduled for implementation this year. The essential features of this model are i) it is consumer controlled and consumer focused, ii) it uses existing community resources and services in a creative fashion that replaces the current fragmentation with a more integrated process of providing assistance and iii) the centre would exist outside the confines of "blindness" agencies and organizations recognizing instead that the needs of people with low but useable vision are distinctly different from the needs of the functionally blind.

Low Vision Patients and Other Disabilities: A Comparative Study

Mary Santangelo, M.A., Rina Lang, M.A., Olga Overbury, Ph.D.

Low Vision Center, Department of Ophthalmology
McGill University, Montreal, Canada

Life satisfaction measures of low vision patients were compared with those of 2 other diagnostic categories, dialysis and cardiac, and with a control group. The assumption was that life satisfaction would vary according to the functional limitations associated with each condition. Thus, life satisfaction scores of low vision patients were expected to fall between those of the dialysis and cardiac groups, as well as be lower than the control scores. Five different tests were utilized, Life Satisfaction Indexes A and B, the Activity Questionnaire, the Holmes Social Readjustment Scale, and the Assessment of Current Community, Emotional and Social Satisfaction questionnaire that was introduced to be validated. The statistical analysis showed no significant differences between diagnostic categories. However, such differences between diagnostic categories. However, such differences were found between low vision and control subjects' perceived life satisfaction. This suggests that control subjects, as representative of a relatively healthy elderly population, are more active and satisfied with their lives. Regardless of the fact that low vision individuals' functional level is more inhibited by their disability, dialysis patients are more affected in terms of morale and satisfaction found in their present lives.

The Visual Requirements of Mobility

Denis G. Pelli, Ph.D., Lois C. Applegate, B.A.

Institute for Sensory Research, Syracuse University, Syracuse, New York, U.S.A.

To determine the visual requirements of mobility we artificially restrict the vision of normally sighted subjects, and measure how well they perform a mobility task, e.g. walking through a laboratory maze or a shopping mall. For each environment we measure time, bumps, and anxiety. **Time** is how long it takes them to do the task; **bumps** is the number of contacts with obstacles plus any full stops; **anxiety** is measured by scoring the answers to a multiple-choice questionnaire. The visual requirements for walking in a shopping mall are 4° field, 2% contrast, or an acuity of 20/2000.

An Evaluation of Follow-up Systems in Low-Vision Clinics in the United Kingdom

Jonathan Jackson, B.Sc., M.B.C.O.*, Janet Silver, M.Phil, F.B.C.O., M.B.I.M.+

*Royal Victoria Hospital, Belfast, Northern Ireland
+Moorfields Eye Hospital, London, United Kingdom

The low vision (LVA) clinic at Moorfields Eye Hospital London was restructured in 1970, and improved methods of assessment and follow-up were introduced. A new LVA clinic based on Moorfields methods was created at The Royal Victoria Hospital, Belfast in 1983. At about that time the Moorfields clinic, by then heavily oversubscribed and with long waiting lists, switched from booking follow-up for every patient at the first visit to a system that combined booked follow-up for unstable situations with an on-request and by correspondence system for the majority. Belfast sustained the original system. A sample of 100 new patients originally seen early in 1984 in each clinic for whom follow-up data is available is reviewed and the systems compared.

Rights of Low Vision Children and Their Parents

Jennifer Leigh Hill, B.A., M.Ed., Ed.D.

Atlantic Provinces Resource Centre for the Visually Impaired
New Brunswick Department of Education
Fredericton, New Brunswick, Canada

This paper will address the rights of low vision children and their parents. Topics will include the right to genetic/medical counselling; the right to accurate assessment, diagnosis, referral and follow-up; the right to appropriate educational/vocational services; the right to necessary aids and equipment; and the right to employment, housing and transportation. The need for optometry, ophthalmology, education and rehabilitation to coordinate services will be stressed, along with the need for each service provider group to function as advocates for this particular population of visually impaired persons.

Strengthening Low Vision Rehabilitation Through the Accreditation Process

Alfred A. Rosenbloom, O.D., M.A.

Illinois College of Optometry
Chicago, U.S.A.

This paper will explore those elements of low vision rehabilitation in a clinical setting that relate directly to the accreditation process as espoused by the Commission on Accreditation, The National Accreditation Council. In building strong, responsive low vision programs on a multidisciplinary basis, accreditation of such programs seeks to: 1) assess strengths and weaknesses, 2) determine ways to correct or ameliorate weaknesses while building on strengths, and 3) formulate and implement short and long range plans to help the program achieve its mission. Each of these elements will be discussed and related directly to quality care in comprehensive low vision rehabilitation.

Sight Enhancement Services: A Safety Net or a Spider's Web?

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Canadian National Institute for the Blind
Toronto, Canada

This presentation will outline the development of sight enhancement services from the human service perspective.
The Canadian experience, portrayed against North American and world trends, will reveal new challenges for the future.
A brief historical overview is needed to understand the human service structure targeted to blind and visually impaired persons as the 21st century is fast approaching. Emphasis on the unique needs of this minority group, within the disabled community, will stimulate discussion on the allocation of human and financial resources and will expose a population at risk.
In the momentum of planning coordinated services we must be careful to avoid "having the sight of an eagle — and the vision of a clam". This presentation will analyze that perception with reference to sight enhancement services — a safety net — or a spider's web.

National Long Term Care Facility Survey

Sheree J. Aston, O.D., M.A., Monica Beliveau, M.Ed., Ann Yeadon, M.A.

Pennsylvania College of Optometry
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Assessment of the current practices of the long term care facilities related to their elderly visually impaired residents will be reported in this study. A detailed questionnaire covering such areas as: the number of visually impaired residents, specific problem areas attributed to loss of visual functioning as it relates to activities of daily living, specific administrative policies, steps taken in the last two years to alleviate the problems, type and extent of any relevant inservice education, activities as well as needs and problems related to the area were sent to 2000 randomly selected long term care facilities that are representative of the national distribution of institutions by type, size and location.
An analysis and summation of the survey research will be presented which will indicate the current practices and needs of long term care facilities with regard to the visually impaired elderly.

The Effect of Blur Upon Psychophysical Receptive Field Properties

Marcus D. Benedetto,Ph.D.

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Detroit, Michigan, U.S.A.

The effect of optically induced blur upon static versus dynamic psychophysical center-surround receptive field relationships was examined. Previously believed to destroy these relationships, if was found, by using procedures similar to Enoch's Westheimer/Werblin functions, that the relationships were shifted by induced blur. Increased blur tended to have less effect on dynamic than on static thresholds under center-surround conditions.

Visual Acuity Deficits and Chromatic Aberration in Pseudophakia

S.J. Rog, B.A.*, C.W. White, Ph.D.*, *P. Simonet*, M.Sc., L.Sc.O.*+

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Montreal, Canada

The pseudophakic eye exhibits an increased amount of chromatic aberration due to unfiltered ultraviolet (UV) light. As a consequence, the individual may have reduced visual acuity due to the defocusing of short wavelength light. Moreover, there is no empirical evidence quantifying the amount of longitudinal chromatic aberration in the UV. Therefore, this study includes two types of UV measurement in pseudophakic observers: 1) visual acuity loss, and 2) chromatic aberration. The visual acuity loss was measured by both optotypes and by a computer-driven vernier acuity apparatus. UV-filtered and unfiltered light sources were projected on either the eye chart or the vernier apparatus during the measurement of visual acuity. Chromatic aberration was measured with a computerized Badal-principle optometer. The acuity loss measured approximately one line on an eye chart and a comparable amount in vernier acuity. The relationship between the two measures is discussed in terms of the theoretical chromatic aberration computed by Cornu's formulae.

Eye Movement Considerations in the Assessment of Retinal Function in Patients with Maculopathies

Stephen G. Whittaker, Ph.D., Roger W. Cummings, O.D.

William Feinbloom Rehabilitation Center
Pennsylvania College of Optometry
Philadelphia, U.S.A.

Our investigations have yielded several characteristics of eye movement control in individuals with maculopathies which differ substantially from those found in normally sighted individuals. While approximately 70% of our subjects adopted one preferred viewing locus for fixation, 30% developed two or more eccentric loci. In addition, the variability of the eccentric fixation in these individuals increased with increasing scotoma size. For subjects with central scotomata ranging from 2 - 30 degrees in diameter, 1 - 3 degrees of uncertainty of retinal position would be common with standard visual field testing. In subjects with larger scotomata, shifts in fixation angle of greater than 20 degrees have been recorded. While mean drift velocity in these individuals (31 minarc/sec; range: 13 - 186 minarc/sec) was slightly larger than that recorded in normally sighted subjects with artificial scotomata (mean: 25 minarc/sec; range: 13 - 55 minarc/sec), more important was the relatively high drift velocities in particular individuals and/or drift direction which may position that scotoma in the path of the desired image. Our results reveal that accurate psychophysical testing, such as higher resolution visual fields or spatial contrast sensitivity testing of specific retinal loci, of individuals with maculopathies, necessitates image stabilization techniques.

Contrast Sensitivity

Robert A. Weale, Ph.D., D.Sc.

Department of Visual Science
University of London
London, United Kingdom

Many workers are understandably interested in the upper limits of visual performance, and the cut-off frequency of the contrast sensitivity curve provides a useful index for this purpose. But minimal performance can be shown to be not only of practical but also of theoretical interest. It shows that birth, focus, luminance level, colour, amblyopia and senescence share a common meeting point.

Prescribing Magnification: Strategies for Improving Accuracy and Consistency

Ian L. Bailey, O.D., M.S.

School of Optometry
University of California, Berkeley, U.S.A.

All low vision clinicians develop their own methods for prescribing magnification devices. Virtually all methods for determining magnification requirements can be fitted with one broad model, but the accuracy, consistency and efficiency of prescribing depends on the methodology applied within each of the broad stages. Commonly used models will be critically reviewed and consideration given to the effects of test chart designs, sequences of power steps, and reliance on lens power or viewing distance. Recommendations for enhancing clinical consistency will be developed.
Once the magnitude of the required magnification effect has been determined, it must be decided whether the magnifier will be provided in the form of reading glasses, hand held magnifiers, stand magnifiers, near vision telescopes, or video magnifiers. Methods to ensure that the examiner maintains maximum control over the resolution capabilities and the efficient visual functioning will be presented.

Evaluation of Cylindrical Minifying Bioptic

Richard Brilliant, O.D., S. Appel, O.D., R. Ruggiero, O.D.

William Feinbloom Vision Rehabilitation Centre
The Eye Institute
Pennsylvania College of Optometry, U.S.A.

Assessment in the use of a cylindrical minifying bioptic (amorphic bioptic) and fresnel prisms for enhancement of peripheral field awareness is made in this study. A bioptic amorphic system was developed to provide horizontal visual field expansion to individuals with severe visual field constriction. When used in conjunction with fresnel prisms, retinitis pigmentosa patients that were evaluated found that they could maneuver more safely and with increased confidence in unfamiliar environments. Parameters of the lens system along with patient selection criteria will be discussed.

