



U3A Keynote Address Thursday 7th May

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For age is opportunity no less
Than youth itself though in another dress,
And as the evening light fades away
The sky is filled with stars, invisible by day.

These wise words that conclude “Morituri Salutamus” by Henry Wadsworth Longfellow express beautifully the key to successful aging. New opportunities reveal themselves to those who look for them which are neither visible nor available to the young.

Today I will discuss progress in our thinking about the elderly, the wonderful resource they provide and ways in which communities can both support the elderly and gain full benefit from them.

Over the years and between different cultures we see widely divergent views about the elderly in communities. For example in many Asian communities, the old people are viewed with enormous reverence and respect – China and Japan are prominent amongst them. Our own indigenous communities place particular significance on the elders in their people and pay respect to them at all formal gatherings. In contrast, in times of hardship and war, certain tribal and other communities have viewed old people as a handicap, and abandoned or killed them. In our own community, family pressures can often make the elderly feel they are a burden on their families.

At the community level, we talk about the ageing of our community largely in terms of the costs to our health care and social services rather than for the benefits that they may bestow. The Treasury Department’s Intergenerational Report prepared for the last Government highlights the extra costs associated with the ageing of our community although the age profile will only approach that of Europe and Japan over a number of decades. I will discuss the Intergenerational Report in more detail later in my address.

History is filled with old people who have made remarkable contributions. Alexander the Great may have been a young man when he led armies into neighbouring countries but his contribution, if you think of military invasions and imperialist ambitions as contributions, pale into insignificance in comparison with the old men of ancient Greece such as Sophocles, Hippocrates, Pythagoras and Aristotle. There are many examples of old people making exceptional contributions in every walk of life whether Tolstoy, Goethe or Voltaire in literature, Lloyd Rees and many others in art, love him or hate him, Rupert Murdoch in business and his universally loved mother Dame Elisabeth in philanthropy and community service. One may argue about the contributions of Ronald Reagan and Winston Churchill to politics but they held high office at a time of life when, according to Western tradition, they

should have been walking their dogs and playing with their grand-children. The American people judged John McCain harshly, not apparently because of his 72 years, but to a greater extent because of the youth and inexperience of the woman he chose as his running partner and potential substitute.

Why do people in western civilisations spend a fortune on useless anti-wrinkle creams, face lifts and hair dye. Why do we not revel in the exceptional role that we can play when we are older and wiser? Much of it is attitudinal and much of it is a submission to the popular culture propagated by a media where the reporters are young and empowered to think that they are the masters or mistresses of the universe.

We won't easily alter the views of the young but we can do a great deal to alter our own attitude to ageing. The fascinating evidence to emerge over the last few decades is that not only can we alter our psychological response to aging, there is much we can do to benefit physical health and neurological functioning.

I would like at this point to add a personal note. The idea that serious illness in the elderly was not necessarily a sentence to an early death preceded by a period of immobilisation in bed is a relatively recent one. I am proud to say that my father was a pioneer of rehabilitation of the elderly following stroke and other incapacitating illness. He returned from training in the US and UK in 1954 as one of, if not the first, geriatric specialist in Victoria, bringing with him the four-pronged stick as an aid to early mobilisation following hemiplegic stroke. He planned the first rehabilitation unit established at Mount Royal Hospital in 1957 before dying at the age of 37 in 1959 from a stroke due to a burst aneurysm. I quote from an article he presented as part of a series of workshops held in 1958 and published as a book called "Growing Old" edited by Alan Stoller. "The concept that rehabilitation of the chronically ill aged patient is possible is a relatively new one and has not been practised on a large scale in this country." He went on to describe the necessity for a full assessment of the physical and psychological state of the patient and the team approach to rehabilitation.

This concept of physical and mental stimulation has been found to not only be helpful in rehabilitation but to play a vital role in maintenance of physical health, mental health and intellectual ability. There are countless studies in each area and they can be summarised along the following lines without specific attribution.

First, moderate, consistent physical exercise has been shown to prolong life, improve plasma lipids, prevent and improve diabetes, strengthen bones and improve muscle strength and sense of wellbeing. The form of exercise examined has varied from walking to swimming and weight training. Apart from the finding that weight-bearing exercise is better from the point of view of preserving bone strength, the form of exercise seems to be relatively insignificant – the important thing is the exercise. Interestingly, there is evidence that physical exercise improves neurological function in the elderly, presumably due to increased blood flow to the brain. There are also dietary effects, probably largely mediated by effects on the flow of blood through small blood vessels or capillaries. Diets high in vegetables seem to help. There is also some evidence that in contrast to the effects of heavy alcohol intake, moderate alcohol intake helps to preserve brain function in the elderly, presumably by its known favourable effects on blood fats and blood flow.

