

Convocation Address, University of Western Ontario, June 15, 2010

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Chancellor Thompson, President Chakma, Deans, Chairs and Directors, Ladies and Gentlemen:

It is a great honour for me personally and for Canadian Gerontology to be here today to receive an honorary degree. It is the first time a Canadian gerontologist has been so honoured. In my address this morning, the President asked me to speak to you about Gerontology, my area of expertise, and about the implications of population aging for young people like yourselves who are at the threshold of your professional careers.

Most people know that Canada's population is aging. They have heard that the average age of the population has been steadily increasing since the turn of the 20<sup>th</sup> century and that while persons aged 65 and over currently comprises 13% of the population, by 2010 when the leading edge of the baby boom generation become senior citizens, the proportion will increase to 20%. They and you will have also heard many dire predictions – that the “grey Tsunami “ will swamp the current health care and pension systems and that productivity will plummet. Much of my career has been devoted to dispelling such myths and hyperbole. In 2000, my good friend the late Ellen Gee and I co-edited a book called “*The Overselling of Population Aging: Apocalyptic Demography, Intergenerational Challenges and Policy Issues*”.<sup>1</sup> In it we pointed out that much of what is said is being driven by political agendas rather than being based on fact.

It is important to understand that population aging occurs when two trends coincide: when there is an increase in the number of people living to be old at the same time that there is a decline in the birth rate. The birth rate in Canada currently stands at an all time low - 1.5 children per woman of child-bearing age. Some of us in this audience are old enough to remember when the prophets of doom were predicting that if developing countries didn't adopt strict birth control policies and practices the world would sink from the weight of the babies that would be born. In response, China adopted its one child per family policy -- without thinking about who would be available to provide care when their parents grew old and frail. Today, the birth rate in China – standing at 1.6 per woman of child-bearing age – is high compared to some of its Asian neighbours (e.g. 1.2 in Korea; 1.4 in Japan) and developed countries in Europe such as Spain, Germany and Italy (respectively TFRs of 1.5, 1.3 and 1.4)<sup>2</sup>. Today, people in these<sup>3</sup> and many other countries, including Canada<sup>4</sup>, are wringing their hands over the birth dearth!

What people don't stop to think about is that if there are fewer babies to pay for, there is more money available to care for the older population. The dependency ratio, which is the number of old and young over the number of people of working age, in Canada today, is, in fact, at an all time low. Population aging is good news for young people such as those of you graduating here today and the cohorts that

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<sup>1</sup> Gee, E. & Gutman, G. (2000) (Eds.). *The overselling of population aging: apocalyptic demography, intergenerational challenges and policy issues*. Don Mills, ON: Oxford University Press.

<sup>2</sup> Population Reference Bureau (2010). 2009 World Population Data Sheet

<sup>3</sup> See *Asia Pacific Perspectives: Japan+ Magazine*, Vol.1, No. 6, October, 2003 –whole issue

<sup>4</sup> See A childless culture. *National Post*, Feb. 20, 2006

will follow you over the next few decades. You will have your pick of existing jobs. There will also be unprecedented opportunities for creativity in developing products and services that will appeal to or be needed by the growing older population. Let me give you some examples.

At the end of May over 400 people from 29 countries came to Vancouver to attend the 7<sup>th</sup> World Conference of the International Society for Gerontechnology. The theme of the conference was “Technologies for Health, Quality of Life and Aging-in-place”. Those who attended included computer science specialists, architects, engineers, health and social care providers and social science professionals and people from a number of other disciplines. While some people may think of Gerontechnology as being comprised mainly of wheelchairs and walkers, I can assure you that this new field of research, education and practice is much more broadly defined. It includes robots and 3G telecommunication devices, various types of tele-care and e-health, ranging from remote monitoring of people with acute and chronic health conditions through electronic medical records, to personal health records inscribed on chips the size of a grain of rice and implanted under one’s skin, to sensors embedded in clothing and foot wear. Papers I personally co-authored, that were presented in a session organized and chaired by Dr. Maggie Gibson, an adjunct professor of psychology here at UWO, focused on Personal Emergency Response Systems. You’ve all seen TV commercials about the first generation of these devices – they show an older man or woman who has fallen down or had a heart attack pressing a button on a pendant or bracelet to summon help. Our symposium discussed the use of such devices to alert people in natural and human-originated disaster and emergency situations using second or third generation technology – that gives information and does not just passively receive it ( “reverse alert” systems might be built into cells phones or watches -- something like the Dick Tracy 2-way wrist radios that were science fiction when I was a child).