Low Vision Performance as a Function of Task Characteristics

Shelly Marmion, Ph.D.

RRTC-BLV, Mississippi State University
Mississippi State, U.S.A.

Three assessment tasks measuring aspects of visual functioning, such as visual search, pattern identification, and visuomotor control, were developed and administered to a) 48 sighted subjects with simulated visual losses, and b) 43 low vision clients in the rehabilitation system. Tasks were performed under a variety of stimulus conditions including variations in illumination, contrast, size, target speed, and presentation mode. Analyses of variance allowed for comparisons of effect size to be made between stimulus variables and between the two populations studied. Similar stimulus effects were found for each group, but groups differed somewhat in terms of the extent and consistency of experimental effects. The low vision group exhibited far greater variability in performance across tasks and conditions. A number of interactions were identified between task variables and between subject groups and task variables.

Pathology Characteristics and Optical Correction of 900 Low Vision Patients

Adrian R. Hill, Ph.D., F.B.C.O.*+, Alexander Cameron, F.A.D.O.§

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+Nuffield Laboratory of Ophthalmology, University of Oxford, United Kingdom
§Edinburgh Royal Infirmary, Edinburgh, Scotland

A random sampling procedure was used to compare the pathology of 900 patients attending a hospital low vision clinic with their near vision performance and type of low vision aid issued. The sample included over 30 pathology groups of which the major were senile macular degeneration (40%), myopic degeneration (9%), diabetic retinopathy (8%) and glaucoma (6%). Patient ages spanned

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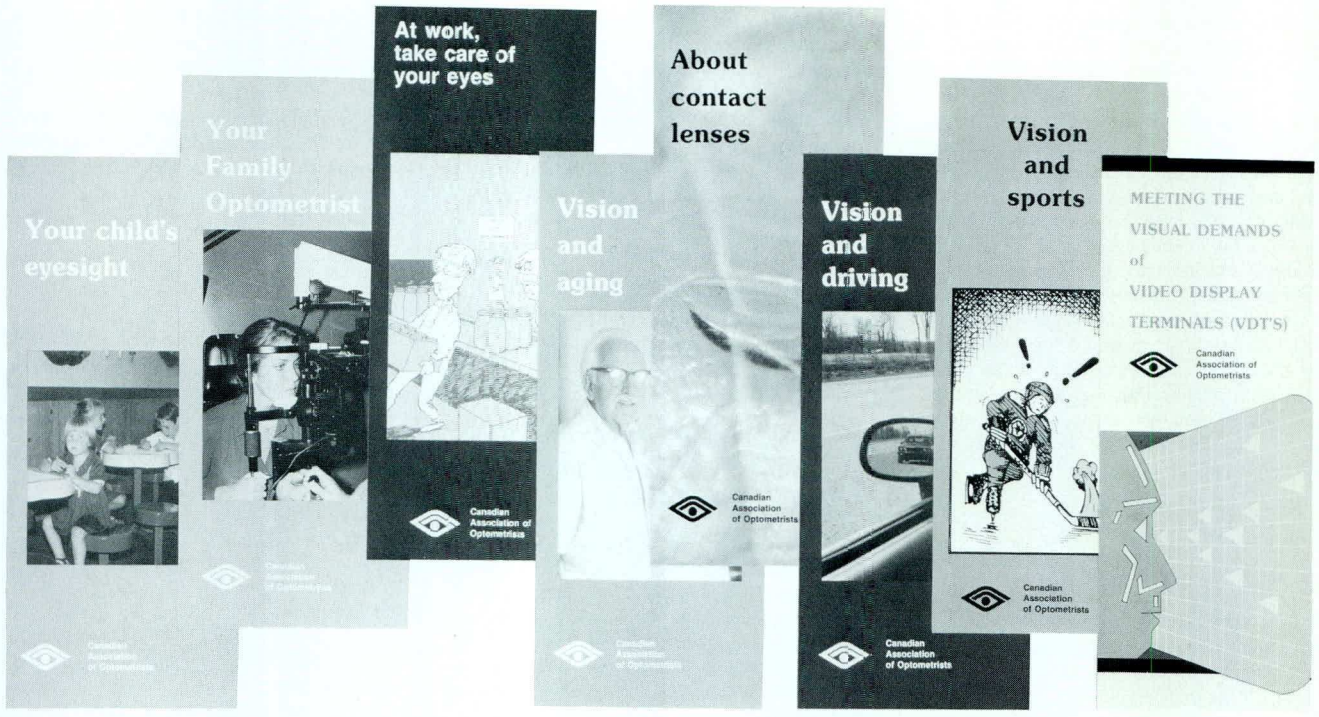

The Canadian Association of Optometrists
— Vision Education Service —

CAO's new series of English-language pamphlets (shown above) is now available and may be ordered directly from the Association at Suite 207 - 77 Metcalfe Street, Ottawa, Ontario. K1P 5L6 (*)

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from 5 to 95 years with a range of visual acuities on presentation from N8 to N48. The types of low vision aid used included high powered spectacles, spectacle microscopes and spectacle telescopes covering a magnification range of 2X to 20X. Many multivariate analyses have been undertaken to test several hypotheses. For example, an analysis of the optical magnification required by patients when expressed as a function of their uncorrected near vision shows that on average those with "better" visual acuities at presentation require slightly higher magnification than expected, whereas the "poorer" visual acuities require slightly lower magnification than would be predicted from theoretical calculations. This can be explained in part by the nature of the prevailing pathology and whether there is predominantly macular or para-macular disturbance to vision. Emphasis will be placed on practical clinical implications of the findings.

The City Study into Aging and Visual Disability: Optometric Data, Preliminary Report

Janet Silver, M.Phil, F.B.C.O.

Moorfields Eye Hospital
London, United Kingdom

The City Study is a multi-disciplinary prospective study of people entering retirement. Disciplines involved include physical medicine, epidemiology, ophthalmology, optometry, and statistics. Over 1000 subjects have been reviewed and data collected on smoking, alcohol consumption, work, and both personal and medical history. Each subject had a full eye examination which included refraction, central field, intra-ocular pressure, biomicroscopy, ophthalmoscopy and fundus photography. Blood samples were analysed, and blood pressure recorded.
The first subjects were seen in April 1983, and it is proposed to repeat the assessments at intervals of three years. Some interesting correlations have been found between certain activities and vision. Optometric data on the first assessment is presented.

Senile Macular Degeneration of the Eye and Parkinson's Disease

Margaret E. Paetkau, M.D.

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Edmonton, Canada

This study was undertaken to determine any association between Senile Macular Degeneration of the eye and Parkinson's disease, both of which occur in old age and involve pigmented tissue of brain origin.
Patients attending the University of Alberta Low Vision Clinic between August 1984 and November 1985 were examined for cog wheeling of the elbow and for at rest tremors. All patients 65 years and older with a diagnosis of Senile Macular Degeneration (SMD) made by referring ophthalmologists were included. Cog wheeling motion of the elbow and tremor were found in 29 of 176 patients. Among the 66 males, the ratio of those with Parkinson like findings to those without was 15:51, and for the 100 females 14:96. The expected prevalence of Parkinson's disease is 6.6 for those 65 years and over. This may be a chance occurrence or may indicate a similar etiology of two diseases. Low vision aid design needs to be adjusted for patients with tremor.

To Determine if the Silver Pages Telephone Directory Provides Easier Access to Information for Sighted and Partially Sighted Elderly

Denise A. DeSylvia, O.D., Thomas Corwin, Ph.D.

New England College of Optometry
Boston, Massachusetts, U.S.A.

The purpose of this study was to determine whether the larger print of the Silver Pages Telephone Directory provided easier access to information for both normally sighted and partially sighted elderly subjects. Prior to its publication a brief survey of the elderly was made to identify which listings and/or advertisements were easiest to see, however, no actual comparison to standard directories was made. Subjects in this study were over 55 years of age; all subjects were tested for central and peripheral field loss and were classified according to their visual acuities. Subjects' performance using the Silver Pages Directory was compared to their performance using a normal directory during three tasks: 1) reading a predetermined portion of the index of each volume, 2) locating five listings from each volume, 3) locating and copying five selected listings from each volume.

A Hierarchy of Perceptual Training in Low Vision

Jocelyn Faubert, M.A.*, Olga Overbury, Ph.D.*, Gregory L. Goodrich, Ph.D.+

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Recent evidence has demonstrated that having subnormal corrected vision does not mean that perceptual abilities cannot be improved. Barraga and her colleagues have proposed a perceptual development model for visually impaired children. This model is composed of 8 individual stages of development each dependent on the other. These stages are: 1) visual attention, 2) efficient eye movements, 3) manipulation of concrete objects to match model, 4) copy/draw shapes from model, 5) match single element picture to complex picture, 6) figure-ground discrimination, 7) letter and word recognition and 8) reading efficiency. We have chosen to investigate this model's relationship with the adult visual system impaired due to ocular pathology. The questions asked were: When an adult visual system is impaired, does this system and the perceptual abilities related to it regress to earlier stages of the developmental model proposed by Barraga? If such a regression occurs to a specific stage of development, do the stages remain sequential? That is, if the system has broken down at level 5 does this mean that they cannot perform levels 6, 7, and 8, or is it specific to one level? Considering these and other related questions we have set out to design materials and techniques that could evaluate visual functioning at the different perceptual levels and train perceptual abilities necessary to function at these levels. These techniques will be demonstrated along with data.

Effect of Magnification and Field Size on Reading Speed Using a CCTV

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+School of Optometry, University of Waterloo
Ontario, Canada

Patients with low vision require optical or electronic aids to magnify the images of objects of interest and thus enhance their visual performance. This is particularly so for reading tasks. Spectacles, simple magnifiers, telescopes and Closed Circuit Television (CCTV) systems can all be used as low vision aids to assist with reading. CCTVs tend to be used by those with severe visual impairments who require higher magnification than is readily available with optical aids or who need wider fields of view and freedom from the viewing distance restrictions inherent in high magnification optical systems. With the facility for interfacing CCTVs with microcomputers, more persons with low vision are using CCTVs. Different size monitors and a wide range of magnification and/or field size affect the reading speed of people using CCTVs.
The project involved two experiments; in the first we measured the reading speeds of 19 subjects with normal vision and 10 with low vision for each of 20 conditions (5 magnifications x 4 field sizes) on the CCTV. In this experiment the reading material was on a platform which the subjects moved at their own speeds, such that they could read quickly and correctly the print projected on to the CCTV screen. To investigate the influence of the subjects' dexterity with the platform movement, 11 subjects repeated the experiment under 16 conditions (4 magnifications x 4 field sizes), this time with the platform being moved mechanically at varying speeds which were increased until the subjects began to make errors in their reading. The results indicate that reading speed is limited by increasing magnification and decreasing field size, and that dexterity and familiarity with CCTVs do influence reading performance.

Predicting Reading Performance in Low-Vision Patients with Age-Related Maculopathy (ARM)

Gary S. Rubin, Ph.D.

Wilmer Institute, Johns Hopkins Hospital
Baltimore, Maryland, U.S.A.

