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1996 Welcome from the Director

I have often commented on the rapid rate of change our society is experiencing, especially with respect to science and technology. Change by itself is neither good nor bad. We can all think of many positive developments that have improved the quality of the lives we lead but we can also point to many negative developments that threaten the very lives and futures we are striving to enhance.

The close of the second millennium is only four years away. Indeed, it is startling to realize that the class of new students who are beginning to study optometry this fall are the class of the year 2000! We live in a period of considerable uncertainty. The economic and political order that we were used to has become such less stable. The recent Quebec referendum has taught us that the political future of Canada, as we know it, is at best uncertain. Fundamental elements of Canadian society such as our health care system are undergoing serious erosion. The future of the Canada pension plan is a matter of debate. Jobs and economic growth can no longer be taken for granted. In fact, even the professions which were once guarantees of a secure future have become much less secure.

While the future is somewhat uncertain for all of us, it is considerably less so where optometry is concerned. In spite of budget cuts, hospital restructuring and improved efficiency in health care delivery, the need for optometric services will continue to increase as the population ages. Our society has moved from the Industrial Age into the Information Age, with its related emphasis on communication and reading skills. In addition, the current emphasis on cost effectiveness in health care as well as the need for geographic uniformity in health care delivery has meant that the scope of practise of optometry is expanding. In short, the future is a bright one for the class of the year 2000. As the new academic year begins it is a pleasure to welcome new students and returning students to the School.

-Dr. J. Sivak
We Welcome Two New Faculty Members to Join the School of Optometry

Dr. William Baldridge received a Ph.D. in the Faculty of Health Science, McMaster University. He has held two post-doctoral positions: one in the Department of Physiology and Pharmacology, University of Queensland, and the other in the Department of Medical Physiology, University of Calgary. The biomedical emphasis of Dr. Baldridge's research and teaching experience will strengthen the School's teaching and research programmes in an area of increasing importance to the profession of optometry.

Dr. Elizabeth Irving completed O.D., M.Sc. and Ph.D. degrees in Vision Science at the University of Waterloo. For the past three years, Elizabeth has been engaged in a new field of independent research as a post-doctoral fellow in the Department of Ophthalmology, University of Toronto. Dr. Irving will contribute to both the clinical and didactic programmes in Optometry as well as to the vision science activities of the School.

Vision Research Symposium - June 7, 1996

I am pleased to be able to add my own welcome to a symposium for the sharing of research results and trends. As someone has said, research is to teaching as sin is to confession: if you don't engage in the one you'll have little to talk about in the other. Well, in the area of vision research there is much to talk about these days, and the University of Waterloo is proud of its own researchers who are making contributions to this acutely important field, and is honoured to have distinguished scholars from other institutions and countries collaborating in that research and participating in this symposium.

There are many tributaries that run into the river of applied creativity which flows through the life and work of a university. One of the most important is the support provided by alumni and friends, both individual and corporate. In this regard Campaign Waterloo, which began in 1992 and continues, has been a major watershed for the University of Waterloo. While, as in all campaigns, the flow has been uneven, hardly an area of our institutional life has not in some way been irrigated by it. New facilities have been built, new faculty have been hired, new centres have been created, new scholarships established, new research undertaken, new courses introduced. At a time of seismic retrenchment, Campaign Waterloo has allowed us to expand our horizons in a number of important areas.

This has been of more than obvious importance. Waterloo has developed a culture and, by now, a reputation for innovation, of taking roads less travelled and turning the ensuing adventure to advantage. We did this with co-op education, we did it with distance education, we did it with computers and technology transfer, we did it with the environment and applied health sciences, we did it with accounting and architecture, we did it with optometry. And as you can see from your surroundings, and will have demonstrated at today's symposium, we continue to do it with optometry, notwithstanding the fiscal vicissitudes that bedevil our corporate life these days.
Though not everyone thought so at the time, the match between Optometry and the University of Waterloo was a good and natural one. In every important dimension of the University's mission and character Optometry has contributed to Waterloo's success: through the School's innovative curriculum, through the superior quality of its students, through the professional achievements and personal loyalty of its alumni, through its groundbreaking vision research, though the contributions of its faculty and staff to the collegial life of the University, and through the School's exemplary clinical outreach programme which now brings 30,000 patients to the campus each year.

