



William Beattie Smith
1853 – 1921; Dead at 68



Beattie Smith



James Angus



Bruce Singh



Henry Brodaty

Professor of Aged Care Mental Health and Director of Primary Dementia Collaborative Research Center, UNSW; Director, Aged Care Psychiatry, Prince of Wales Hospital

The Rise and Surprise of Old Age Psychiatry

Johann Wolfgang von Goethe (1749-1832)



- German poet, novelist, lawyer, playwright, courtier, and natural philosopher
- Discoveries about plant and animal life; theories about light
- 18 yrs: first play
- Several partners until aged 74 he fell in love with 19 yo but was disappointed whereupon he wrote *The Marienbad* elegy
- Admired by Beethoven
- Continued to write until 84 yrs

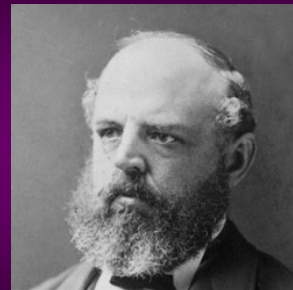
The Surprise of Old Age

“Age takes us by surprise” – Goethe

“Old age is the most unexpected of all the things that happen to a man” - Leon Trotsky

“A person is always startled when he hears himself seriously called an old man for the first time” - Oliver W. Holmes, Sr.

Is 80 the new 60 !?!



George Briscoe Kerferd
(1831-1889 = 58 yrs)

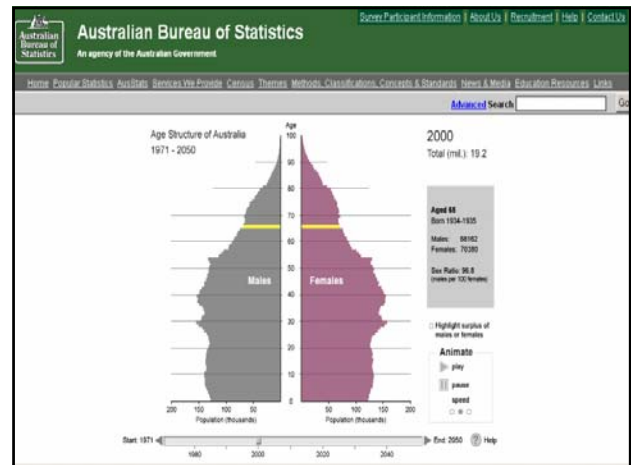
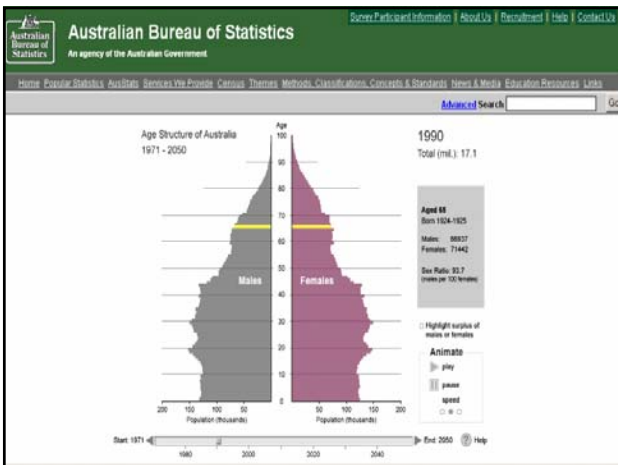
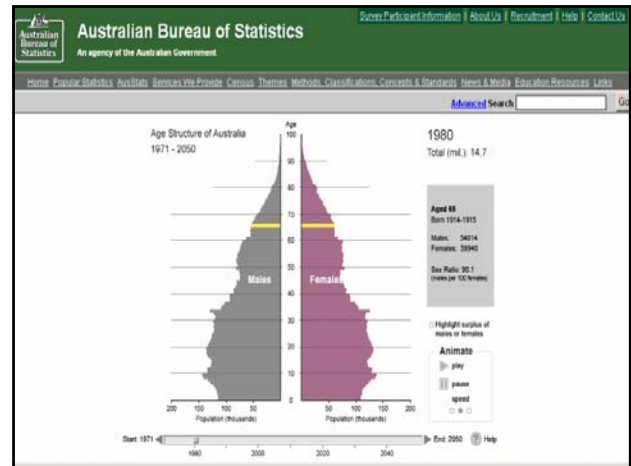
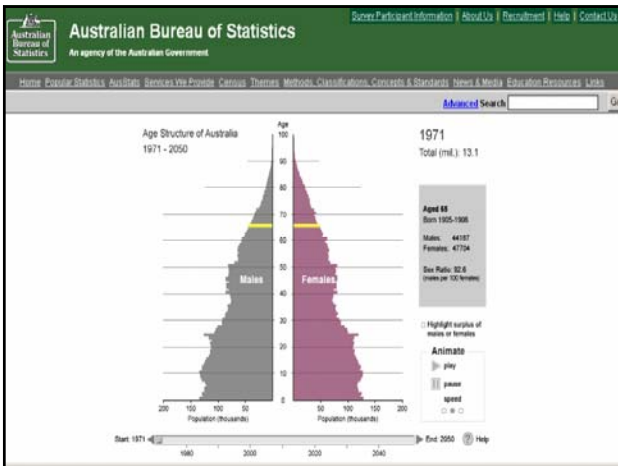
- More older people
- More people living longer
- Declining mortality
- Declining fertility and birth rate