In an earlier study of low-vision reading (Legge, G.E., Rubin, G.S., Pelli, D.G. and Schleske, M.M.

Vision Res 25, 1985, 253-266) we found that Sloan *M* acuity (a near vision test) is a useful predictor of the magnification required for optimal reading performance. However, contrast sensitivity is better than acuity in predicting maximum reading speed, especially for observers with macular scotomas. This study examines whether one needs to measure the entire contrast sensitivity function (CSF) in order to predict reading performance, or whether a specific feature of CSF provides the necessary information. Forced-choice CSFs and reading rates for scanned text are being measured in patients with ARM. Perliminary results indicate that the peak of the CSF is the best single predictor of reading speed and that little predictive value is gained by measuring other aspects of the CSF. As a practical clinical test, peak contrast sensitivity can be obtained by measuring contrast thresholds for individual large letters.

Observations from the Psychology of Reading Relevant to Low Vision Research

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Philadelphia, U.S.A.

Although studies in the psychology of reading have focused on a normally sighted subject population, the findings in this area are relevant to low vision reading. Selected studies on visual word recognition ability, sentence processing, eye movement control, and differences between skilled and unskilled readers will be presented. These studies will demonstrate the extent to which sensory variables such as visual acuity and retinal image position, perceptual variables such as word recognition latency, fixation span, saccade control, and cognitive variables such as text level comprehension and phonological coding ability contribute to overall reading ability. This literature can provide a framework for identifying the factors that may limit reading among low vision populations. Methodologies for the assessment of low vision reading ability will be evaluated on the basis of this research. Specifically, the strengths and weaknesses of procedures whereby subjects are required to read as words are scanned across a TV monitor (Legge, **et al**, 1985) or read unrelated words that must be scanned by the subject (Cummings **et al**, 1985) will be discussed in terms of their ability to identify the particular components of reading that are problematic for various visual pathologies.

Contrast Polarity Effects in Low-Vision Reading

Gordon E. Legg, Ph.D*, Gary S. Rubin, Ph.D.+, Mary M. Schleski, R.N.*

*Department of Psychology
University of Minnesota, Minneapolis, U.S.A.
+Johns Hopkins Hospital
Baltimore, Maryland, U.S.A.

Text may be printed with black letters on a white background or with white letters on a black background; this is its contrast polarity. This difference has little effect for people with normal vision, but it is important in some forms of low vision. We have examined the effect of contrast polarity as part of a major psychophysical study of low-vision reading. Maximum reading speeds were measured for text that was presented on the screen of a TV monitor. Only subjects with cloudy ocular media showed a major effect of contrast polarity. When viewing conditions were optimized, reading speeds for these subjects ranged from 10% to 50% higher for white-on-black text. These subjects showed corresponding differences in acuity (Sloan *M* testing) measured with black-on-white and white-on-black optomtypes. Our results suggest that contrast-polarity effects in low vision are due primarily to light scattering within the eye. We will describe a model that predicts contrast-polarity effects on reading from measurements of glare sensitivity and the contrast sensitivity of reading. (Supported by U.S. Public Health Service Grant EY02934.)

Most Useful Aids for the Partially Sighted

Gerald Fonda, M.D.

Saint Barnabas Medical Centre
Livingston, New Jersey, U.S.A.

For distance, after a careful refraction, the most useful visual aid is approach (non-optical) magnification which is achieved by reducing the distance between the observer and the object of regard. The infrequent and intermittent need for a telescopic device is best served by a hand-held telescope.
For near, after a careful refraction, the most useful visual aids are approach (non-optical) magnification, spectacle magnifiers, hand-held magnifiers, and the paperweight magnifier. Spectacle magnifiers can be in the form of high add bifocals, trifocals, and half-eyes. Bifocals and trifocals are indicated when distance correction makes a significant improvement in vision (e.g. aphakia). Spectacle magnifiers have the advantages of a 2½X larger field of view, freeing both hands, and maximum and constant magnification. Calculations will relate convergence (in meter angles), patient interpupillary distance, decentration effect and prism prescribed through half-eye spectacle magnifiers.

Magnification Efficiency in Low Vision Patients

Franklin I. Porter, O.D., M.S., Joseph L. Demer, M.D., Ph.D.

Cullen Eye Institute, Baylor College of Medicine
Houston, Texas, U.S.A.

The use of telescopic spectacles in the rehabilitation of the partially sighted is a common clinical practice. Unfortunately, many patients are unable to achieve the level of visual function predicted on the basis of telescopic magnification alone. We define the magnification efficiency factor (MEF) to be the actual vision with telescopes divided by predicted vision with telescopes.
To determine MEF in a low vision population, Snellen acuity and contrast sensitivity were measured with telescopic spectacles. The observation that MEF is less than one for many low vision patients indicates that non-visual factors contribute to successful use of telescopic spectacles. Ongoing studies will determine the nature of these non-visual factors.

Sensorimotor Adaptation to Telescopic Spectacle Low Vision Aids

Joseph L. Demer, M.D., Ph.D., Jefim Goldberg, Ph.D., Franklin I. Porter, O.D., M.S., Herman A. Jenkins, M.D.

Cullen Eye Institute, and
Clayton Neurology Laboratory
Baylor College of Medicine
Houston, Texas, U.S.A.

Non-visual factors appear to contribute to the success of telescopic spectacles in low vision rehabilitation. We postulated that the effectiveness of a sensorimotor system, the vestibulo-ocular reflex (VOR), in compensation of head movements may be important in achieving success. Unless VOR gain (eye velocity/head velocity) increases to equal spectacle magnification, retinal image slip produced by head movements will degrade acuity.
We are using computerized electro-oculography to investigate eye movements in normal and low vision subjects wearing telescopic spectacles. Head movements are controlled by a motorized chair. Immediate and delayed VOR adaptation to telescopic spectacles has been measured in most of the subjects tested, although individuals have different adaptive capabilities. This adaptation improves visual acuity with magnification. Plastic VOR gain adaptation may thus predict individual access with telescopic spectacles.

An Overview on the Use of a Low Magnification Telescope in Low Vision

George C. Woo, O.D., Ph.D.

Centre for Sight Enhancement
University of Waterloo
Ontario, Canada

A Galilean telescope in its simplest form is a two element system consisting of a plus lens as an objective and a minus lens as an eyepiece. The system is restricted to lower magnifications and smaller fields of view in comparison with a Keplerian telescope. The image through the system however is always erect resulting in its use for distance viewing for partially sighted patients. In this presentation, several optical properties will be examined. The use of a full field telescope in objective and subjective refractions will be discussed and contrast sensitivity function through this system will be presented. The employment of an expression for spectacle magnification will be elaborated when such a telescope is used for near vision or in reverse for some low vision patients. The vinocular telescope scanning technique recommended to patients with scotoma will be described. In addition, the ocular telephoto system designed by Donn and Koester for macular degeneration patients will be reviewed.

The Canadian Optometric Education Trust Fund Invites Applications for Funding under the awards schedule for the 1987 Grant Program

Purpose of the COETF

Recognizing the need to support the continuing growth and development of the profession of Optometry, the COETF is prepared to financially assist the educational, research and manpower programs deemed by the Trustees to be more important to achieving these goals.

Suitably trained optometric personnel, and the profession's continued access to these professionals is vital to our academic evolution. *The COETF supports* faculty development in our schools of optometry, graduate students in specialized educational programs and investigative research by undergraduate students.

Ongoing research undertaken by the optometrist in private practice is just one type of professional development program which optometry must continue to initiate. *The COETF supports* projects established in a clinical environment to assist the visually handicapped and to assist other optometrists through preparation and publication of the details of these clinical research studies.

A third Canadian school of optometry is of vital concern to the profession. The ongoing activites of our two existing schools are just as important. *The COETF supports* needed alterations and renovations at both schools presently operating and stands ready to assist substantially in the operating cost support of a new school of optometry in Canada.

Continuing education in the 80s must be regular and structured as technology sweeps the profession forward into new methods and discoveries in the delivery of complete vision care. *The COETF supports* the development of an academic Chair of Physiological Optics and Continuing Education to meet these ongoing needs.

The Canadian Optometric Education Trust Fund invites your support in this "Vision of the Future". If you are (or know of) an optometric practitioner, student, educational institution, service organization or member of the general public who is presently involved in, or planning a program that meets any of the goals outlined above, then assistance might be available to achieve the project's objectives. Write to us, using the application in this issue of the CJO, by Feburary 1, 1987. The Trustees assure that all projects meeting the purposes of the Fund will be given serious consideration.

Le Fonds de fiducie pour les études en optométrie au Canada offre du financement en vertu de son Programme de subventions 1987

Objet du FFEOC

Reconnaissant la nécessité de soutenir la croissance et le développement de la profession d'optométriste, le FFEOC est disposé à accorder une aide financière pour les programmes d'étude, de recherche et de main-d'oeuvre que son Conseil de fiducie juge parmi les plus importants pour l'atteinte de ces objectifs.

Il est essentiel à l'évolution de notre science de nous assurer un personnel optométrique bien formé et de faire en sorte que la profession continue d'avoir accès à ces professionnels. *Le FFEOC appuie* le perfectionnement des enseignants dans nos écoles d'optométrie, la participation d'étudiants de deuxième cycle aux programmes d'enseignement spécialisé et le travail d'investigation de la part des édudiants de premier cycle.

La recherche permanente entreprise par l'optométriste en pratique privée n'est qu'un des types de programme de perfectionnement professionel que l'optométrie doit continuer de lancer. *Le FFEOC appuie* les projets établis en milieu clinique pour aider les handicapés visuels et pour aider les autres optométristes par la préparation et la publication des détails de ces études de recherche clinique.

La profession souhaite vivement la création d'une troisième école canadienne d'optométrie. Les activités permanentes de nos deux écoles existantes sont tout aussi importantes. *Le FFEOC appuie* les modifications et les rénovations requises aux deux écoles actuelles et est disposé à assumer une part appréciable des frais de fonctionnement d'une nouvelle école d'optométrie au Canada.

L'éducation permanente dans les années 80 doit être constante et structurée au moment où la technologie propulse la profession vers de nouvelles méthodes et de nouvelles découvertes dans la prestation des soins complets de la vue. *La FFEOC appuie* la création d'une chaire universitaire d'optique physiologique et un programme d'éducation permanente pour répondre à ces besoins permanents.

Le Fonds de fiducie pour les études en optométrie au Canada vous demande votre appui pour cette "Vision de l'avenir". Que vous soyez praticien, étudiant, établissement d'enseignement, organisme de service ou membre du grand public qui participez présentement ou projetez de participer à un programme qui répond à l'un des objectifs décrits ci-dessus, vous pourriez obtenir une aide pour atteindre les objectifs du projet. Écrivez-nous, sur le formulaire de demande reproduit dans ce numéro de la RCO, avant le 1er février 1987. Le Conseil de fiducie accordera une attention minutieuse à tous les projets correspondant aux objectifs du Fonds.