Like so much else that Waterloo has accomplished, the new facilities in which this conference is being held are the product of partnership—a partnership in the first place with the governments of Canada and Ontario who have funded our development as both a teaching and a research institution, and who permitted us to participate in an infrastructure renewal programme which provided two thirds of the capital funds for three major projects on this campus; second, a partnership with the School's alumni and friends, whose generous support enabled the University to meet its own one-third of this project's cost. Included among our partners too have been the Ontario Association of Optometrists and the College of Optometrists of Ontario as well as we a number of optical companies—Alcon Canada, Allergan, Bausch & Lomb, CIBA Vision, and Vistakon.

May I say somewhat parenthetically what a relief it is to be at a conference on vision where what is being talked about is indeed vision. "Vision" was once a powerful metaphor for an elevated experience by which exceptional people saw into the meaning of things, people like Isaiah the prophet, John of Patmos, William Blake, Martin Luther King. Now, everybody above the level of deckhand is expected to have visions. "What is your vision for University, for the faculty, for the department, for the office, for the closet at the end of the hallway?" we ask each other, as though life was one mountaintop experience after another.

Perhaps optometrists, who have a professional interest in protecting the integrity of the word, should consider taking a class action against this abuse of a once powerful metaphor. At the very least I know you will lead us to a deeper understanding of how to protect and enhance the most precious of our human senses. Finally, in welcoming you to this symposium, I should like to commend the Dean of Science, Dr. John Thompson, The School's Director, Dr. Jake Sivak, the moderators and organizers of this symposium, and the highly professional and hard-working faculty, staff and students who together are building here a School of Optometry of which the profession and the University are justifiably proud.

-James Downey, President

News Flashes

Congratulations!

Friends of Professor E. J. (Ted) Fisher and his wife Eleanor will be pleased to join us in congratulating them as they celebrate their 60th wedding anniversary on September 28, 1996. All
graduates, colleagues, and staff wish Prof. Fisher and Mrs. Fisher many more years of happiness and send our warmest regards.

Professor Fisher and Mrs. Fisher were married in Lindsay, Ontario on September 28, 1936. The same year they became associated with the College of Optometry in Toronto. In 1967, the College became the School of Optometry at the University of Waterloo. Professor Fisher is regarded by many as the Father of Optometry; he was the Dean of the School of Optometry for 28 years. Countless students were invited for fine Thanksgiving and Christmas dinners at their home as well as for many other social occasions.

A Tribute to Retiring Editor

On June 30th, 1996, Dr. William M. Lyle retired as Editor of Optometry and Vision Science. It is a tribute to Dr. Lyle that throughout his seventeen year term as Editor, the Academy Journal was always published regularly and on time.

Dr. Lyle was honoured by the School of Optometry at a cake and coffee party during which Dr. T. David Williams, Associate Editor, presented him with a copy of the initial volume that Dr. Lyle edited. We all wish Dr. Lyle the very best in his future activities, and we extend our sincere thanks to him for his time and expertise in editing the Academy Journal.

Stella Ruza, Editorial Assistant

Right to left: Prof. A.P. Cullen, President, AAO; Prof. E. J. Fisher, Past-President, AAO; Stella Ruza, Editorial Assistant; Prof. T. David Williams, Associate Editor; Prof. W. M. Lyle, Editor, Optom Vis Sci; Jitka Dvoracek, Baiba (Gomes) Turner, Bibliographical Editors; Patti Metzger, Joanna Hughes, Lori Campbell, Editorial Assistants.

New Graduates

Convocation for the Faculty of Science was held the following day in the Physical Activities Complex. Fifty nine optometry students convocated as well as three students from our M.Sc. programme in Vision Science. Optometrists run in this family, graduand Lisa Skaff (left) beside father Solomon Skaff, FBCO and sister Amanda Skaff, MBCO, MSc (Waterloo) who hopes to be convocating from the O.D. programme next May.

Distinguished Teaching Award

The graduation awards were held Thursday, May 23rd at the School of Optometry for this year's graduating class. Addresses were given by Dr. J. Sivak, Director, Dr. C. Beaulne, Universit, of Montreal, and Dr. B. Coward, Canadian Association of Optometrists. Dr. Marlee Spafford received her Distinguished Teaching Award from the class president Nadia Miani.
Retirements

A retirement barbecue was held June 17, 1996 in honour of three faculty members and one staff member who have retired over the summer. Two centuries ago Samuel Johnson said that you shouldn't retire from the world until the world will be sorry that you retire.