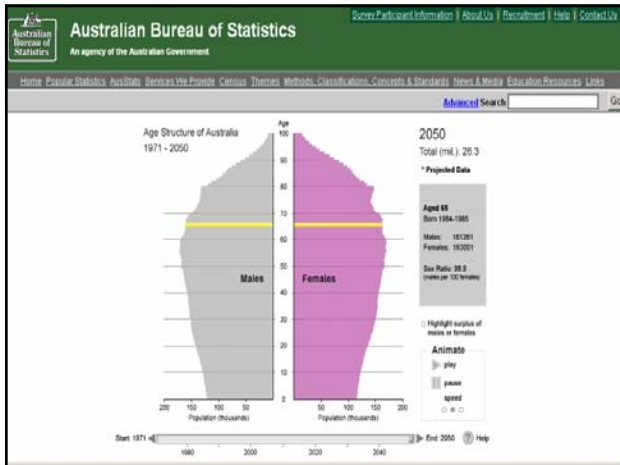
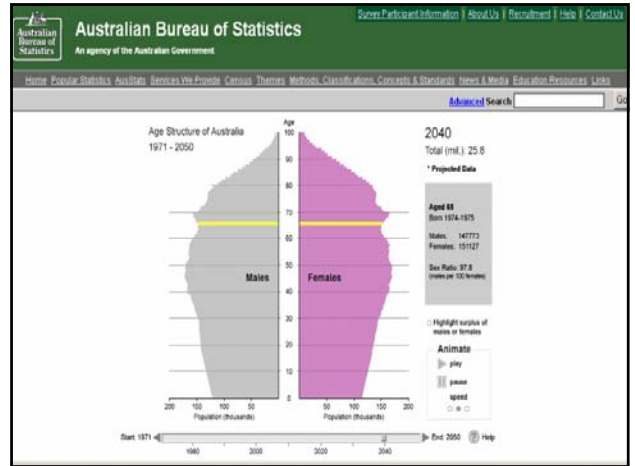
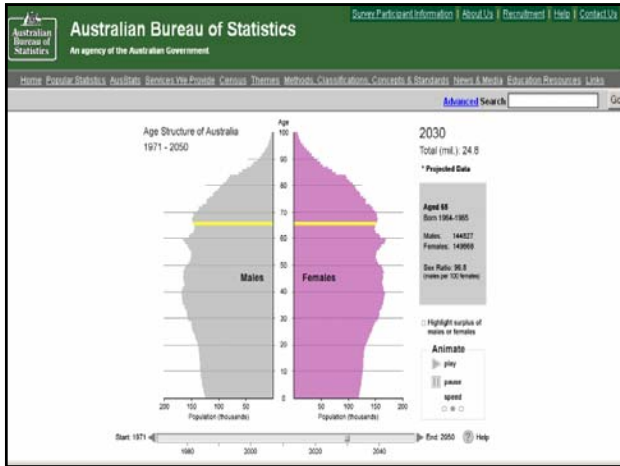
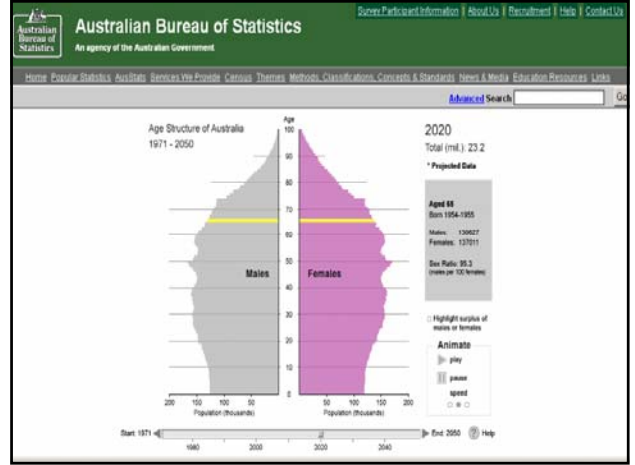
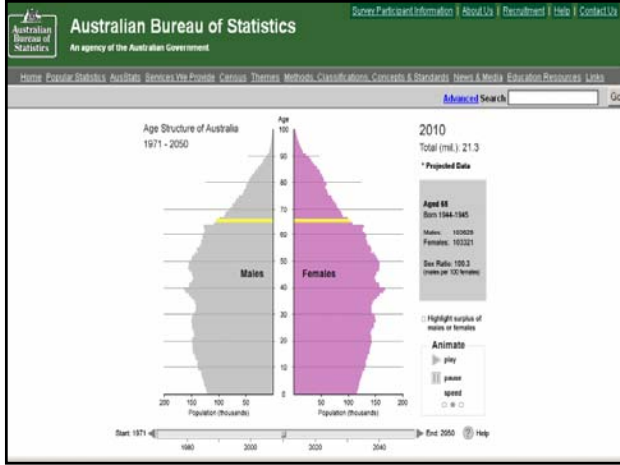