Canadian Optometric Education Trust Fund
1987 Grant Program — Application for Funding

Complete and forward (we require 5 copies) no later than February 1, 1987, to:

COETF Grant Program
Ste. 207 - 77 Metcalfe Street
OTTAWA, Ontario
K1P 5L6

(after Nov. 15 to:)
c/o Canadian Association of Optometrists
Suite 301 - 1785 Alta Vista Drive
Ottawa, ON
K1G 3Y6

FULL NAME _____ TEL. ( ) _____

MAILING ADDRESS _____

_____

_____

_____

FUNDING CATEGORY _____ ☐
Post Doctoral Study _____ ☐
Clinical Research _____ ☐
Undergraduate Research _____ ☐
Public Vision Care
(conducted by non-academic
or non-practitioner) _____ ☐

Title, nature and description of project* _____

_____

_____

_____

_____

_____

*(If this space is insufficient, please outline the project on a separate sheet of paper)

Expected date of completion _____

Expected benefit from project _____

_____

_____

_____

_____

_____

Estimated Budget (Please provide details on a separate sheet of paper)

Personal Services	Salaries	Equipment	Supply Mtl.	Travel	Tuition	Other (specify)
				Total Grant Requested $		

A formal written report is expected to be a part of this study. The applicant agrees that *any* written report on a project funded either in whole or in part by the Canadian Optometric Education Trust Fund (COETF), whether a final report or a report of the project in progress, shall be submitted first to *The Canadian Journal of Optometry*, to whom first right of publication refusal has been assigned by the Trustees of the COETF. In signing this application, the applicant also affirms that no written report or paper resulting from a project funded in whole or in part by the COETF has been or will be submitted to any publication other than *The Canadian Journal of Optometry*, to whom exclusivity of publication has been assigned by the Trustees of the COETF, pending acceptance or rejection by the *CJO*'s Editorial Board.

_____ _____

SIGNED DATE

Fonds de Fiducie pour les Études en Optométrie au Canada
Programme de Subventions 1987 — Demande de Financement

Remplir et renvoyer (en 5 exemplaires) au plus tard le 1 février 1987 à:

Programme de subventions du FFEOC
Bureau 207, 77 rue Metcalfe
OTTAWA (Ontario)
K1P 5L6

(après le 15 novembre à:)
a/s Association canadienne des optométristes
Bureau 301 - 1785, promenade Alta Vista
Ottawa (ON)
K1G 3Y6

NOM DU COMPLET _____

ADRESSE POSTALE _____

_____

_____

_____

TÉL. ( ) _____

CATÉGORIE DE FINANCEMENT____ ☐

Études post doctorales _____ ☐

Recherche clinique _____ ☐

Recherche (premier cycle) _____ ☐

Vision publique
(par un non-universitaire
ou un non-praticien) _____ ☐

Titre, nature et description du projet* _____

_____

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_____

_____

_____

*(Si l'espace est insuffisant, exposer le projet sur une feuille détachée.)

Date prévue d'achèvement _____

Avantages attendus du projet _____

_____

_____

_____

_____

_____

Budget estimatif (Fournir détails sur une feuille détachée)

Serv. pers.	Salaires	Matériel	Fournitures	Déplacements	Scolarité	Autres (préc.)
				Subvention totale demandés $		

Cette étude doit comporter un rapport officiel écrit. Le candidat convient de ce qui suit : *tout* rapport écrit découlant d'une étude financée en tout ou en partie par le Fonds de fiducie des optométristes candiens pour l'éducation (FFOCE), qu'il s'agisse du rapport final ou d'un rapport d'étape, sera soumis d'abord à la *Revue canadienne d'optométrie*, qui aura doit de premier refus en ce qui touche la publication, suivant la décision du Conseil du FFOCE. En portant sa signature sur la demande, le candidat déclare qu'aucun rapport ou document écrit découlant d'une étude financée en tout ou en partie par le FFOCE n'a été ou ne sera soumise à toute publication autre que la *Revue canadienne d'optométrie*, à laquelle le Conseil du FFOCE a accordé le droit exclusif de publication, sous réserve de l'approbation du conseil de rédaction de la *Revue*.

_____ _____

SIGNATURE DATE

COETF 1986 Awards

Following is a complete list of awards presented by the 1986 Awards Committee of the Canadian Optometric Education Trust Fund:

(The Awards are listed in alphabetical order of the principal applicant for each approved project)

1. to Dr. Murcheson G. Callender, School of Optometry, University of Waterloo: $3,500.00 for a project entitled *Corneal Respiration Associated With Extended Periods of Contact Lens Wear.*

2. to Dr. B. Ralph Chou, School of Optometry, University of Waterloo: $3,300.00 support for year 4 of a Ph.D. program at the School.

3. to Dr. Anthony P. Cullen, School of Optometry, University of Waterloo: $2,000.00 towards the acquisition of a spectro-radiometric standard source for in-laboratory calibration of spectral radiance meters.

4. to Dr. Debra Currie, Kitchener, Ontario: $1,500.00 for a project entitled *A New Method of Evaluating the Effects of Anisometropic Lenses by Measuring the Comitancy of the Fixation Disparity Curve (FDC) With and Without Asymmetric Prisms.*

5. to Dr. Jacques Gresset, Ecole d'Optométrie, Université de Montréal: $1,500.00 for a project undertaken with Dr. Gaston Berubé, entitled *Mesure d'Acuité Visuelle par la Méthode du Regard Préférenciel auprès d'une Population Multihandicappé.*

6. to Dr. Elizabeth L. Irving, School of Optometry, University of Waterloo: $1,500.00 towards a study of a new approach to the Standard Fixation Disparity Curve: *Evaluation of Monocular Components.*

7. to Dr. Angela C. Kothe, School of Optometry, University of Waterloo: $6,500.00 towards a Ph.D. research project, conducted under the supervision of Dr. John Lovasik, investigating changes in retinal and optic nerve function with changes in intraocular pressure and retinal vascular perfusion pressure.

8. to Dr. William M. Lyle, School of Optometry, University of Waterloo: $600.00 for a project entitled *The Differential Diagnosis of Headaches.*

9. to Dr. Kenneth M. Robertson, School of Optometry, University of Waterloo: $12,000.00 support for year 3 of a Ph.D. program at the School.

10. to Dr. M.J. Samek, Optometric Institute, Toronto: $4,018.00 to support an Optometry student summer internship at the Institute.

11. to Pierre Simonet, Ecole d'Optométrie, Université de Montréal: (i) $5,000.00 support for year 1 of a Ph.D. program in Physiological Optics at the School of Optometry, University of Waterloo; (ii) $2,500.00 for a project entitled *Mesure des Variations de la Puissance Periphérique de Lentilles Ophtalmiques à l'Aide d'un Focometre Electronique.*

12. to Dr. Jacob G. Sivak, School of Optometry, University of Waterloo: $1,500.00 towards a study on the contribution of near ultraviolet light to the chromatic aberration of the vertebrate lens.

13. to Dr. Marlee M. Spafford, School of Optometry, University of Waterloo: $5,000.00 towards a study entitled *Short Term Visual Deprivation Effects on Visually Evoked Response: Implications for Patching Therapy in Functional Amblyopia.*

14. to Dr. George C. Woo, School of Optometry, University of Waterloo: (i) $4,000.00 towards a project, undertaken with Drs. T.T. Liu and B.A. Haberstroh, entitled *Visual Function and Renal Failure;* (ii) $2,000.00 towards the preparation of the published proceedings of the International Symposium on Low Vision.

15. to Dr. M. Emerson Woodruff, School of Optometry, University of Waterloo: $5,000.00 towards a project entitled *Derivation of Accommodative Amplitude Norms of Children Aged 3 to 12 Years.*

Canadian Optometric Education Trust Fund Summary of Annual Awards Programs

With the completion of the 1986 Awards Program, the COETF has awarded a total of over $300,000.00 to vision and eye care research and screening programs and projects since the first year a grant was presented — 1980.

Following is a summary of the total amounts to date in applications and grants to various institutions and individuals.

Total Applications to date:	$1,049,675.52
Total Awards to date:	311,655.00

(i) to the School of Optometry, University of Waterloo:	202,555.00
(ii) to l'Ecole d'Optométrie, Université de Montréal:	41,050.00
(iii) to the Optometric Institute, Toronto:	22,718.00
(iv) to individual practitioners sponsored by a provincial Optometric Association:	16,300.00
(v) to independent optometric practitioners:	29,032.00

VISION CARE NEWS/ACTUALITÉ OCULO-VISUELLE

Halifax ODs Provide Services To NATO Conference

Drs. David Dobbelstyn and Paul Gray were recently pressed into service, at the request of Health and Welfare Canada, to provide emergency optical services for participants attending the North Atlantic Treaty Organization (NATO) Ministers' Conference in Halifax in late May.

The Conference had some 700 attendees, including several spouses and family members. As part of the formalities surrounding the provision of emergency optical services, Drs. Gray and Dobbelstyn were given a multinational embassy list should billing have been required for attendees other than those specifically covered by the Government of Canada.

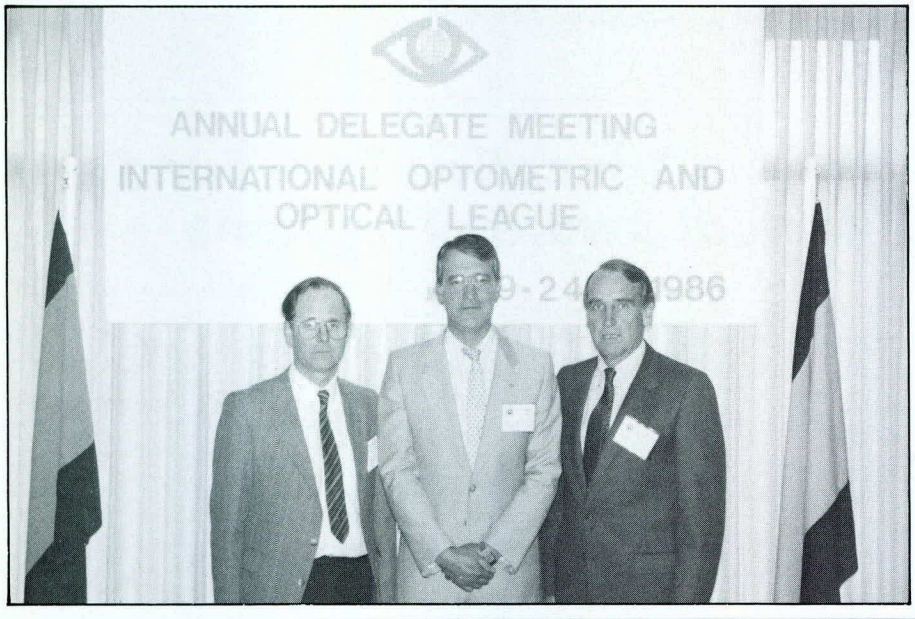
In a post Conference assessment, Dr. Gray, who is currently President of the NS Association of Optometrists, advised that the whole event went very smoothly, although Halifax's infamous noon cannon caused more than a few starts when it was fired on Day 1 of the Alliance's gathering.