From left: Dave Buck, Maureen Fitzgerald, Murchison Callender, Ross Beauchamp.

Dave Buck has been a full-time faculty member with the School for 20 years. He graduated in the famous "small" class of 1961 from the College of Optometry and then spent a year operating a Red Cross Mobile Eye Clinic. From 1962-1976 Dave practised in Woodstock in association with A.W. Cole, a Woodstock optometrist who served on a number of optometric organizations in Ontario and who was involved in the developments that led to the School's move to Waterloo in 1967. Dave's devotion to the smooth operation of the clinic is legend.

Maureen Fitzgerald was a member of the clinic staff for over 10 years. In fact, she was employed in the optometry clinic on a temporary basis before she was appointed to a full-time job. Over the years she occupied a variety of positions including those of; Cashier, Accounts receivable, Appointments desk and Accounting System Supervisor.

Murchison Callender became a full-time member of faculty in 1968, after he graduated from optometry. His class was the first to graduate from Waterloo because the last year of his programme was spent in Waterloo. During his career, Murch made many contributions to the School and the University, but his most enduring contribution has been in the development of a clinical and didactic teaching programme dealing with contact lenses, as well as in the initiation of research in this field. Murchison's particular interest has been and continues to be in the transition of scientific knowledge from fundamental theory to clinical practice.

Ross Beauchamp came here in 1971, 25 years ago, after completing a Ph.D. at Brown University under Lorne Riggs, one of the leading vision scientists of the 1960's and 70's and after an NIH post-doctoral fellowship with another well known scientist, Nigel Dew. Ross was the first faculty member in optometry to receive research funding from MRC. After 15 years of very active basic research on the topic of colour vision, Ross changed direction to a more clinical direction and became interested in the diagnosis and treatment of various brain disorders, as they relate to various visual functions, such as reading.

Faculty Activities

Academy President Anthony Cullen, O.D., Ph.D., FCOptom, FAAO, was appointed chair of the Education Committee at the recent meeting of the World Council of Optometry (WCO), held in Munich, Germany from 3rd to 5th of June, 1996.

Professor George Woo (who has been Asia Pacific Council of Optometry's China Liaison since 1993) took a leave of absence from the School of Optometry, University of Waterloo beginning October 1995. Recently he was appointed an Honourary Professor by the Hong Kong
Polytechnic University. He was recently reappointed a Visiting Professor of Ophthalmology by China's Sun Yat-sen University of Medical Sciences. In this latter capacity, Dr. Woo taught a course on Visual Optics, Refraction, and Contact Lenses from October 1 to December 27, 1995. In attendance were professors, ophthalmologists, residents in training and refractionists from many different parts of China. The lecture was in Mandarin. In addition to Professor Woo's usual presentation, Dr. Stanley Woo, Assistant Professor of Optometry at the University of Houston, delivered a guest lecture in English on the latest development of Eccentric Viewing and Age Related Maculopathy.

Professor George Woo was invited to speak at the 7th National Meeting of Amblyopia, Strabismus, and Paediatric Ophthalmology held in April 1996 in Chonqing, China.

**The Eye Care Centre**

A number of changes have been made to our clinic during the past few months. First and foremost is a change of the clinic's name; patient care activities, and clinical teaching now take place in The Eye Care Centre at the University of Waterloo, School of Optometry. This new designation will give the Centre a stronger identity within the university community and will contribute to maintaining a solid patient base for our students. New signs and accompanying promotional material, including posters and brochures, are in preparation.

With their move to the new building addition, the facilities formerly occupied by the Contact Lens Research have been returned to the Eye Care Centre and currently house the Binocular Vision, Aniseikonia, and Sports Vision clinics. This suite of rooms provides an ideal facility for these services.

The Eye Care Centre now offers convenient parking for patients with disabilities. The entrance driveway loop allows for handicap parking spaces, and short-term metered parking spaces. This addition, along with the automated entrance doors, have greatly improved the building accessibility for patients with special needs.