My interest in seniors and disasters and emergencies dates back to December, 2004. You will recall that when the Tsunami occurred in Indonesia and Thailand the images that were shown on TV around the world were of drowning babies and Scandinavian tourists. I wondered how other vulnerable populations had fared – in particular older persons and handicapped persons. In July 2005, as outgoing President of the International Association of Geriatrics and Gerontology, I convened a Presidential symposium at the World Congress of Gerontology in Rio de Janeiro, Brazil on the topic of seniors and disasters. I invited Dr. Robert Butler, founding director of the US National Institute of Aging to talk about 9/11, a geriatric psychiatrist from Indonesia to speak about the Tsunami and seniors, and the head of a large British charity that for many years has provided humanitarian aid to older persons in disaster situations in developing countries to speak about the response of UN and other international agencies. In that session and subsequently, it became evident that in large measure older persons were invisible when it came to disaster relief. The SPCA were out in New York within a week of 9/11 rounding up and caring for stray animals; it took two weeks before senior shut-ins and handicapped persons were brought the services they needed. The images portrayed, of individuals sitting in their own urine and feces for those two weeks, were not pretty and are forever burned in my brain. Other images burned in my brain are those of older persons left destitute after the Tsunami.

I had invited Margaret Gillis, the new director of the Division of Aging and Seniors, Public Health Agency of Canada, to attend that symposium. I asked what DAS was doing about seniors in Canadian disaster

situations. She responded “interesting question”! I called her again several months later after Hurricane Katrina devastated New Orleans and the Gulf coast of the USA. This time, action resulted because what the statistics from Katrina showed unequivocally was that it was not babies and pregnant women who died, it was old people. They are disproportionately affected in disaster situations.<sup>5</sup>

Since Katrina, the Division of Aging of the Public Health Agency of Canada has spearheaded an international movement to draw attention to the needs of old people in disasters. Subsets of the older persons with physical and/or cognitive impairments have special needs that must be considered when disasters hit. During Katrina, emergency responders thought about diapers for babies, they did not think about the incontinence pads for frail elders.

The heat wave that took place in Europe in the summer of 2003 was another example of a disaster where older people were disproportionately affected. Many living in institutional settings perished because their buildings did not have appropriate air conditioning. Among community dwelling elderly, many deaths occurred because of fear of crime – people were afraid to open doors and windows lest they become victims of home invasions.

With global warming, the reality is that more and more natural disasters will occur. We need to use technology (and everything else at our disposal) to assist vulnerable groups of all ages in such situations – and at all stages of the disaster cycle, not just the beginning stage. For example, in the after math of the Fire Storm – the serious forest fires that occurred in BC in 2003 - it became clear that it was difficult for older people living in rural and remote areas to apply for government assistance to restore their properties. Why? Because most of the forms they needed to fill out were available mainly by internet. If they were not computer literate they were out of luck and had to wait until roads and/or public transportation were restored so that they could get to the nearest urban centre to pick up hard copy of the necessary forms.

Another area in which I work is Environmental Health. I was recently commissioned by Health Canada to undertake a literature review<sup>6</sup> that covered four topics: seniors and biological hazards, seniors and chemical hazards, seniors and radiological hazards and seniors and climate change. These also turned out to be areas where seniors were not on the radar screen.

Most of you will have heard of Legionnaire’s disease - an acute bacterial pneumonia that first came to public attention in 1976 when an outbreak occurred at an American Legion convention in Philadelphia. Did you know that it is caused by a contaminated water supply? I didn’t -- I always thought it was caused by faulty air conditioning. Air conditioners were suspected but in fact the disease has been traced to potable water supply and in one case, in an ICU, to a contaminated ice machine<sup>7</sup>. Colonization of *Legionella* has been reported in water supply of nursing homes and in 6% of private homes of American

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<sup>6</sup> Gutman, G. (2009, December). *Seniors’ environmental health literature review*. Ottawa: Health Canada, Healthy Environments and Consumer Safety Branch.

<sup>7</sup> Graman, P.S., Quinlan, G.A., & Rank, J.A. (1997). Nosocomial legionellosis traced to a contaminated ice machine. *Infection Control and Hospital Epidemiology*, 18(9), 637-640.

Legion members. Lower hot water tank temperature was significantly associated with presence of *L.pneumophila*<sup>8</sup>. Legionnaires' disease may be an important but under recognized cause of pneumonia in long term care facility residents<sup>9</sup>. Persons providing health care to seniors need to ask questions about the safety of the water supply in the facilities they work in.

Similarly, questions need to be asked about the role of environmental hazards with respect to respiratory illness rates among community dwelling elderly. Settled dust has been used in studies to assess exposure to allergens and other biologically active components. In one study, settled dust was vacuumed from five locations in 831 housing units in 75 locations in the USA<sup>10</sup>. Asthma and wheezing were found to be associated with: Lower income, older homes (i.e. homes constructed before 1946), less frequent cleaning (when I learned that I vacuumed like mad for several weeks), having pets and having a smoker in the house. Implications for health care providers and others: Many older people live in older homes<sup>11</sup>, where they may be exposed to dampness and mould. Many also fit the low poverty profile which has implications for the quality of their housing.