Dr. Roland des Groseilliers Attends 1986 IOOL Conference

Canada's official delegate to the International Optometric and Optical League (IOOL), Dr. Roland des Groseilliers, was present at the League's 1986 Annual Meeting held April 19-24 in Madrid, Spain.

During the Conference, some 67 delegates from 26 different countries discussed the current position of Optometry around the world and approved a 12-month Action Plan for the IOOL's Committee Structure to follow in the year ahead.

Shown here with Dr. des Groseilliers (centre) are the League's past President, Professor David Pickwell (L) and its newly elected President, the first ever from the United States, Dr. G. Burtt Holmes (R).



AAO To Meet In Canada In December

The American Academy of Optometry will be meeting this December at Toronto's Harbour Castle Hilton Hotel.

The meeting, which will be held December 11th through the 16th, will feature five full days of Continuing Education and clinical research symposia. Over 100 lectures and some 14 hands-on workshops are scheduled as part of "Ellerbock '86", the official title of the program.

In addition to the educational program, Ellerbock '86 will include a hall of scientific exhibits, promising the latest in ophthalmic technology. There will also be a display of scientific posters, planned to illustrate the state of the art in clinical research. A number of scientific publishers will be present with exhibits and information relating to the current text and periodical scene in ophthalmic research.

Concurrent with the lecture and exhibit programs, the Academy's 1986 Annual General Meeting will begin December 13 and conclude on the 16th.

For further information on either the Ellerbock '86 program or the Academy's 1986 AGM, contact: The American Academy of Optometry, 5530 Wisconsin Avenue, Washington, DC, 20815, USA.

IOOL Seeks New ED

The International Optometric and Optical League (IOOL) is seeking a new Executive Director to replace Don Schaefer when his mandate expires at the end of December this year.

To take charge in January, 1987 of the League's administration, the position will require the successful candidate to locate at the League's offices in London, England.

The IOOL is a world federation of optometrists and ophthalmic opticians with members in 44 countries and liaison contacts in 25 others. In its new Executive Director, the IOOL is seeking a "goal-oriented individual with an international outlook, strong written and oral communication skills, with interests in meeting planning, marketing, fundraising, public relations and developing a wide range of Committee support materials."

Interested candidates are invited to apply directly to the League in care of its President, Dr. G. Burtt Holmes, IOOL, 10 Knaresborough Place, London, SW5 OTG, England.

US Optometric Doctoral Thesis Available for Associations

Drs. Carol A. Murie and Joseph Day, two Oregon optometrists, have circulated to CAO and every state Association in the US an announcement advising the

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availability of their doctoral thesis "Assessment of the Normal Fundus" for possible use in their testing programs.

Following is an abstract of the project:

Most currently available fundus slides series are heavily pathologically oriented. Optometry students need to have a firm grasp of the normal fundus to appreciate pathological changes, but they will not encounter all the normal variations and benign conditions observable with ophthalmoscopy during their student careers. To facilitate recognition of normal and non-pathological findings, patients aged eight to 60 were photographed using the Canon Non-Mydriatic fundus camera. Both left and right eyes are included for comparison. The optic nerve, vessels, posterior pole appearance and macular variations were evaluated and classified. Pigmentary changes, nevi, myelinated nerve fibers and other diverse normals are included. Slides are presented with the above information in a teaching format designed for the novice ophthalmoscopist.

The complete project includes 139 slides and a 122 page Manual and is available for $399.00 (US) for the first kit, $350.00 for each additional one. Further information is available from:

Joseph D. Day, O.D.
1504 21st Place, No. 5
Forest Grove, OR
97116
USA
Tel. (503) 357-6511

IAPB To Meet in New Delhi

The International Agency for the Prevention of Blindness has announced that its Third General Assembly will be held December 6 - 11, 1986 in New Delhi, India.

Previously, the Agency has met in Oxford, England and Washington, DC (1978 and 1982, respectively).

For further information: Dr. L.D. Sota, Secretary General, Third General Assembly, IAPB, 178 Rouse Avenue, New Delhi — 110 002, India. Telephone 331 6064.

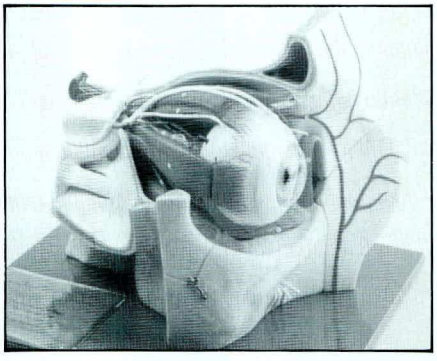
AJO Swallowed by New, Larger Title

The Australian Journal of Optometry has recently undergone a transformation and emerged now as *Clinical and Experimental Optometry incorporating the Australian Journal of Optometry*.

In a news release announcing the change, the publishers refer to the "mood of Optometry today" as the prime motivator and cite UWIST's Michel Millodot's advocacy of "Experimental Optometry" as the banner for this profession's research and development.

Subscription information, and a free copy, is available from:

Clinical and Experimental Optometry
PO Box 185
Carlton South
Victoria 3053
Australia



Canadian Source for Anatomical Eye Models

Directional Learning Canada Ltd, a company located in Elora, Ontario, has published a catalogue of anatomical models of the eye and its various topographies. Ranging in price from $59.00 (for a non-detachable 4-times enlargement of the eyeball) to $1,549.00 (for a base-mounted, 15-times enlargement which separates into two parts), the full-colour models include several which are dissectable into as many as nine different parts.

For further information:

Directional Learning Canada Ltd.
480 Washington Street
Elora, ON
N0B 1S0
Tel. (519) 846-5397

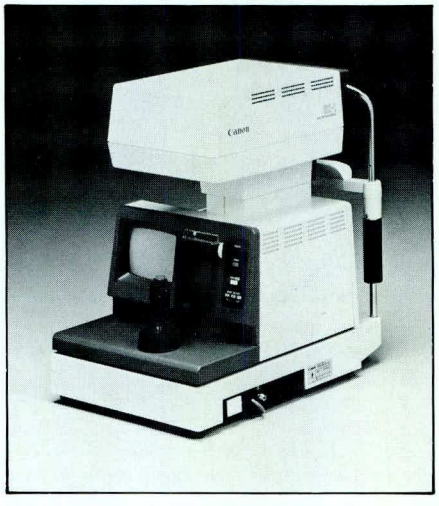
Canadian Ophthalmic Merger

As at May 27, 1986, two Canadian ophthalmic companies, N & N Optical Ltd. of Calgary and Trans Canada Contact Lens Ltd. of Toronto have formed a new "entity" to carry on the business of the two companies. The news release announcing the advisory, received by the *CJO* in mid-July, also advised that the newly-merged entity had yet to create a name for itself, although its expressed purpose has been defined and includes the elimination of redundancies in both organizations and the building on respective strengths.

Further information: Frederick S. Hawa (416) 423-1923.

Allergan/Coopervision/Ciba Vision Announce Agreement

Allergan Inc. has announced that, effective July 1, both Coopervision Inc. and Ciba Vision Care have agreed to include Allergan's Hydrocare protein remover tablets in their respective soft contact lens starter kits.



Canon Auto Ref-Keratometer Introduced in Canada

Canon Canada Inc. has announced the introduction of a new, combined auto refractor and auto keratometer, the RK-1 Auto Ref-Keratometer.

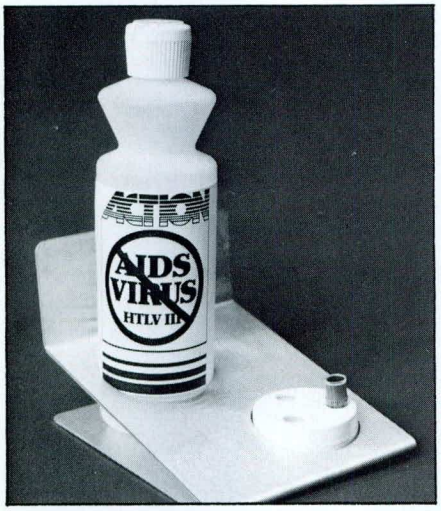
VISION CARE NEWS/ACTUALITÉ OCULO-VISUELLE

According to Canon, the RK-1 can be operated in three separate modes: refraction, keratometry or automatic continuous, which measures sphere, cylinder and axis as well as K readings.

As a refractor, the RK-1 supposedly takes less than five one-hundredths of a second to complete each scan. The unit also incorporates an anti-fogging system with a landscape phototargeted, which Canon claims makes the eye examination easier on the patient.

As a keratometer, the RK-1 is reported to operate even faster, measuring five meridians simultaneously, calculating automatically the radius of curvature, astigmatism and other corneal information in only one *one-thousandth* of a second.

Further information:
Ms. Faye Bitner
Canon Canada Inc.
6390 Dixie Road
Mississauga, ON
L5T 1P7
Tel. (416) 678-2730



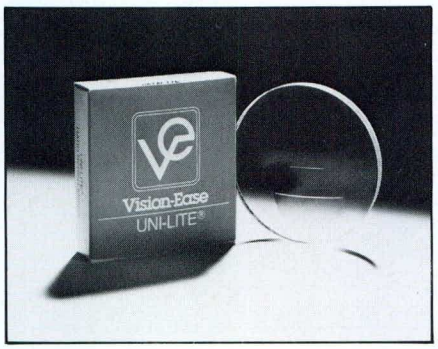
Florida Company Introduces "AIDS Disinfectant"

Following last year's dramatic coverage of the possibility of the Acquired Immunodeficiency Syndrome (AIDS) virus' being transmitted through tears, it may not be surprising that an American company has introduced a product which it claims "prevents the possible spread of HTLV III and other microbial pathogens that might be present in tears."

Action Services AIDS Disinfectant Solution, according to a recent news release received at CAO, is for the "high quality professional whose patients expect attention to be given to such serious details."

The release is accompanied by statistics from a June Public Health seminar held in Miami on AIDS related occurrences throughout the US and Florida.

For more information: Bud Berman or Betty Rhine, Action Services, 8480 Northwest 56th Street, Miami, FL, 33166, USA.



Vision-Ease Develops "VDT" Lens

Vision-Ease, a St. Cloud, Minnesota based lens manufacturer has developed a new trifocal lens called "Datalite" which, it claims, is "designed to meet the visual needs of VDT users who are presbyopic".

The lens incorporates an extra wide trifocal area which, according to Vision-Ease, eliminates the need to adjust the head position to see through different lens segments.

For further information:
Vision-Ease
700 54th Avenue North
St. Cloud, MN
56301, USA
(612) 251-8782

Don't Take This Display For Granite . . .

Giant film strips, ice cubes, boulders and rocks are all part of the inventory of display accessories offered by a California company to add "colour and visual excitement" to optical dispensing.

Also in its current catalogue, Visual Dynamics offers pastel rainbows, miniature deck chairs and umbrellas (for displaying sunglasses), blue waterdrops, bubbles, magic wands, snow and your choice of glass, gold or frosted heads.