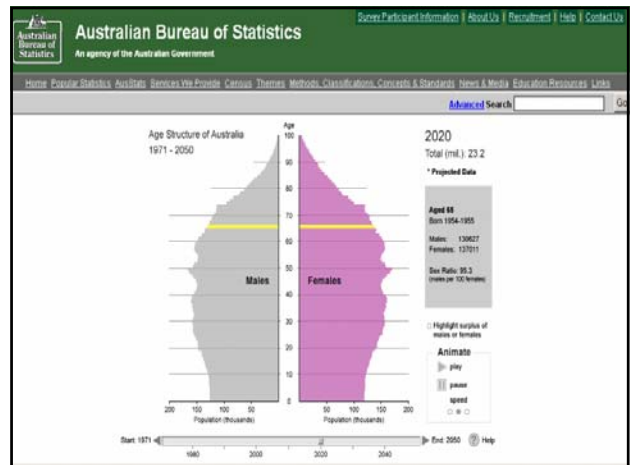
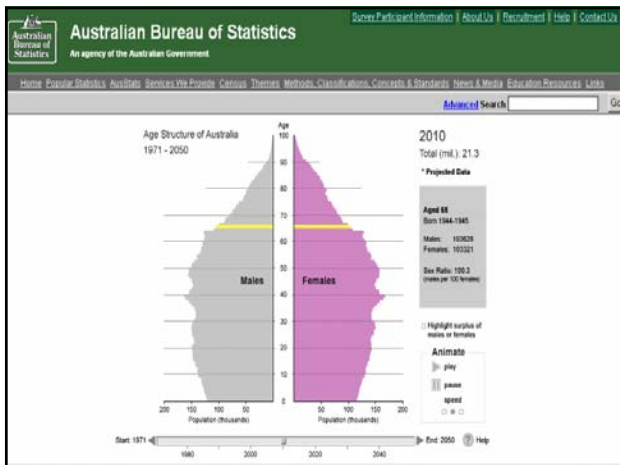
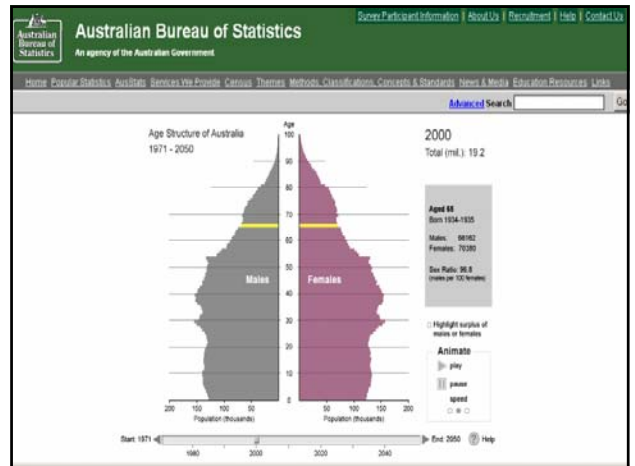
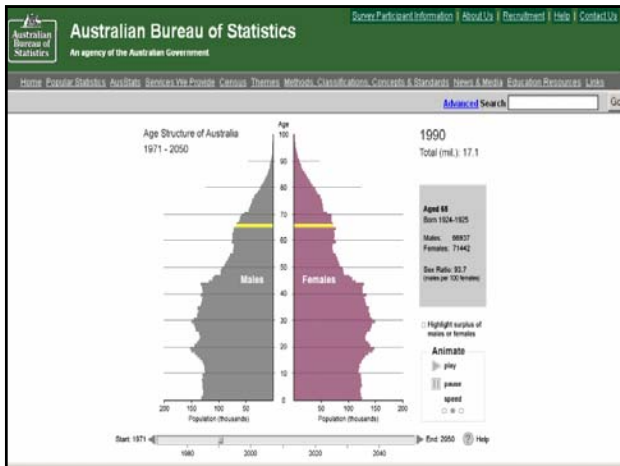
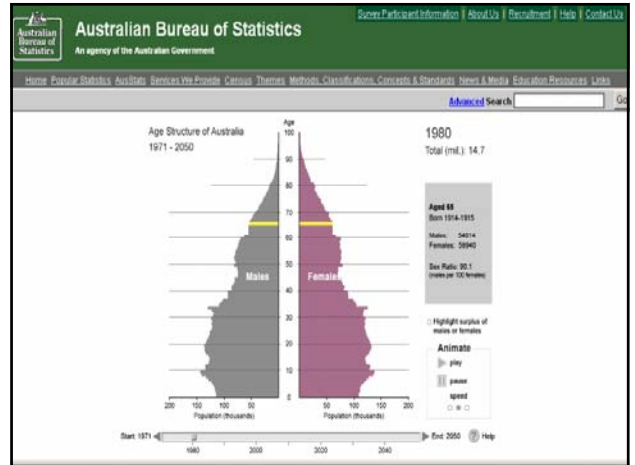
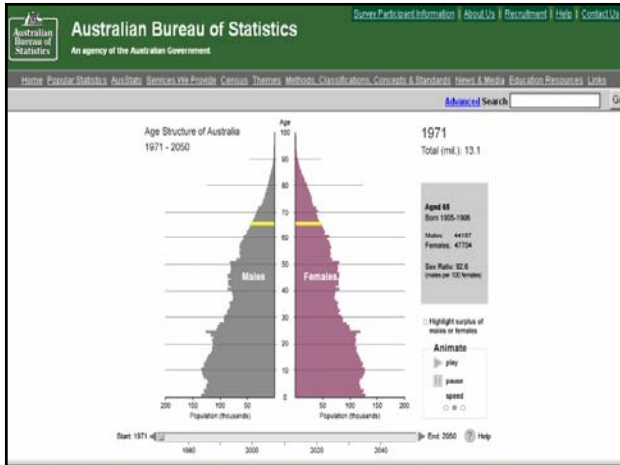
Projected population growth - Australia (assuming highest population growth)

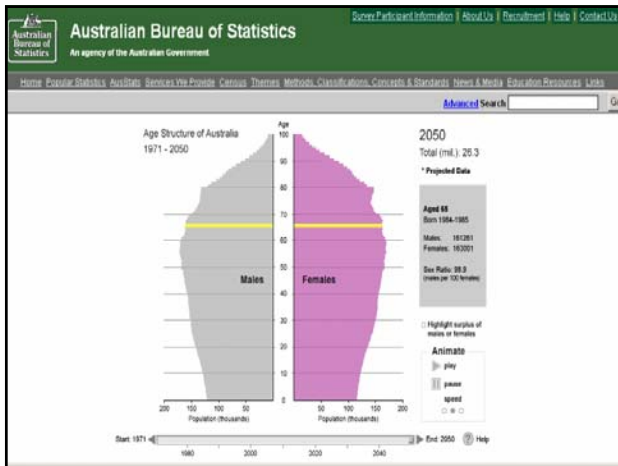
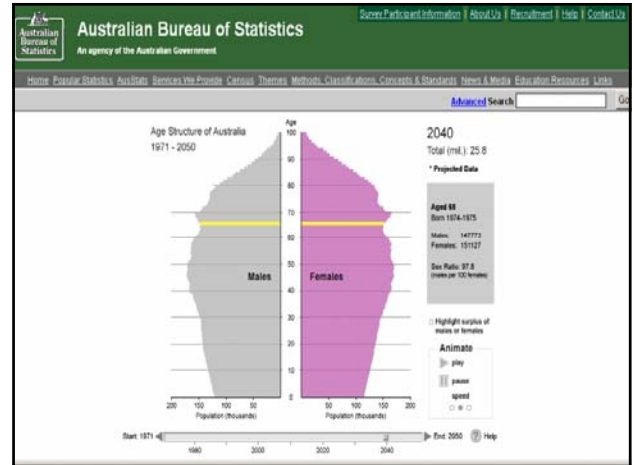
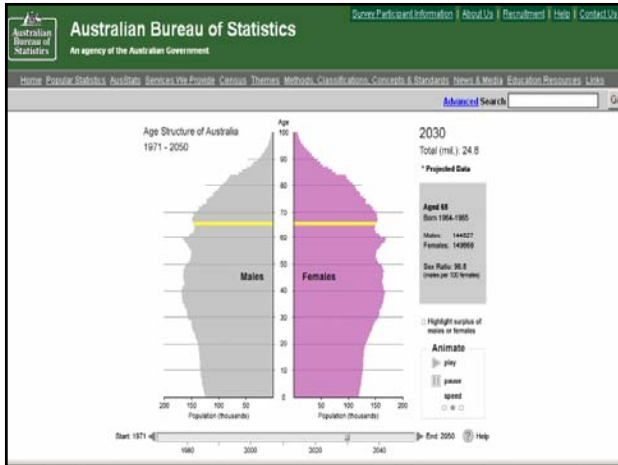
Year	65 yrs+	85 yrs +
2002 (19.7 million)	13% (2.6 million)	1.4% (0.3 million)
2051 (31.4 million)	30% (9.4 million)	9% (2.8 million)
2101 (37.7 million)	32% (12.1 million)	11% (4.1 million)