But the most exciting evidence to emerge from many lines of investigation over the last couple of decades has been the demonstration that forms of mental stimulation can prevent or slow the rate of mental deterioration with aging and reduce the incidence of dementia. This has been shown in many studies in humans using tests of mental ability

and agility as the indicator of mental function. It doesn't seem to matter what the nature of the intellectual stimulation is – whether it is doing crosswords, playing bridge or chess, staying employed in an intellectually challenging position or other forms of mental stimulation. Some of the studies have been cross-sectional looking at the history of intellectual stimulation in old people with and without evidence of failing intellectual function and others have been intervention studies in individuals with some early features of dementia. Of course the intervention studies have the greatest validity but there has been a great degree of consistency in the results from the different approaches.

Interestingly, a neurophysiological explanation of this has been convincingly demonstrated in rodent models. We used to think that neural pathways were laid down early in life and that the potential to change these decreased progressively with age so that once one entered mature life, there was no real possibility of new neural pathways being established.

The neurological basis for learning and memory is still far from completely elucidated, but part of this fundamental mystery has been defined. Learning is associated with the establishment of new synapses. Let me explain what this means. The number of neurons or nerve cells we have in our brain is defined quite early in life. In fact, from early adulthood on, we progressively lose neurons. Very depressing. But it is not so bad as that might suggest. The functionality of the neurons we have is determined by the way that they connect with each other. The connections are called synapses. Studies in rats and mice show conclusively that even in adult animals, stimulation of the brains of the rats and mice by tasks such as having to go through mazes, having to perform sequential tasks to obtain food, or even more interestingly, being provided with a range of stimulating toys in their cages, leads to substantially more synapses being established, presumably explaining their observed superior performance at tasks requiring their brain power.

There are also other changes observed. Levels of the chemicals which transmit the messages between the neurons in the brain can be altered by training the brain. And it can also be demonstrated that improved intellectual activity associated with physical and mental activity is associated with growth or preservation of small capillaries, that is tiny blood vessels, in the brain.

In summary, we have evidence that physical exercise preserves not only muscle and bone strength but causes alterations in blood chemistry likely to benefit the flow of blood through blood vessels and prevent strokes and heart attacks. Mental exercise of one form or another preserves or improves intellectual functioning in old age.

There are important lessons for these findings for individuals as they get older, for public health policy, for local governments and for those responsible for educational services.

I will consider each of these in turn.

The first lesson is that the findings are enormously empowering for individuals. We can now plan our later life not with the feeling that we are unable to do anything about a deterioration of our bodies and minds that might previously have been viewed as inevitable. We should actively plan preservation of physical activity throughout our lives according to our ability to undertake it. As little as three thirty minute sessions of moderate physical activity

has been shown to be of benefit although the findings in terms of the nature and extent of exercise are varied. Moderate weight training may confer added benefits in terms of diabetes and blood lipids as well as muscle and bone strength. Golf, bowls, walking, swimming, gardening and cycling all provide possible options. With respect to intellectual function, deferment or staging of retirement, volunteer activities including mentoring, reading, bridge, chess, crosswords and writing provide examples of ways of preserving intellectual stimulation. Taking an active interest in family and preserving active social contact are really important even though at the time the effort required may seem daunting.

We should maintain a healthy diet with plenty of vegetables and if we drink alcohol and confine that to moderate levels, say 2 standard glasses per day, we can take comfort from the fact that it is likely to benefit rather than harm intellectual function.

Public health policy is equally important. The costs of maintaining old people with dementia in nursing homes is very high. Public health policy should be developed which aims to prevent physical and mental deterioration. This will have a number of components. Included will be the monitoring and treatment of problems such as high blood pressure, diabetes and high levels of harmful blood fats. These all predispose to blood vessel narrowing with small strokes which may cause or accelerate intellectual deterioration. But equally important should be the lifestyle advice about physical activity and mental stimulation. This is often best provided by a nurse rather than a doctor and just as we have nurses trained in diabetes education, we require substantial numbers of nurses trained to give advice to healthy people as they get older. It should be a service funded through the State and Federal Governments as it is costs to these governments which will be reduced and the advice should be provided free through local councils. Facilities for the retired and elderly should provide both counselling and services to encourage and enable physical exercise and intellectual stimulation.

For local government, just as councils assume responsibility for “meals on wheels”, “home help”, libraries and sporting facilities, they should be encouraged to target more effort and funds towards intellectually and physically engaging activities such as chess and bridge lessons, water aerobics and other exercise classes, excursions and so on. Mindless activities such as sitting at poker machines or bingo nights should be replaced by trivial pursuit evenings, bridge nights and so on. Book clubs have burgeoned and local councils should resource these and encourage their spread.

Educational institutions must also play their role. U3A does a great job and should receive increased public funding for the role it plays in providing the intellectual stimulation and social networking which is so valuable as we age. But U3A alone cannot provide education through the full spectrum that might appeal to the older members of our community. The Council of Adult Education runs focused courses directed at the acquisition of specific skills and is also a great community resource. But there is room for much more.