Further information and a copy of the catalogue is available from:
Visual Dynamics
301-8th Street
Space 207-B
San Francisco, CA
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CAO Office Relocated

Effective **November 15, 1986**, the Ottawa office of the Canadian Association of Optometrists moves to a new address in the nation's capital.

Alta Vista Drive in Ottawa is home to what is fast becoming known as ''Health Care Row'', incorporating as it does the Canadian Dental Association building, the Canadian Medical Association building, the Canadian Pharmaceutical Association building and, now under construction, the new national headquarters of the Canadian Red Cross. Directly around the corner from these four national Association facilities is the National Defence Medical Centre, the Ottawa General Hospital, the Ottawa Rehabilitation Centre and the world class paediatric hospital, the Children's Hospital of Eastern Ontario (CHEO).

The national Executive of CAO recently approved a five-year lease package, negotiated after several weeks of discussion by CAO Executive Director Gérard Lambert and an Office Facilities Committee, specially appointed by CAO Council.

The new office, a ''Class A'' corner suite in the newly opened Canadian Pharmaceutical Association building, also adjoins a first class Executive boardroom. CAO, the first tenant in this particular space, is in the process of having it customized for the Ottawa staff of the Association. When finished, the 1500 square foot space will feature three Executive offices, a reception area and an open concept space designed for use by our secretarial/clerical staff.

Besides Mr. Lambert, CAO's full-time office staff consists of Director of Communications Michael DiCola, Government Affairs Co-ordinator Alex Saunders, Executive Assistant Chantal Wall, Senior Secretary Ruth Wilcox, COETF Administrator and Secretary Deanna Verhey and Secretary Receptionist Annette McDonald.

As of November 15, CAO's new mailing address will be:

Suite 301 - 1785 Alta Vista Drive
Ottawa, ON
K1G 3Y6

A new telephone number has yet to be established but, when installed, members will be advised (in the next issue of the **CJO**).

Déménagement du bureau de l'ACO

À compter du **15 novembre 1986**, le bureau d'Ottawa de l'Association canadienne des optométristes aura une nouvelle adresse dans la capitale nationale.

La promenade Alta Vista, à Ottawa, se transforme rapidement en «boulevard des soins de santé», comptant déjà parmi ses occupants les immeubles de l'Association dentaire canadienne, de l'Association médicale canadienne et de l'Association pharmaceutique canadienne, auxquels viendra s'ajouter le nouveau siège social national de la Croix-Rouge canadienne, actuellement en construction. Juste à côté de ces quatre immeubles d'associations nationales, dans une rue transversale, se trouvent le Centre médical de la Défense nationale, l'Hôpital général d'Ottawa, le Centre de réadaptation d'Ottawa et l'hôpital pédiatrique de classe mondiale qu'est l'Hôpital pour enfants de l'est de l'Ontario (HEEO).

L'exécutif national de l'ACO vient d'approuver un bail de cinq ans, fruit de plusieurs semaines de négociations menées par le directeur général de l'ACO, Gérard Lambert, et un Comité des bureaux administratifs spécialement nommé par le Conseil de l'ACO. Le nouveau bureau, qui occupe une place de choix dans un coin du tout nouvel immeuble de l'Association pharmaceutique canadienne, est situé juste à côté d'une salle de conférence de toute première catégorie. L'ACO, premier occupant des lieux, est en voie de les faire adapter aux besoins de son personnel d'Ottawa. Une fois les travaux terminés, l'espace de 1 500 pieds carrés comportera trois bureaux de direction, une aire de réception et un espace à aires ouvertes à l'intention de notre personnel de secrétariat et de bureau.

En plus de M. Lambert, le personnel de bureau à plein temps de l'ACO comprend le directeur des Communications Michael DiCola, le coordonnateur des Affaires gouvernementales Alex Saunders, l'attachée de direction Chantal Wall, la secrétaire principale Ruth Wilcox, l'administratrice et secrétaire du FFOCE Deanna Verhey et la secrétaire-réceptionniste Annette McDonald.

À compter du 15 novembre, la nouvelle adresse postale de l'ACO sera:

Bureau 301 - 1785, promenade Alta Vista
Ottawa (ON)
K1G 3Y6

On ne connaît pas encore le nouveau numéro de téléphone, mais nous en informerons les membres (dans le prochain numéro de la **RCO**) aussitôt qu'il sera installé.

SECTIONS

Three New Sections Formed

At its summer meeting, CAO Council approved the creation of three new Sections of the Canadian Association of Optometrists, one conditional upon a minor revision to its proposed By-laws.

1. Low Vision

In their submission for Section status, members with a special interest in Low Vision offered the following rationale of the need for a Low Vision Section in CAO:

The average age of the Canadian population is steadily increasing. As a result, the number of visually impaired Canadians requiring low vision services is increasing annually. Both elderly and young patients with low vision require, and are increasingly demanding, high quality, readily accessible low vision services.

As the largest provider of primary vision care in Canada, Optometry has the professional obligation, as well as the unique opportunity, to ensure that visually impaired patients receive the highest quality low vision services available.

In order to enhance the delivery of low vision services via Optometric practices across Canada, it is necessary that Canadian optometrists have access to the latest theoretical and practical clinical information relating to diagnostic and therapeutic low vision procedures. It is also important that governments and others involved in low vision rehabilitation be made aware of the unique services which optometrists offer the visually impaired. Optometry must therefore speak with a unified voice in order to communicate effectively with all parties concerned with low vision rehabilitation.

It is for these reasons that the Canadian Association of Optometrists should establish a section on LOW VISION.

Following, for the information of members in general and, in particular, those who might be interested in joining the CAO Section on Low Vision, is the Section's purpose and by-laws as were approved by Council at its summer, 1986 meeting.

Purpose of a Low Vision Section

1. To advance the well-being of visually impaired Canadians and to promote their universal access to high quality low vision care.
2. To promote high quality basic and applied low vision research.
3. To encourage the legitimate role of Optometry as a key provider of clinical low vision services within a comprehensive interdisciplinary low vision service.
4. To cooperate constructively with other agencies, organizations or professions who share the Canadian Association of Optometrists' desire to help Canadians with low vision.
5. To help visually impaired Canadians cope with their increasingly technological environment by providing directly, or by referral when necessary, exposure to advanced low vision technology.
6. To participate actively in the delivery of quality low vision services to the multiply-handicapped.
7. To promote a better understanding of low vision conditions by educators, employers, legislators, agencies for the blind and the general public.
8. To encourage appropriate health-care measures leading to earlier detection, diagnosis and treatment of sight-threatening diseases or injuries.
9. To provide low vision services to visually impaired Canadians whose level of impairment can be easily remedied by in-office Optometric services.
10. To better inform medical practitioners concerning the pressing need for early referral for professional low vision services as an integral part of their management of patients with ocular disorders.

Bylaws of the Section on Low Vision

Article I — Name and Purpose

Section 1

This section shall be known as the LOW VISION SECTION.

Section 2

The purpose of this section is to enhance low vision services provided to the public served by Optometrists practicing low vision care; to promote, advance and enhance the identity of Optometry as a profession providing these services; to assist in the provision of low vision continuing education courses; to provide a forum for members of the Canadian Association of Optometrists having an interest in this specialty area to exchange and interchange ideas and information with respect to low vision diagnostic and therapeusis; and to act as a resource on the subject of low vision to both the profession of Optometry and the general public.

Article II — Membership

Section 1

Membership shall be open to any members of the Canadian Association of Optometrists. Unless otherwise specified, each member of the Section shall pay to the Canadian Association of Optometrists annual section dues of $50.00 except student members of the Canadian Association of Optometrists who shall pay no annual dues.

Article III — Officers and Section Delegates

Section 1

The officers of this Section shall be a Chairman, Vice-Chairman and Secretary.

Section 2

There shall be a Council which shall consist of the Chairman, Vice-Chairman, Secretary and the last retiring Chairman, together with two other members, to be elected by the Section as hereinafter provided.

Section 3

The Council shall select the Section liaison to the Council of the Canadian Association of Optometrists.

SECTIONS

Article IV — Nomination and Election of Officers

Section 1

At least ninety days before the Annual Meeting of the Section in the year that the terms of office expire, the Chairman shall appoint a nominating committee of three members of the Section who are not candidates for the office. The nominating committee in turn shall at the Annual Meeting submit its nominations for the following offices: Chairman, Vice-Chairman, Secretary and two members of the Council. The report of the nominating committee shall not preclude any member of the Section for making a nomination for any office from the floor at the Annual Meeting.

Section 2

Except for the last retiring Chairman, Council officers and members shall be elected biennially by the Section members at the Annual Meeting of the Section. A majority of the votes cast on a particular office shall be required for election to that office.

Section 3

All terms of office herein specified shall begin at the close of the Annual Meeting at which the election takes place, and shall end two years hence at the close of the next Annual Meeting.

Article V — Duties of Officers

Section 1 — Chairman

The Chairman, or Vice-Chairman in the absence of the Chairman, shall preside at all meetings of the Section, and of the Council. He or she shall formulate and present annually to the Canadian Association of Optometrists a report of the work of the Section for the current closing year. He or she shall appoint the Chairman of any committees within the Section who are to hold office during his or her term as Chairman. He or she shall plan and superintend the program of the Section at the Biennial Congress of the Canadian Association of Optometrists during his or her term, subject to the directions and approval of the Section Council. He or she shall superintend the performance of all activities of the Section. He or she shall keep the Council fully informed and carry out its decisions. He or she shall perform such other duties and acts that usually pertain to his or her office or as may be designated by the Council.

Section 2 — Vice-Chairman

Upon the death, resignation or during the disability of the Chairman, or upon refusal to act, the Vice-Chairman shall perform the duties of the Chairman for the remainder of his or her term or disability, as the case may be. The Vice-Chairman shall aid the Chairman in the performance of his or her responsibilities in such a manner and to extent as he or she may request.

Section 3 — Secretary

The Secretary shall be the custodian of all books, papers, documents and other property of the Section, with the exception of Section monies. He or she shall keep a true record of the proceedings of all meetings of the Section and of the Council, whether assembled or acting under submission. With the Chairman, he or she shall prepare a summary or digest of the proceedings of the Section for its Annual Meeting for publication in an Annual Report. He or she, in conjunction with the Chairman as authorized by Council, shall attend generally to the business of the Section. He or she is to keep an accurate record of all monies appropriated by and expended for the use of the Section.

Article VI — Duties and Powers of the Council

Section 1

The Council shall have general supervision and control of the affairs of the Section subject to the provisions of the Constitution and Bylaws of the Canadian Association of Optometrists and the Bylaws of the Section. It shall especially authorize all commitments and contracts which shall entail the payment of money and so authorize the expenditure of all monies appropriated for the use of the Section. It shall not, however, authorize commitments or contracts which shall entail the payment or more money during any fiscal year than the amount which shall have been previously appropriated by the Section for said fiscal year. The Council may further authorize the Chairman at the beginning of his term to appoint an Executive Committee with the approval of the Council to act in instances when time will not permit the calling of a meeting of the Council. Action by the Executive Committee shall be reported to the Council.