Australian Bureau of Statistics Population Projections Australia 2002-2101; Cat No 3222.0









Life expectancy in 2000-02 (Australia)

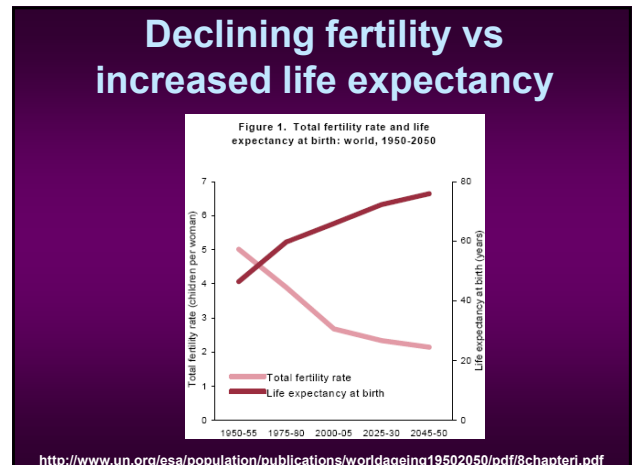
	Birth	30yrs	65yrs
Males	77.9	78.8	82.4
Females	83.0	83.4	85.8

<http://www.aihw.gov.au/mortality/faqs.cfm>

Life expectancy at birth - Australia (Assuming current trend continues)

	2020-2021	2050-2051
Males	83.2	92.2
Females	87.5	95.0

Australian Bureau of Statistics *Population Projections Australia 2002-2101; Cat No 3222.0*



The Fountain of Youth



15th Century:

- Transfusions of young male blood

19th Century:

- grafting monkey testicles into ageing men
- injections of mashed up dog testicles
- Removal of large intestine + eating yoghurt

The Fountain of Youth



20th Century:

- Transplanting goat testicles
- Injections of living lamb embryo cells
- Cosmetic surgery
- Collagen injections
- Botox injections

21st Century:

- More extreme and socially accepted cosmetic surgery?



Ageing has a mixed “outcome”

Ageing well and not so well



Ageing well and not so well

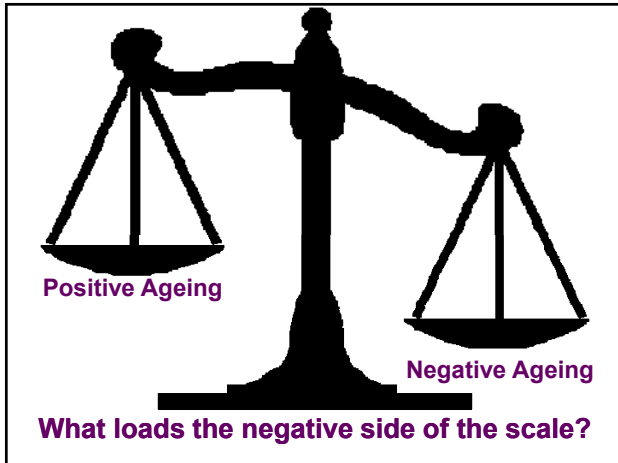


Study of successful ageing¹

Defining success:

- Length of active life
- Physician assessed objective health
- Subjective physical health
- Objective mental health - work, relationships, play and no psychiatric care or medication
- Life satisfaction - marriage, job, children, friendships
- Good social supports - friends, family

¹Vaillant G, Mukami K Am J Psych 2001;158:839-847



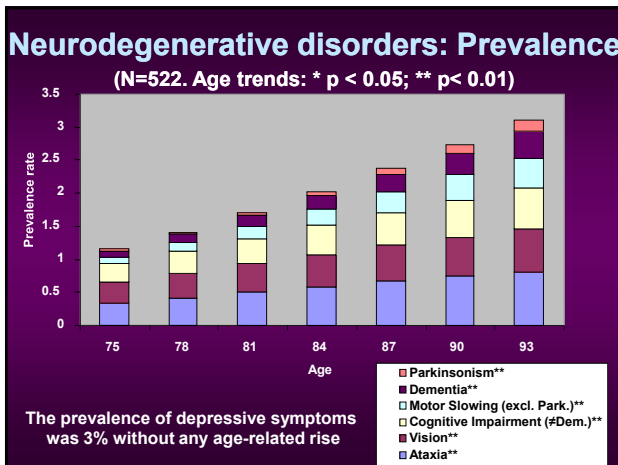
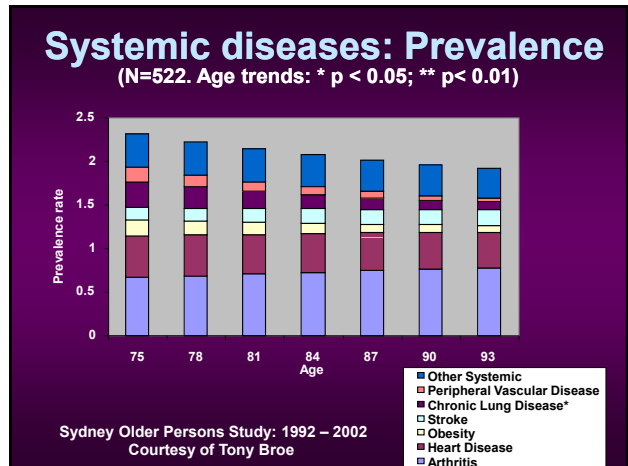
Negative Aspects of Ageing

- Negative attitudes
- Youth-fixated society
- Ageism
- Age associated disorders
- Under-recognition and under-treatment of mental disorders

A Fifth Disease Transition

(Broe & Creasey 1995)

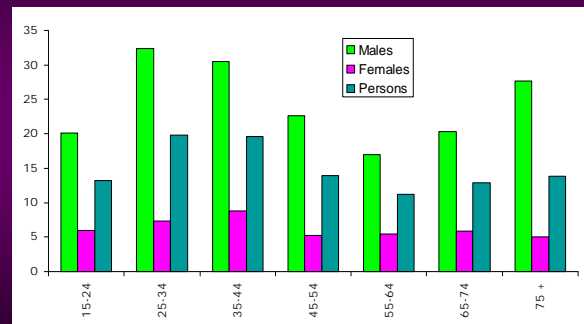
<u>Infectious 19th C.</u>	<u>Systemic 20th C.</u>	<u>Brain 21st C.</u>
Typhoid	Heart diseases	Alzheimer disease
Cholera	Vascular/Stroke	Parkinson disease
Dysentery	Hypertension	Other dementias
Small Pox	Obesity/Diabetes	Gait slowing
Tuberculosis	Lung diseases	Gait ataxia
Influenzas	Cancer	ARMD



Focus on Mental Disorders

Depression

Suicide Across Life Span Australia: Age specific rates/100,000 2000.