In addition to the easier access to the building, we have extended the hours of operation for The Eye Care Centre. We now offer evening hours on Tuesdays and Thursdays in the Primary Care and Contact Lens clinics with support from the Spectacle Dispensary. Our final year interns will gain added patient care experience while our patients receive a more convenient service.

As a part of university downsizing, faculty and staff retirements have had their impact on The Eye Care Centre. Dr. Dave Buck, after many years of dedicated service to the School and the Centre has taken early retirement. Dave has served in many capacities in the School including Clinic Director and (in recent years) as Head of Primary Care Services. We will miss Dave's enthusiasm and daily commitment to our students. The good news is that Dave will be continuing as a part-time clinician so his presence will continue to be felt.

Mrs. Maureen Fitzgerald also took early retirement. Maureen has been with the clinic for many years and her skills as a staff supervisor will be missed.
After a hiatus of several years, we have once again initiated a one year residency programme. Dr. Carolyn Acorn, a 1996 UW graduate, has begun her residency in Low Vision and Optometric Gerontology. We wish Dr. Acorn well and hope that this programme will continue to develop and expand in future years.

-Rodger Pace

Obituary

Clair Winston Bobier, O.D., M.Sc.

Professor Emeritus of the School of Optometry, University of Waterloo

Professor Emeritus Clair W. Bobier died suddenly at his home on August 29th, 1996.

Clair began his teaching career in one room country schools, then in The College of Optometry. He was the first Canadian Optometrist to earn a graduate degree in the Science of Vision. He studied under Glenn Fry at The Ohio State University, graduating in 1956.

Before the College of Optometry became the School of Optometry, University of Waterloo in 1967 numerous briefs and reports had to be prepared. Dr. Bobier did much of this work.

Once the School was established, Dr. Bobier not only carried a heavy teaching load but assumed the responsibility for coordinating the construction of the new building which opened in 1974. Clair retired in 1982.

He is remembered for his pervasive influence on generations of optometrists and on his colleagues, friends and family.

World Wide Web News

Medline is free on the Web!: Medline, produced by the U.S. National Library of Medicine, is an index to medical journal articles published from 1966 to the present. You can now search Medline at two Web sites, via the UW Optometry Electronic Library page: http://www.lib.uwaterloo.ca/discipline/opt/journals.html

UW's liaison librarian for Optometry, Carol Stephenson, points out that although there is currently no fee for using Medline at either site, there may be limitations to access in the future. The sites have different search interfaces. For a simple, fast search, Ms. Stephenson recommends the Healthgate site. The Johns Hopkins site works well for searches using Medical Subject Headings.

Other useful Web sites for optometrists: On the UW Optometry Electronic Library page (http://www.lib.uwaterloo.ca/discipline/opt), Ms. Stephenson provides links to many other Web sites of potential interest to optometrists. The links are organized under such headings as
"Teaching, professional, patient resources," "Electronic books and publishers" "Electronic journals, newsletters and indexes: MEDLINE," "Optometry Schools" "Electronic discussion groups" "Internet search tools," etc. As she finds new sites of interest, she adds links from this page.

The UW Optometry Electronic Library page could become your favorite starting point for finding information on the Web.

School of Optometry Hosts Symposium

On Friday, June 7, 1996, the School hosted a symposium to commemorate the addition of a new wing to its existing building. Visitors from across Canada and the northern United States, as well as a large representation of faculty and graduate students from the School, were in attendance. Presentations throughout the day highlighted some very innovative and advanced research by scientists from around the world as well as by our own faculty.

The day began with an address from Dr. James Downey, President of the University. He emphasized the respect that the School enjoys both on and off campus. Technology and how it helps to enhance patient care was the theme for the morning session, which was moderated by Dr. Bill Bobier. Speakers included Drs. Melanie Campbell, John Flanagan, Trefford Simpson, Jeffery Hovis, and Graham Strong from the UW School of Optometry and John Lovasik from the Universit', de Montr'al. After lunch Dr. Desmond Fonn moderated the afternoon session centred around the theme of refractive error, environment and vision correction. Dr. Raymond Applegate from the University of Texas Health Center at San Antonio began the session and was followed by Drs. Anthony Cullen and Jacob Sivak from UW School of Optometry, Donald Mutti from University of California, Berkeley, and Raymond Stein from the Beacon Eye Institute in Toronto.