Section 2

The Council may authorize the Chairman to appoint committees from Section membership to perform such duties and exercise its powers as the Council may direct, subject to the limitations of these Bylaws and the Constitution and Bylaws of the Canadian Association of Optometrists.

Section 3

The Council, during the interim between Annual Meetings of the Section, may fill vacancies in its own membership or in the office of the Secretary, or in the event of a vacancy in all the offices of Chairman and Vice-Chairman. Members of the Council and all officers so selected shall serve until the close of the next Annual Meeting of the Section. In the event of a vacancy in the office of the Section delegate, the Council shall select a successor.

Section 4

A majority of the Council shall constitute a quorum for the transaction of the business. All binding actions of the Council shall be by the majority vote of the members present.

Section 5

The Council of the Section, during the interim between meetings of the Section, shall have full power to do and perform all acts and functions which the Section itself might do or perform, not inconsistent with any action taken by this Section. Any such action taken by the Council shall be reported to the Section at its next meeting.

Article VII — Meetings

Section 1

The Section shall hold business meetings annually at the place and time so designated by the Council of the Section.

Section 2

Every two years the annual meeting of the Section will be

SECTIONS

held in conjunction with the Biennial Congress of the Canadian Association of Optometrists.

Section 3

Special meetings of the Section may be called by the Chairman upon approval of the Council, at such time and place as the Council may determine.

Section 4

The members of the Section present at any meeting shall constitute a quorum for the transaction of business.

Section 5

All binding action of the Section shall be by a majority vote of the members present. Each member of the Section who is not a student member of the Canadian Association of Optometrists shall be entitled to vote on any matter coming before the Section. Those members of the Section who are student members of the Canadian Association of Optometrists shall be considered as a group for purposes of voting and therefore entitled to one vote on any matter coming before the Section.

Section 6

Except as may otherwise be required by the Constitution or Bylaws of the Canadian Association of Optometrists or of this Section, all meetings shall be governed by the parliamentary and usages contained in the then current edition of Beauchesne's Parliamentary Rules and Forms.

Article VIII — Miscellaneous Provisions

Section 1

The fiscal year of the Section shall be the same as that of the Canadian Association of Optometrists.

Section 2

All bills incurred by the Section, before being forwarded to the office of the Canadian Association of Optometrists for payment, shall be approved by the Chairman or the Secretary, or both if so directed by Council.

Section 3

No salary or compensation shall be paid to any officer, council member, or member of a committee.

Section 4

Any action of this Section must be approved by the Canadian Association of Optometrists before the same becomes effective as the action of the Canadian Association of Optometrists. Any resolutions adopted by the Section shall be reported by the Chairman of the Section to the Council of the Canadian Association of Optometrists for the Association's approval and recommendation.

Section 5

These Bylaws shall become effective upon approval thereof by the Council of the Canadian Association of Optometrists.

Section 6

All printing for this Section or for the Council or any committee of the Section shall be done under the supervision of the headquarters office of the Canadian Association of Optometrists.

Article IX — Amendments

Section 1

These Bylaws may be amended at any Annual Meeting of the Section by a majority vote of the members of the Section present and voting, provided such proposed amendment shall first have been approved by a majority of the Council and providing further that no amendment so adopted shall become effective until approved by the Council of the Canadian Association of Optometrists.

2. Voluntary Optometric Services

Council also agreed with a second submission which stated:

There is a need to provide the means whereby optometrists interested in opportunities to assist and participate in voluntary projects have access to information and encouragement to become involved in such programs.

Optometrists may give of their time, expertise, experience, management, training, equipment, instrumentation or whatever resources they may have access to or may wish to contribute.

What follows is the approved purpose and proposed By-laws for the Voluntary Optometric Services Section of CAO:

Purpose

1. To encourage and develop vision care programs, particularly in the Third World, for the needy, underpriviledged and to those who otherwise would not have access to nor could afford vision care services.
2. To establish a network of personnel with expertise in all related areas of eye care. This Section recognizes the interdependence of all the related eye care professions in helping to deliver such needed services.
3. To initiate appropriate communication, public relations, educational materials and programs to assist the public in becoming more aware and understanding of the demand for vision care services to the underpriviledged.
4. To enhance the quality of life, increase self-sufficiency and the broadening of education through the promotion of proper vision care to the needy and disadvantaged.
5. To support private businesses and community service organizations where projects are considered to have viable potential and significant benefit to the objectives and purposes of this Section.
6. To encourage and solicit funding from private, corporate and government sectors, in an effort to assist existing and proposed future voluntary vision care projects.

Proposed Initial By-laws

1. Membership

Membership shall be open to all optometrists who are members in good standing with the CAO. Unless otherwise specified, each member of the Section shall pay to the CAO annual Section dues of $25.00.

2. Officers and Executive Committee

i) The Officers of this Section shall consist of a Chairman, Vice-Chairman and Secretary-Treasurer.

SECTIONS

ii) The Executive Committee shall consist of the Chairman, Vice-Chairman, Secretary-Treasurer, and the last retiring Chairman, together with two other members elected by the Section.
iii) Officers and Executive Committee members shall be elected every two years coinciding with the CAO Biennial Congress by the members of the Section who are present.
iv) Activities undertaken on behalf of this Section must have the approval of the Executive Committee of this Section.
v) Initial by-laws regarding this Section may be formulated and amended by a majority vote of the members. Proposed by-laws in future may be ratified accordingly at the meeting of the Section at the CAO Biennial Congress.

3. Aviation Vision

Aviation Vision, Council agreed, is every bit as specialized an interest as its proposed By-laws would seem to indicate. Prior to approving the establishment of a Section on Aviation Vision, Council requested that a redraft of the proposed membership criteria be undertaken so as to allow for membership by those optometrists who, though perhaps lacking in the full background of information required for examining pilots, may still join so as to add to their professional qualifications through membership in this particular Section.

The creation of this Section was approved subject to a revision of the membership criteria and it is expected that this will have been completed in the Fall. The full By-laws will therefore appear in the Winter issue of *The Canadian Journal of Optometry.*

Special Note: Elsewhere in this issue is a boxed announcement advising of a meeting, being held in Toronto in conjunction with the American Academy of Optometry meeting in December, for optometrists interested in the **Aviation Vision** specialty. Members interested are invited to contact meeting organizer Dr. Lorne Hart at the address in the announcement.

The following application form is designed for those members of CAO who wish to apply for membership in any of the currently approved Sections of the Association. Elsewhere in this issue is a Section status update.

Please ensure that the completed form (i) clearly identifies the Section for which you wish to apply (If for more than one Section, please use a separate form for each); (ii) fulfills the terms for membership in the Section.

If you wish information about any of the approved Sections of the Canadian Association of Optometrists, please contact the national Association.

.....

The Canadian Association of Optometrists
— Application for Section Membership —

I would like to apply for membership in CAO's _____ Section
(Approved Sections as at October '86: Children's Vision; Sports Vision; Contact Lenses; Low Vision; Voluntary Services)

NAME _____

MAILING ADDRESS: _____

_____

_____

Postal Code **Telephone**

I am a member of the Canadian Association of Optometrists.

(If an application fee is required by the Section for which you are applying as indicated in the Terms of Reference, please ensure that it is enclosed with your completed form).

Return this form to CAO.

_____ _____

(Signed) **(Date)**

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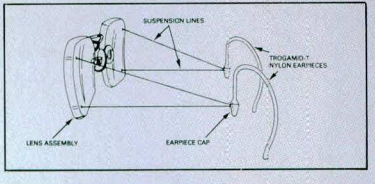

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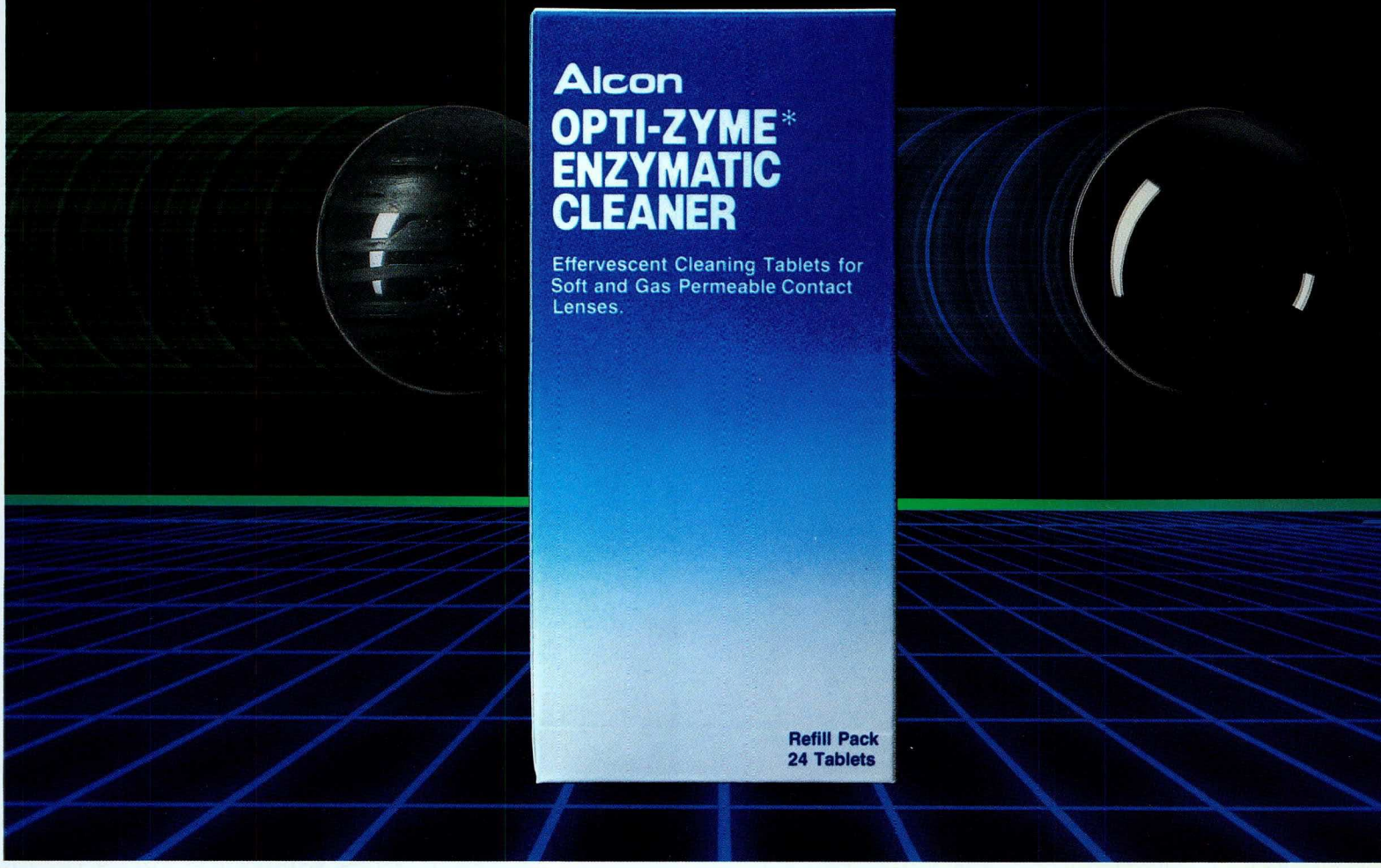

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That's why we're asking you to please insert this one simple sentence in your will: "I give to the Canadian Cancer Society the sum of _____ dollars."