Slide – courtesy of A/Prof Brian Draper

Depression

- Lower prevalence of major depⁿ in old age!
- Selective attrition through death? Yes:
 - Depression & heart disease linked
 - Many disorders have poorer outcome if present - insufficient to explain
- Selective attrition through NH placement?
 - Yes, ↑ rates in NH & RACFS
 - Insufficient to explain
- Artefact of diagnostic process – in part

Older populations at risk for depression

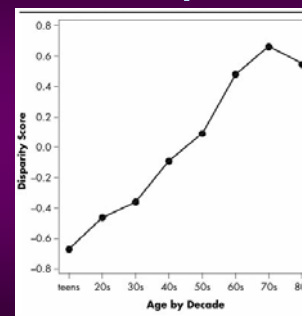


- Nursing home residents
 - major depression ~ 15%
 - other depressive disorders ~ 35%
- Medical outpatients ~ 15%
- Medical inpatients ~ 15%
- General practice patients
- Pts with neurological Δ

Depression

- Are elders not presenting for treatment?
 - Yes, good evidence for this
 - Importance of MH literacy (*beyondblue*)
 - Widening gap between severity of self-reported Sx and clinical Dx with age

Disparity of Self-Rated Vs Clinician-Rated Depression Scores

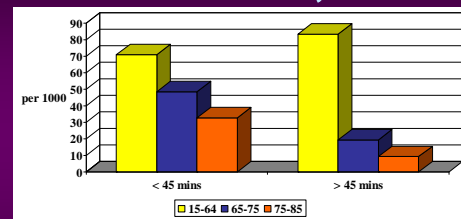


Brody et al. (2005) Am J Geriatr Psychiatry, Volume 13(7); 589–596

Are older people with psychiatric illness being under-treated ?

Yes

Duration of Private Psychiatric Consultations, 1998

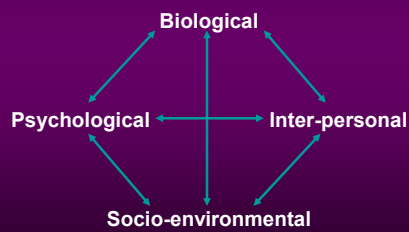


- < 65yrs receive 3 x more services & 4 x more office consults than 65 yrs +
- Per capita Medicare expenditure on younger adults is 4 x 65 yrs +

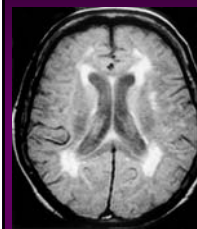
Draper & Koschera, 2001

Aetiology of Depression in Old Age

- Complex interplay of:



Vascular depression¹



- Depressive Δ in old age
- 2^o to microvascular lesions
- Subcortical and prefrontal
- Coronary heart Δ link
- Potential for prevention if vascular health improved

¹Camus V et al, 2004, J. Affective Disorders

Surprises

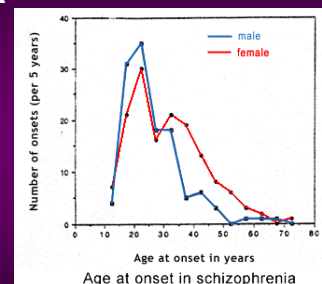
- Prevention? eg ARMD, carers
- Non-pharmacological and pharma interventions successful
 - CBT
 - Resistance training - iron pumping grannies¹
 - Medications and ECT
- Good outcome: prognosis of OA depression = younger ages but recovery takes longer²



¹Singh et al. (2001) J Geront. Series A-Biological Sc & Med Sc. Vol. 56(8); M497-M504
²Brodsky et al, British J Psychiatry, 1993;163:589-596

Schizophrenia in late life

1. Early onset, now old
2. Late onset in mid or late life



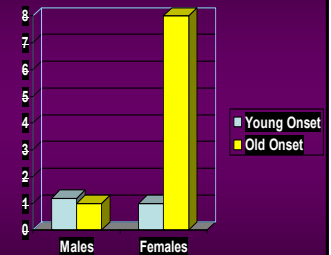
Sham et al. (1994), Psychiatrica Scandinavica; 89(2):135-141

Early Onset Schizophrenia in Late Life: graduates

- EOS and ageing:
 - Condition is milder!
 - Improvement occurs symptoms and function!
 - Medication doses diminish!

Late Onset Schizophrenia

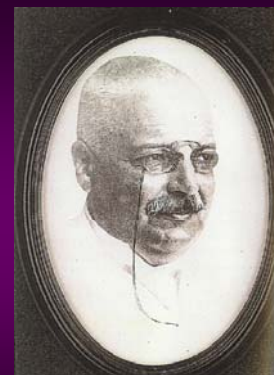
- Female to male ratio reverses from slightly more males to 8:1 female predominance
- Link with dementia: excluded at baseline & not present at 1 yr, but signif. @ 5 yrs follow-up¹



¹Brodsky et al. (2003). Brit J Psych; 183:213-219



Dementia



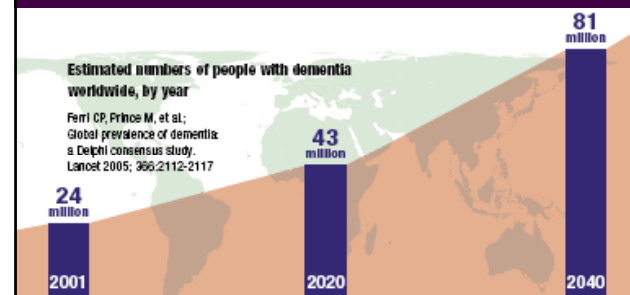
Alois Alzheimer 51yrs

101 years since
Alois Alzheimer
first described
eponymous case

Dementia Prevalence

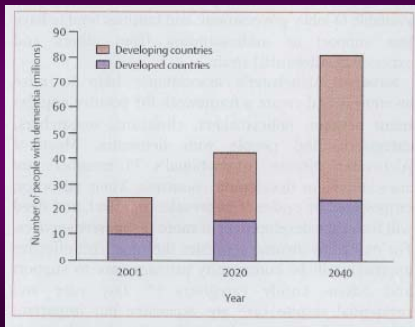
- About 5% of population \geq 65 years old
- 20% of persons \geq 80 years
- 30% of \geq 90 years old