The third annual "Woodruff Lecture" was given by Dr. Brien Holden. Professor Holden is the founder and director of the Cornea and Contact Lens Research Unit and the Cooperative Research Centre for Eye Research & Technology at the School of Optometry, University of New South Wales in Sydney, Australia. This annual award lecture to honour the significant contributions made by Dr. Emerson Woodruff is normally part of our Continuing Education programme. It attracted a number of registrants who were also in attendance the following two days.

A closing address by Dr. John Thompson, Dean of the Faculty of Science, was followed by a wine and cheese reception. All attendees were invited to tour the new facility. Tours were conducted through various research laboratories which included the Centre for Contact Lens Research which is a principal occupant of the new addition. Research posters were also on display throughout the building.

The symposium was deemed a success by all who participated and provided a perfect opportunity to acknowledge the following sponsors who made the building of the new wing a reality:
Canadian Association of Optometry Students (CAOS)

The 1996-97 school year promises to be a busy one for CAOS at the University of Waterloo. Plans for the new school year have been ongoing during the summer. One of our first events of the year will be the Pizza and Pins Mentor Bowling Tournament on Sunday, October 6, 1996. Thanks to the generous sponsorship of this event by the Ontario Association of Optometrists and the School of Optometry, University of Waterloo, we are once again able to offer this event free to both mentors and students. All optometrists within a one hour driving radius of Kitchener-Waterloo are invited to participate in the CAOS Mentor Program. Optometrists are matched up with a small group of four to five students in all years of Optometry and are encouraged to meet the students at the Mentor Bowling Tournament as an initial meeting. The mentors volunteer to help and advise the students when needed. Past mentor involvement has included student visits to the office. Please contact us if you are interested in becoming a Mentor.

Another important event is the Provincial Associations Forum to be held on Friday, October 25, 1996. The Presidents and Executive Directors of each Provincial Association are invited to the School of Optometry to speak to the students about the state of Optometry in their respective province. This annual event is always an informative and enjoyable evening for all who attend.

We are currently updating information for The Canadian Handbook of Optometry. The Handbook includes comprehensive information about the demographics, scope of practice, fee schedules, regulatory guidelines and requirements in every province of Canada. It is an excellent reference source for both students and optometrists. The Handbook can be ordered for $8.00 for members and $12.00 for non-members (plus mailing charges).

CAOS now has a Homepage on the Internet. Thanks to KC Mowbray, our Homepage Designer, the page is up and running. Check it out at [http://www.optometry.uwaterloo.ca/~caos/](http://www.optometry.uwaterloo.ca/~caos/)

Please do not hesitate to contact us if you have any questions or suggestions. Contact: Valeria Kao, CAOS, School of Optometry, University of Waterloo, Waterloo, ON, N2L 3G1, 519-885-1211 x5300, caos@sciborg.uwaterloo.ca, [http://www.optometry.uwaterloo.ca/~caos/](http://www.optometry.uwaterloo.ca/~caos/)

-Valeria Kao, President, CAOS, UW
• **Werner K. Adrian**  

• **William H. Baldridge**  
  Use of microelectrode electrophysiology and optical imaging to study synaptic connections between neurons in the vertebrate retina. The goal of this work is to understand how the retina processes visual information so that it is interpretable by the brain.

• **Ross D. Beauchamp**  
  Visual and perceptual disorders in brain-damaged and stroke patients.

• **William R. Bobier**  
  Vision of infants and children. Basic research concerning the development of refractive, sensory, and motor systems of vision. Clinical research concerning procedures, such as vision screening and instrumentation such as photorefraction to identify problems in the development of visual systems. Current projects are: accommodative and vergence functions in infants and children; design and analysis of preschool vision screening programmes; photorefraction technology.

• **Murchison G.E. Callender**  
  Optical properties and performance of contact lens materials. Corneal physiology and tear fluid composition associated with extended periods of contact lens wear.

• **Melanie C. Campbell**  
  Physiological optics, measurement of image quality on the retina; contributions of the cornea and the crystalline lens to retinal image quality; measurement of refractive index distributions in crystalline lenses and their variation with age; changes in optical quality of the crystalline lens, and eye as a function of accommodative state and age. Confocal scanning laser ophthalmoscopy and microscopy for studying the cornea, lens, and fundus in the normal and diseased eyes. Optimization of image quality through eye models developed from anatomical measurements.