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The magic word is 'you.' If you're willing, together we can beat it.

Canadian Cancer Society

CAN CANCER BE BEATEN? YOU BET YOUR LIFE IT CAN.

LETTERS/COURRIER

Editor, CJO

I am writing in response to an article in the 'Communiqué' section of the *Canadian Journal of Optometry* of June 1986 concerning the recent study that Schema Research conducted with Optometrists, and to clarify for you and your members some misapprehensions.

As the covering letter indicated, Schema Research is a market research company well known and respected in health care marketing circles and adheres to the Code of Ethics established by the Professional Marketing Research Society (PMRS). Schema Research conducts many surveys with health care professionals (physicians, dentists, opticians, etc.), providing data which is of use to companies in the health care field.

In regard to your comments about the recent Optometrists study, Schema Research did not 'wrongly suggest CAO endorsement.' The covering letter clearly states that the optometric associations had been informed, which is true. In addition to *informing* each association of the study, we also offered to provide them information that would be useful. A report was subsequently sent to each provincial association, other than Quebec.

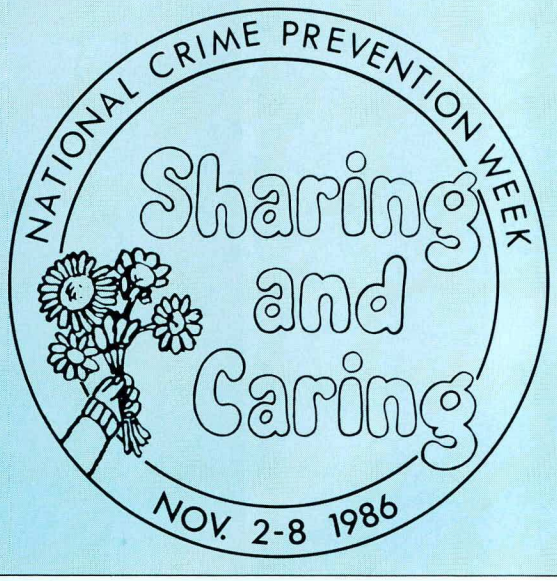
It is true that the CAO had contacted me requesting a copy of the study. It is available to the CAO, as it is to all manufacturers of contact lenses and lens care solutions, and provides valuable information on the use of these products.

Schema Research will be conducting the study twice yearly and will be complementing data from Optometrists with data from Ophthalmologists and Opticians.

I would also be pleased to answer any questions that you or your members may have.

With best wishes,
Yours sincerely,
Philip Harrison

President, Schema Research Ltd.
2 Sheppard Avenue East
Suite 604
Willowdale, ON
M2N 5Y7
(416) 229-6440



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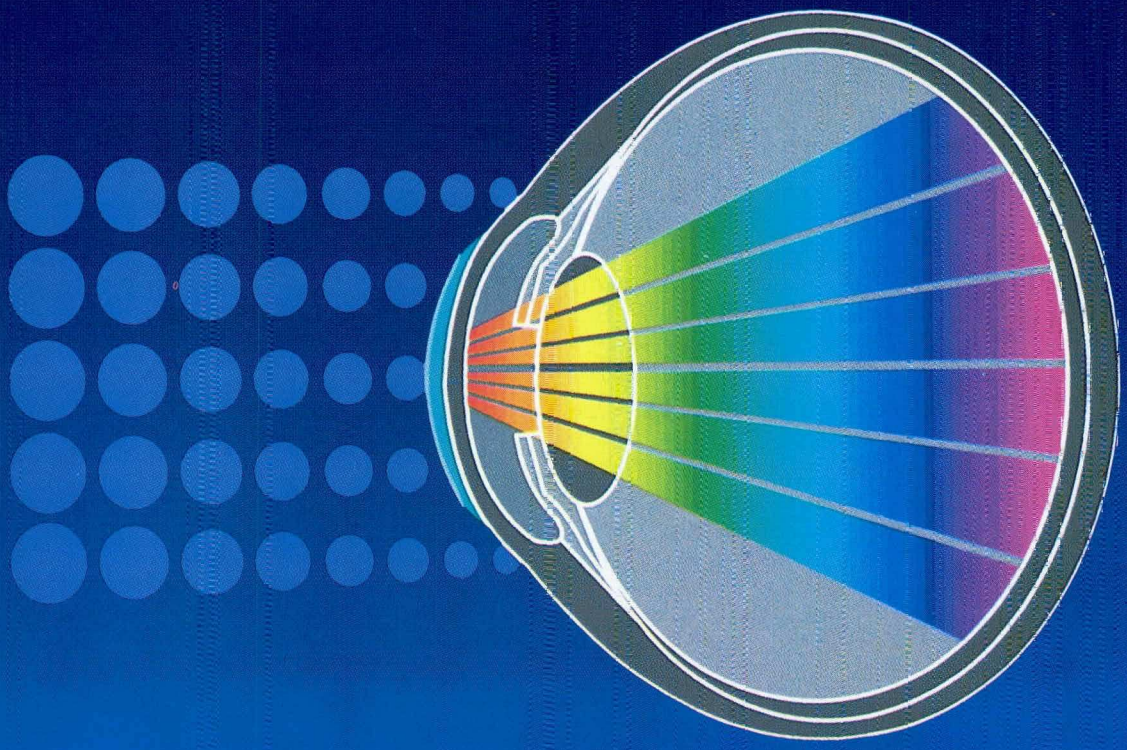

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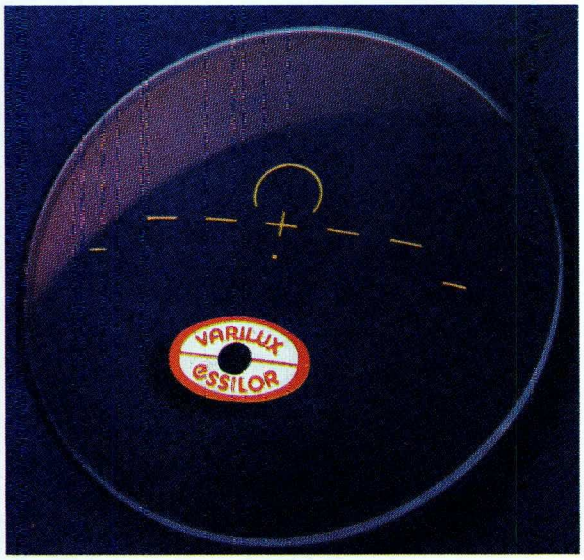

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Aviation Vision Section to Meet in December

In conjunction with the meetings of the American Academy of Optometry in Toronto in December at the Harbour Castle Hilton, a meeting of optometrists either in, or interested in joining, CAO's newly formed Section on Aviation Vision, will be held as follows:

Friday, December 12, 1986
Pier 4 Room
Harbour Castle Hilton Hotel
Toronto, Ontario

Optometrists who wish any preliminary information about either this meeting or the CAO Aviation Section are invited to contact directly:

Lorne G. Hart, OD, FAAO
Optometrist
444 Beaconsfield Blvd.
Beaconsfield, PQ
H9W 4C1
Tel. (514) 695-1461

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Executive Director
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In our last issue, the telephone number printed for Reichert-Jung Scientific Instruments in their advertisement was incorrect. The correct telephone number is as follows:

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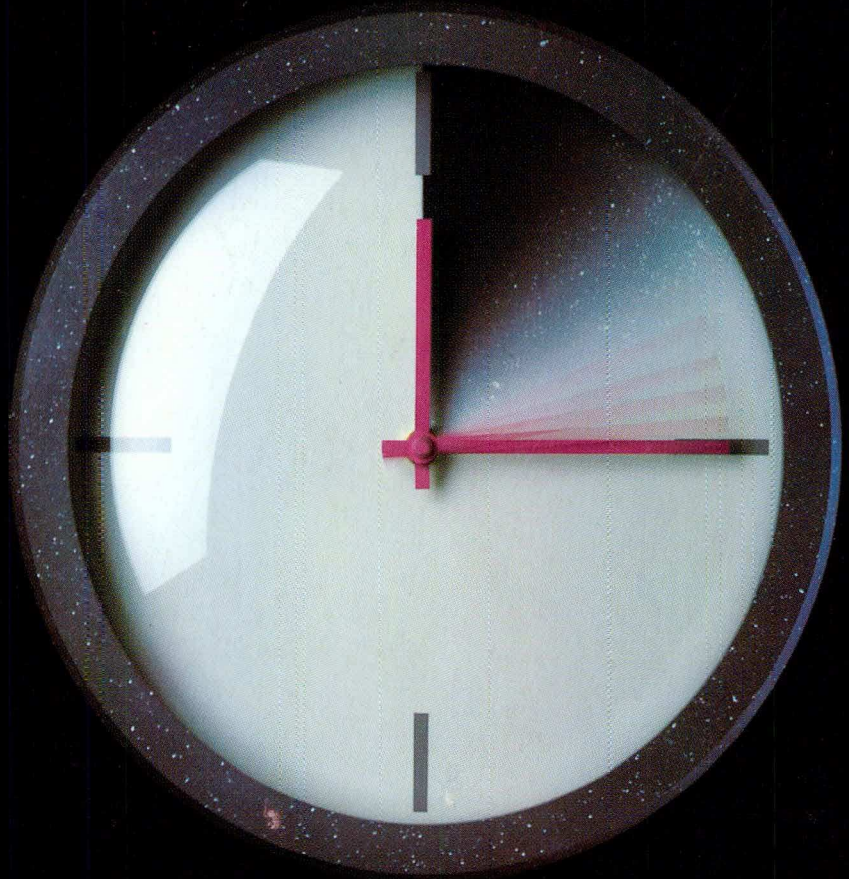

ONE STEP CONVENIENCE

☐ **EFFECTIVE PROTEIN REMOVAL**
ULTRAZYME is a unique naturally derived enzyme (Subtilisin-A) that effectively removes protein deposits from all soft contact lenses including high water and extended wear.

☐ **ULTRAZYME IS SAFE**
ULTRAZYME has a large molecular structure with unique non-binding properties. This formulation is non-irritating, providing safe, comfortable lens wear, even when lenses are soaked overnight.

☐ **ULTRAZYME IS CONVENIENT**
ULTRAZYME is a one-tablet system which simplifies the lens care regimen. A single tablet used weekly for 15 minutes will remove protein deposits from two lenses.

☐ **A SIMPLE COMBINATION**
Unique ULTRAZYME and Oxysept 1* work together synergistically. The result of this combination is improved protein removal and disinfection.

*ULTRAZYME can be used with all hydrogen peroxide systems with the exception of AOsept.

ALLERGAN
SCIENCE WITH VISION