Dementia worldwide



Ferri et al (2005). Lancet; 366: 2112-2117

Dementia Epidemiology: Highest Growth in Developing Countries

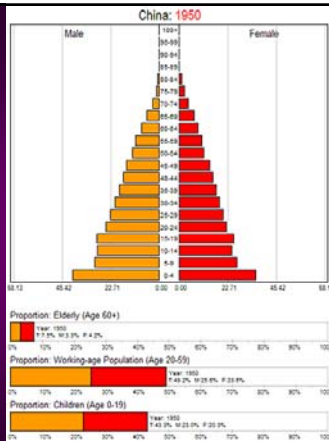


Ferri et al (2005). Lancet; 366: 2112-2117

Dementia Epidemic: Asia Pacific Region

'000 people	2005	2040
Australia	195.4	664.1
China	5 541.2	27 004.4
India	3 248.5	16 290.1
Indonesia	606.1	3 042.0
Japan	1 871.2	4 873.1

ADI; 21 Sept 2006. Dementia in the Asia Pacific Region: The Epidemic is Here.



http://www.china-europe-usa.com/level_4_data/hum/011_7a.htm

Costs of Dementia: Worldwide

- Direct cost of dementia worldwide:
 - US\$ 248 billion in 2006 (including \$92 bill for informal care)¹
 - US\$ 5,633 per PWD in 2003²

¹Winblad & Wimo (2006). ICAD; 15-20 July;
²Wimo et al (2006). Dement Geriatr Cogn Dis; 21: 175-181

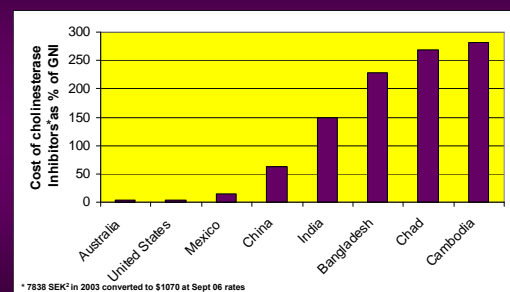
Direct Costs of Dementia in 2003

Cost per person with dementia \$US

Africa	393
Latin America	1,604
Northern America	16,032
Asia	2,419
Europe	8,447
Oceania	10,071

Wimo et al (2006). Dement Geriatr Cogn Dis; 21: 175-181

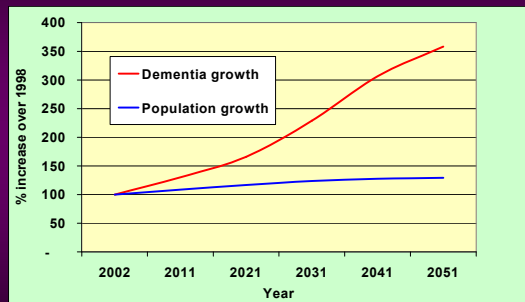
Mean Annual Cost of Cholinesterase Inhibitors Per Patient as % of GNI¹



¹7838 SEK¹ in 2003 converted to \$1070 at Sept 06 rates

¹World Bank; World Development Indicators database: <http://devdata.worldbank.org/data-query/>;
²Jonsson et al (2006). Int J Geriatr Psych; 21:449-459

Projections of dementia in Australia



Access Economics (2003)

In Australia



- Costs estimated \leq \$6b
- Major driver is res care
- Impetus: community care
- Dementia is National Health Priority (incl^u CRC)
- National and State Plans for Dementia
- COAG - mental health as priority
- Strong advocacy by Alzheimer's Australia

Developments and Surprises

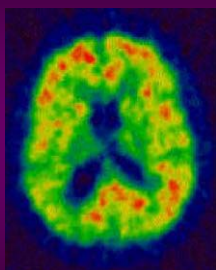
- Advances over last 25 years
- Carer interventions
- Prevention of Alzheimer's disease
- Treatment of AD
- Cure of AD
- Pre-dementia
- Senile dementia revisited
- Personhood reclaimed

Changing Face of Dementia Research

- 25 yrs ago:
 - Essential clinical infrastructure for high quality studies was unavailable
 - “Cure” or “prevention” was inconceivable
 - No diagnostic criteria, standardised assessment instruments, specialists, support groups
- 15 yrs ago:
 - Information on genes/biologic pathways was ltd
 - Animal models of dementia did not exist

Khachaturian (2007). Alzheimer's 101. Alz & Dem; 3, 1-2

Changing Face of Dementia Research



PIB Scan; warmer colours = amyloid plaque

- 5 yrs ago:
 - Persons at high risk for dementia could not be identified
 - Clinical trials for prevention or delay were a dream
 - Hallmark lesions of AD could not be directly visualised until 2004

Khachaturian (2007). Alzheimer's 101. Alz & Dem; 3, 1-2

Changing Face of Dementia Research

- In 3 decades:
 - Dementia has moved from obscurity to forefront of biomedical science
 - Traditional thoughts reversed - nerve cells can regenerate, antibodies can cross BBB
 - Intensive studies are underway on multiple fronts: genetics, drug therapy, caregiver interventions

Khachaturian (2007). Alzheimer's 101. Alz & Dem; 3, 1-2

Advances with carers

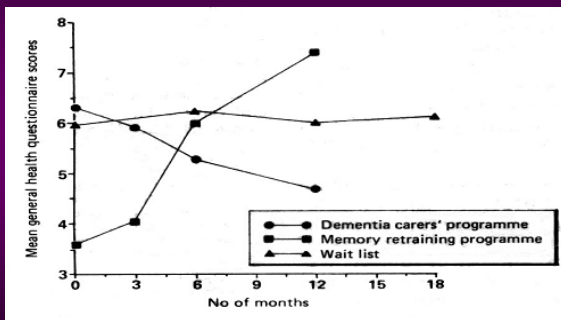


Effects of Caregiving¹

- Positive effects – altruism, love, reciprocity
- Negative effects greater:
 - Psychological (e.g. depression)
 - Physical (eg immune function ↓ , BP↑)
 - Social (eg isolation)
 - Financial
 - ↑ use of health services
- Some but not all interventions effective

¹Brodady H, Green A. (2006) Family caregivers for people with dementia, in O'Brien J, Ames D, Burns A (eds), Dementia. 3rd Ed. Chapman & Hall, London,