Today being June 15 brings me to the final area I would like to draw your attention to. June 15 is World Elder Abuse Awareness Day (WEAAD). The organization that I am currently president of, INPEA – the International Network for Prevention of Elder Abuse, launched WEAAD five years ago. Most of us are aware of the occurrence of child abuse and the need for child protection legislation and services. Movies such as “Sleeping with the Enemy” or “What’s Love Got to do with it?” the latter, the story of Ike and Tina Turner, have drawn attention to spousal abuse. You may not be aware that elder abuse is a universal occurrence. In countries around the world, including those in which the elderly have traditionally been venerated, there are reports of physical abuse of older women and men, psychological abuse, sexual abuse and financial abuse, as well as active and passive neglect. One of the possible outcomes of population aging that worries gerontologists is that elder abuse rates may increase with the increase in numbers of older persons. For far too long people have turned a blind eye to elder abuse, blaming the victims or making excuses for caregivers – such as that in institutional settings they are overworked as a result of chronic under-staffing or, if they are family caregivers, that they are stressed and over-burdened by the demands of caring for a frail elder at the same time as having other

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<sup>8</sup> Stout, J.E., Yu, V.L., Yee, Y.C., Vaccarello, S, Diven, W. & Lee, T.C. (1992). Legionella pneumophila in residential water supplies: environmental surveillance with clinical assessment for Legionnaires' disease. *Epidemiology and Infection*, 109 (1), 49-57.

<sup>9</sup> Seenivasan, M.H., Yu, V.L. & Muder, R.R. (2005). Legionnaires' Disease in long-term care facilities: Overview and proposed solutions. *Journal of the American Geriatrics Society*, 53(5), 875-880.

<sup>10</sup> Elliott, L., Arbes, S.J. Jr., Harvey, E.S., Lee, R.C., Salo, P.M., Cohn, R.D., London, S.J., & Zeldin, G.C. (2007). Dust weight and asthma prevalence in the National Survey of Lead and Allergens in Housing (NSLAH). *Environmental Health Perspectives*, 115(2), 215-220.

<sup>11</sup> A fact sheet currently available on the CMHC website states that it is best to assume that homes built before 1960 contain leaded paint and that lead may have been used in plumbing installed before 1990. The fact sheet indicates that approximately one in four Canadians occupy a home built before 1960. Data from the 2006 census showing housing in need of repair by age of dwelling, suggests that 32% of households headed by a senior were constructed before 1960 (Zamprelli, personal communication)

family responsibilities – i.e. conjuring up the “sandwiched” generation image. However, just as there is no excuse for abuse of children, there is no excuse for abuse of older persons.

Education is one of the most important tools we have to combat elder abuse and neglect. It is also the key to providing appropriate and timely health and social care to that proportion of the elderly that needs it. I am being honoured today for my role in establishing the Gerontology Research Centre and the Gerontology Department at Simon Fraser University (SFU) and for the advocacy role that I have played provincially, nationally and internationally with respect to the need for research and the need for education of all who work with or on behalf of older persons. It has not been an easy role. My first job after getting my PhD was as a part-time lecturer in the Psychology Department at the University of BC. After several years in which I had established courses on aging within my department, and begun to be recognized for my scholarship nationally and internationally, I went to see the dean of my faculty to discuss future full time employment possibilities. His answer was “aging is a flash-in-the pan phenomenon”. That was 1982. The next day I went to SFU -- where I was given a position within Continuing Studies the title of which was Coordinator of Gerontology Programs. My first task was to create the programs I was to coordinate.

The message I want to leave you with today is that you have unparalleled opportunities to be creative in your career trajectories. You are living in an era of massive demographic change -- record low birth rates, increasing numbers and proportion of older persons, migration on an unprecedented scale, climate change. Each of these brings with it opportunities to develop new technologies, to develop new industries, to develop new ways to use existing social and health care systems. You need to take a Determinants of Health Approach – recognizing that health and wellness at all ages is a product of many factors, some of them personal lifestyle choices and others “big picture” factors. Health Canada recognizes 12 factors. These include: Biologic and Genetic Endowment, Healthy Child Development, Gender, Education, Physical Environment, Social Environment, Social Support networks, Culture, Employment & Working Conditions, Income & Social Status, Life Style, and Health Care. The Ageing and Life Course Division of the World Health Organization, in its *Active Ageing Policy Framework*<sup>12</sup>, identifies similar factors. An underlying message of both is the need to take a life course approach. The state of one’s health and well being when old is a product of what it was when one was younger.

Some say the 60 year old of today is yesterday’s 40 year old. The future for those of us growing older In Canada today is bright if we choose to take advantage of the programs and services that have been developed. In BC for example, there are seniors parks that have equipment designed to help us to maximize our muscle strength and physical activity and health. The Centre for Activity and Aging here at UWO has played a lead role in education of physical activity instructors who work with seniors as well as in developing programs for seniors themselves.

For those of you who are on the threshold of your career, the future is even brighter. There will be opportunities no one has even dreamed of. Simply put, believe in what you are doing and you will succeed!

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<sup>12</sup> The Active Aging Framework may be found at [http://whqlibdoc.who.int/hq/2002/WHO\\_NMH\\_NPH\\_02.8.pdf](http://whqlibdoc.who.int/hq/2002/WHO_NMH_NPH_02.8.pdf)