A phenomenon that is becoming much more common is that of the retiree who decides that the time has come for him or her to pursue an academic interest that they had no opportunity to study because of the pressures of their careers and family responsibilities at earlier ages. For example, a prize in classics at Monash was recently awarded to a retired, very distinguished medical scientist. At graduation nights we often see elderly people receiving PhDs – I think the record at Monash is a PhD graduand aged 94. People whose ancestors come from distant lands

frequently wish to study the history or culture of that land. Others would wish to examine the meaning of life and pursue study in philosophy or theology. And many of us would like to indulge our latent creative talents, perhaps by studying fine arts, ceramics, glass work or creative writing in more detail than available through the CAE.

Our universities currently are not particularly attuned to the needs of the elderly. The HECS system and abolition of full fee places for undergraduate Australian students makes it difficult for retirees to enrol as undergraduates and many would not have the academic qualifications to enrol as Masters or PhD students. More flexibility is required and universities should specifically provide information targeted at this market which will grow as the average of the population increases. It is important that classes are not provided specifically for the older students as there is no doubt that mixing with the young is a very good way to remain mentally and physically stimulated.

The final aspect I would like to address is mental health as opposed to mental function. One of the perils of aging is loneliness and depression. One of the sad inevitabilities of getting old is the progressive loss and impairment of so many of one's lifelong friends and near and dear relatives. It is not surprising that depression is a major problem in the elderly. Of course taking an active interest in intellectual and physical pursuits such as those described above can prevent or ameliorate depression in the elderly, particularly when it involves social gatherings with new friendships and relationships. But another important element in combating depression in the elderly is to overcome the feeling that once gainful employment ceases, the retiree ceases to be useful to society and instead becomes a burden. The media commentary on the economic threats posed by an aging society does not help this feeling of worthlessness. The best way to overcome it is for the elderly to become actively involved in voluntary activities of some sort. Again there are many examples you can all cite and indeed many of our older citizens lead exemplary lives of service. The important point is that rather than persuading such people that they need to take it easy, such voluntary activity combats the feeling of uselessness and often provides intellectual and physical stimulation as well as companionship.

It is of interest that one of the nine ideas out of the nine hundred or so put forward at the 2020 Summit conducted by the Prime Minister last year to be taken up is the idea of the so called golden gurus. Essentially the idea is that retired people who have been prominent in business or public service would serve as a panel of mentors for young professionals setting out on their careers or for businesses in the process of getting established or facing particular challenges. While totally supportive of the underlying philosophy which is entirely consistent with my talk today, the details of how such a program would work is not yet clear. Of course much such mentoring already occurs in an informal way or through retired executives and professionals being appointed to non-executive governance roles on boards of companies and NGOs.

The contributions of the older members of the community to society should be viewed broadly and not in narrow economic terms. But even if we focus for a moment on the economic effects, far too negative a picture has been portrayed by the Intergenerational Reports from the Department of Treasury. These reports conclude that productivity will decline by 2047 as the proportion of the population in the traditional working age bracket of 15 to 64 falls from around 66% in 2007 to 60% in 2047. But it should be emphasised that at the same time, the proportion in the age group 0 to 15 years will also fall, in this case from 19% to 15%. Given the costs to government of maternal and child care and education, the impairment of the productivity of the parents with child-care responsibilities and the progressive prolongation of the period of government-supported education with greater

access and broadening participation in post-school education, the relatively lower proportion of younger people will lessen the costs to government, largely or completely offsetting a fall in productivity and increase in health care costs associated with the ageing of the population.

Although the greater call on public health care and aged care services associated with the aging of the population, we should also take into account the fact that a disproportionate amount of our law and order enforcement costs are directed to the young, alcohol and substance abuse rates are much higher in the young and the rate of road accidents and spinal injuries associated with accidents are much higher in young adults than in the elderly.

In any event, with better attention to lifestyles and health care, many of the 25% of the population over 65 will be making substantial contributions to the productivity of the country. Our senior citizens should not feel that they are responsible for any economic difficulties our country might face in the years to come. The aging of the population should be viewed as an opportunity rather than as a cost.

In summary, from every point of view we should be positive about the future of our older citizens and as I am turning 66 in a fortnight I include myself in this category. We are healthier and more active than at any time in the past. We have in our power the methods to not only prolong our lives but to prolong our independent and productive lives. The research evidence now provides mental exercise achieves the same benefit for our brain as physical exercise does for our bodies.

I will finish as I began with a quotation, this time from Agatha Christie, whose productivity as a novelist increased markedly in her later life:

“I have enjoyed greatly the second blooming... suddenly you find ... that a whole new life has opened before you.”

-- Agatha Christie