The Dementia CGs' Program Results: GHQ



Brodady and Gresham (BMJ, 1989)

Dementia Carers Program: survival at home over 7 years

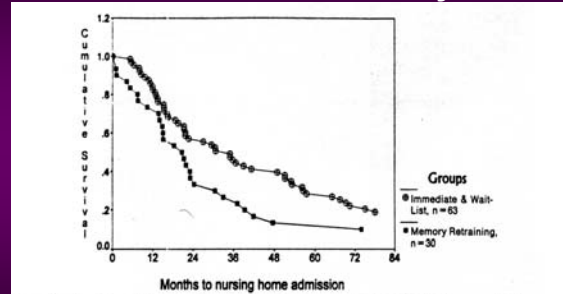
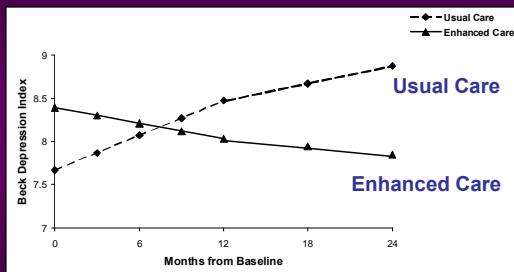


Figure 2. Kaplan-Meier survival functions for nursing home admission comparing the combined training groups with the memory retraining group

(Odds ratio 5.03, 1.73- 14.7) Brodady et al, IJGP, 1997

The 3 Country Study: Caregiver Depression



The treatment group started off more depressed than control group and ended up less depressed

Can AD be prevented?

Can AD be prevented?

- Short answer = "No!"
- But... ≤ 50% of risk of AD may be preventable
- Prevention: delay vs elimination
- 5 years delay in onset could reduce prevalence by 50%
- More evidence exists for prevention of cerebrovascular disease
- Strategies may need to start in childhood

Protective factors against AD

(small effect in population studies; statistically significant; none proven)

- Higher education
- Reduction of high blood pressure
- Anti-inflammatory drugs
- Certain genes - ApoE2
- Cholesterol lowering drugs (statins)

Other putative protective factors

- Other antioxidants
 - food, drinks
 - supplements
- Culinothrapy - red wine, blueberries, curcumin, fish
- Physical exercise
- Mental activity
- Prevention of diabetes



Can AD be treated?

Drugs for AD

- 4 drugs - all symptomatic, modest benefit
- Aricept (donepezil) - cholinesterase inhibitor
 - Exelon (rivastigmine) - cholinesterase inhibitor
 - Reminyl (galantamine) - cholinesterase inhibitor
 - Ebixa (memantine) - NMDA, receptor antagonist

Commonly recommended:

- Ginkgo biloba
- Folic acid (and B₁₂)
- Vitamin E (and C)



Can AD be halted, reversed or cured?

New treatments

- www.clinicaltrials.gov → 140 drugs
- Vaccine - to remove amyloid plaque
 - active immunisation
 - passive antibody injection
- β and δ secretase inhibitors - to prevent build up of plaque
- **Alzhemed**, PBT2 (clioquinol) - to prevent clumping together of β protein
- **R-Flurbiprofen** reduces levels of β amyloid
- Others - statins, serotonin antagonist inhibitors, rosiglitazone, leuprolide

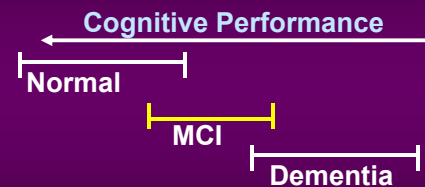


Controversy And Dementia

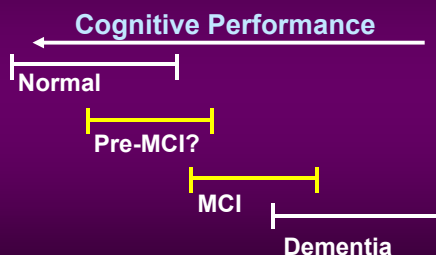
Can pre-dementia be diagnosed and if so is it useful?

- Push for earlier diagnosis
- The period between first symptoms and clinical diagnosis of dementia is
- New syndrome: *Mild Cognitive Impairment*
- Defined as subjective memory loss, objective impairment but normal function
- Debate re: over-labelling, medicalising ageing and utility of diagnosis

MCI concepts



MCI concepts



Senile Dementia Revisited

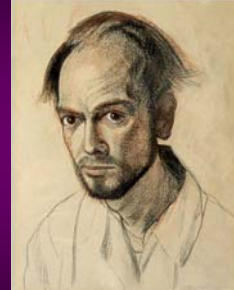
- Correlation of cognitive impairment with Alzheimer pathology decreases in old age – more multiple pathologies: AD + VaD + LBD
- ? Senile dementia = mixed dementia
- Implications for treatment

Personhood Reclaimed

- PWD may experience a progressive loss of self identity or personhood
- PWD report¹:
 - Family role identity as most important, and...
 - A general decline in role identity (professional, family, hobbies/leisure and personal attributes) over time
- Decline is also reported by informant¹

¹Cohen-Mansfield (2006)

William Utermohlen Self-Portrait 1967: Pre AD Diagnosis



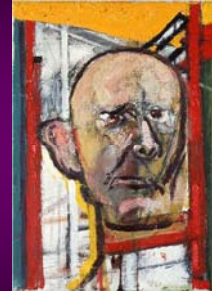
Denise Grady. Self-Portraits Chronicle a Descent Into Alzheimer's; New York Times; 24 October, 2006

William Utermohlen Self-Portrait 1996: 1 yr Post AD diagnosis



Denise Grady. Self-Portraits Chronicle a Descent Into Alzheimer's; New York Times; 24 October, 2006

William Utermohlen Self-Portrait 1998: 3 yrs Post AD Diagnosis



Denise Grady. Self-Portraits Chronicle a Descent Into Alzheimer's; New York Times; 24 October, 2006

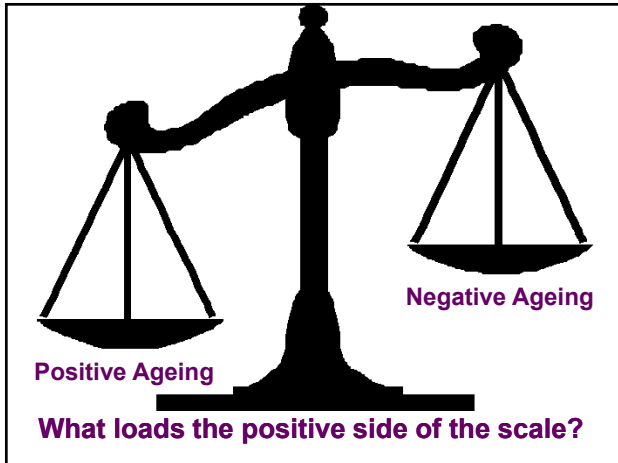
William Utermohlen Self-Portrait 2000: 5 yrs Post AD Diagnosis