• **B. Ralph Chou**  
  Experimental ocular pathology resulting from optical radiation. Optical properties of ophthalmic lens materials, and ocular media. Environmental and industrial ocular hazards.

• **Anthony P. Cullen**  
  Environmental and occupational hazards to the eye (especially nonionizing radiation including ultraviolet and solar radiation) and protective strategies (with emphasis on the cornea and lens). Other aspects of ocular toxicology, environmental eye disease and surveillance, international optometry and education.

• **David M. Dilts**  
  Teleoptometry, optometric service quality, optometric resource usage optimization, and mathematical analysis of cellular mosaics.

• **Kathryn Dumbleton**  
  Contact lenses ocular response, clinical applications and clinical trials, cornea and tear film.
- **E. J. Fisher**  
  Collection and preservation of early optometric instruments, books, diplomas, spectacles, etc. History of Canadian Optometry.

- **John G. Flanagan**  

- **Desmond Fonn**  
  The ocular response to daily and extended wear of contact lenses. Non invasive in vivo assessment of corneal function. Contact lens materials and designs. The role of the tear film in contact lens wear.

- **M. Furniss**  
  Visual function, quality of life, orientation and mobility in the geriatric population; ocular health; contact lenses.

- **Kenneth D. Hadley**  
  Primary care optometry, optometric education, communications and instrumentation.

- **Jeff K. Hovis**  
  Binocular color mixing; modelling normal and abnormal human color vision; testing for color vision deficiencies, and occupational vision standards.

- **Patricia Hrynchak**  
  Primary care practice, contact lens practice, and low vision practice.

- **Elizabeth Irving**  
  Oculomotor development fixation disparity oculomotor dynamics in strabismus, refractive development, animal models of myopia, environmental adaptations of the age and visual system.

- **Susan J. Leat**  
  Psychophysics: visual acuity and contour interaction, reading and spatial frequency filtering. Low vision: image enhancement for low vision, the outcome of low vision services, visual acuity, contrast sensitivity, reading performance, visual processing skills. Infant vision: stereoacuity in children, acuity testing, hyperopia. Special populations (multiply challenged): accommodation, stereoacuity, vision assessment.

- **William M. Lyle**  
  Headache, migraine, albinism, inheritance of ocular conditions, immunology, arthritis, sexually transmitted disease.

- **Rodger Pace**  
  Vision impairment and low vision, vision and aging.

- **A. D. Plotkin**  
  Low vision assessment and rehabilitation.

- **Arnulf Remole**  

- **Kenneth M. Robertson**  
to visual performance during vocational and avocational activities. Sports vision, visual training.

- **Barbara Robinson**
  Epidemiologic research. Ocular diseases, anomalies and disorders. The study of the incidence, prevalence and risk factors associated with these problems.

- **Trefford L. Simpson**
  Corneal sensitivity related especially to contact lens wear, binocular visual function, especially inhibitory binocular interactions. Monovision. The psychophysics of parallel visual processing. Psychophysical and electrophysiological clinical visual tests.

- **Jacob G. Sivak**
  Comparative anatomy and physiology of the eye with emphasis on refractive components, refractive state and accommodative mechanisms. Chromatic and spherical aberration of the human eye and its application to refractive methodology. Biology of the crystalline lens and cataractogenesis.

- **Barbara Sivak**
  Neuroanatomy ocular anatomy, human physiology, visual control of hand movements, neuropathology, and neuromotor assessment.

- **Gina Sorbara**
  Contact lenses, rigid contact lens design (toric and spherical), corneal topography, and contact lens induced dry eye.

- **Marlee M. Spafford**

- **J. Graham Strong**
  Low vision service delivery models. Low vision assessment and therapy including the non- generic prescribing of high technology low vision aids. Research and development of new assistive device technology for people with low vision. Vision and shooting.

- **Rick Wiggins**
  Vision assessment and treatment plans for children and challenged populations.

- **T. David Williams**
  Application of quantitative methods to assessment of ocular structures (e.g. retinal and optic nerve head topography, vascular tortuosity, pupil responses). Studies of visual field (e.g. effects of aging, congenital anomalies, normal variations in the optic nerve head conformation). Use of closed-circuit television and application of computer digitizing techniques to the above. Depth perception.

- **George C. Woo**