Denise Grady. Self-Portraits Chronicle a Descent Into Alzheimer's; New York Times; 24 October, 2006

Loss or revelation of person

- Core of person revealed?
- Theory of personhood led to change in nursing practices of people with severe dementia




Positive Ageing

- Claude Monet was 80 when he painted his famous series of water lilies
- Giuseppe Verdi was 80 when he composed the opera Falstaff
- Sigmund Freud made seminal contributions to psychoanalysis in his 80s
- Goethe continued to write until 84 yrs
- George Bernard Shaw was 91 when he penned the play "Buoyant Billions." Shaw lamented: "... if only I could live longer to properly benefit from life's experience. Youth is wasted on the young!"

Positive Ageing

- Older people more likely to give money and help their children than receive from them
- Older people significant sector of volunteers
- Older people = fastest growing sector of computer market
- Older people just as happy as younger people



Positive Ageing

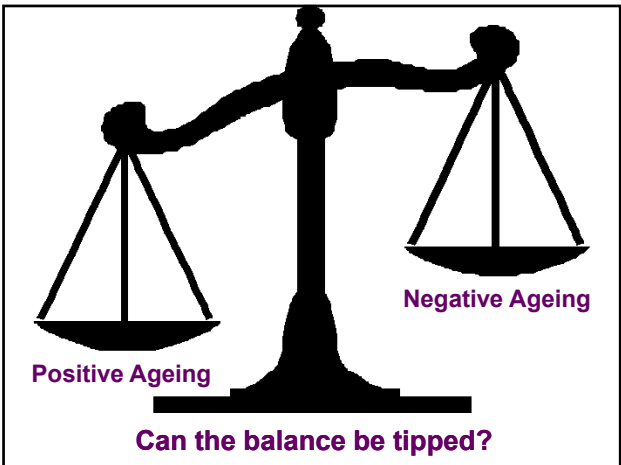
- Quarter of life lived after 65
- Much of old age is positive experience – the golden or "third age"
- Baby boomers start turning 65 in 2010
- Superannuation: golden egg?

How Happy Are Older People?

Little difference between younger and older age groups with respect to life satisfaction¹



SOURCE: British Household Panel Survey



¹ Pinquart (1998); (Slide courtesy of Adrienne Withall)

Interventions to Tip the Balance

- Public health interventions to address:
 - Stigma, ageism
 - Isolation, loneliness
 - Transport
 - Social engagement
 - Exercise and activities (physical and mental)

Interventions to Tip the Balance

- Volunteer groups – Australian Seniors, COTA, OWN, OMNI
- Advocacy groups – Alzheimer's Australia
- Health services
- Psychogeriatrics / Old Age Psychiatry / Aged Care Mental Health

Old Age: Opportunities

- Geriatricians
- Psychogeriatricians
- Aged Care specialists in nursing/health
- Elder law
- Gerodontologists
- Fitness for the elderly
- Computers for the elderly

A Brief History of Psychogeriatrics

Pre 1950s:

- Clinical psychiatry of old age neglected¹
- Diagnostic classification confused
- 1949, UK – 1st inpt. unit for 60+ established²

1950s:

- Elderly recognised as a subgroup and treatment seen as worthwhile³
- Research began²

¹Lewis (1946). J Ment Science; 92: 150-170; ²Mann (1999). Int Psychoger; 4: 367-370; ³Rabins (1999). Int Psychoger; 4: 371-373

A Brief History of Psychogeriatrics

1970s:

- More extensive psychiatric research
- First geriatric psychiatrists
- 1975 - Mental Disorders of Aging Branch at NIMH (USA)
- 1976 – National Institute on Aging (USA)
- 1978 - American Association for Geriatric Psychiatry

Rabins (1999). Int Psychoger; 4: 371-373

A Brief History of Psychogeriatrics

1980s:

- DSM-III included criteria for diagnosing dementia
- NINCDS-ADRDA criteria for AD
- First drug for AD
- Alzheimer's Australia and Alzheimer's Disease International

Rabins (1999). Int Psychoger; 4: 371-373



**Prince Henry Hospital, Sydney, 1987
Formation of Section of Old Age Psychiatry**

OAP Now

- Faculty of Old Age Psychiatry, RANZCP
- >40 advanced trainees
- Curriculum for training
- Professors of OAP in four states

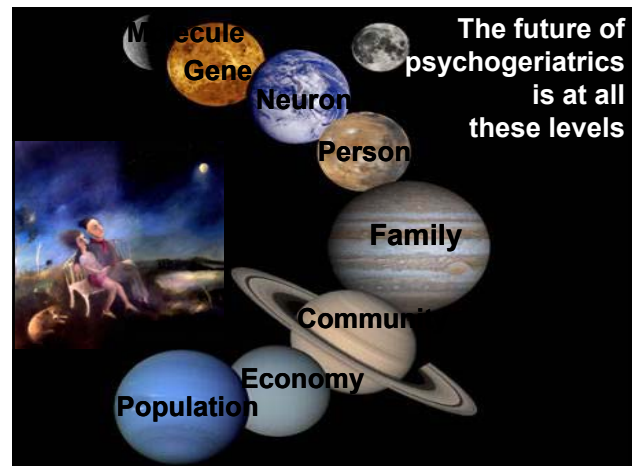
A Brief History of Psychogeriatrics

2000s:

- Qualifications in geriatric psychiatry:
 - UK: RC PSYCH – 1 645 in 2007¹
 - US: ABPN – 2 823 in 2006²
 - Australia: FPOA – 180 in 2007
- 9 English language journals specific to geriatric psychiatry



¹Personal communication; ²http://www.abpn.com/cert_statistics.htm



Summary

- Demography is destiny
- Negatives and positives of ageing
- Interventions for more positive ageing
- The rise of old age psychiatry
- Ageing - it's an epidemic and we are part of it
- We are living longer and healthier: compression of morbidity
- The challenge = neurodegenerative disorders

Thank you

- www.med.unsw.edu.au/adfoap



h.brodaty@unsw.edu.au

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