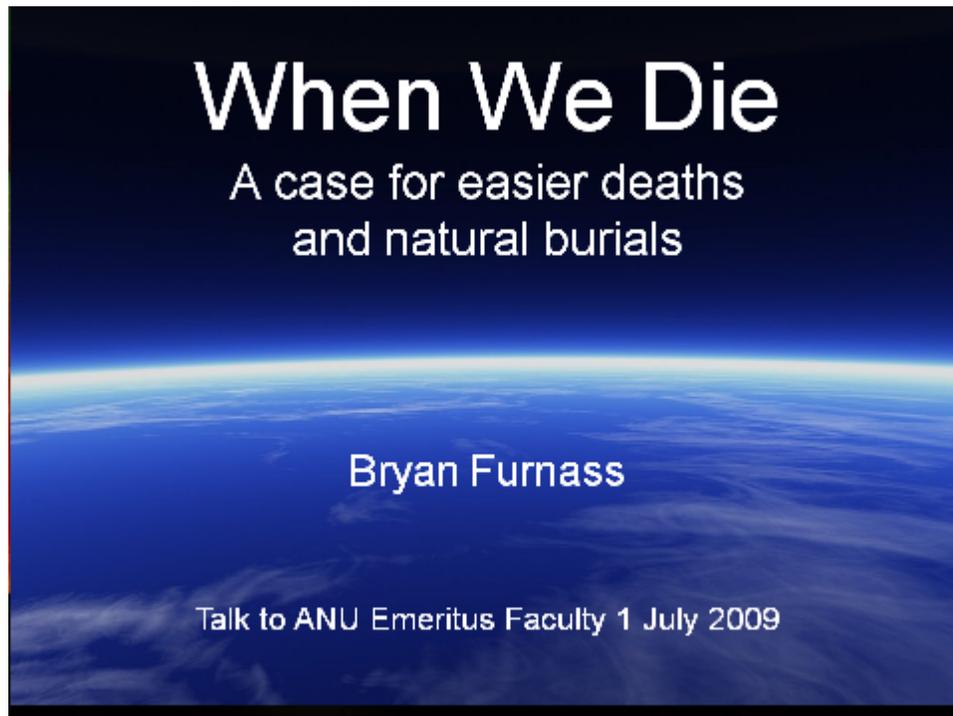


## EMERITUS FACULTY TALK – 01/07/09

### WHEN WE DIE – A CASE FOR EASIER DEATHS AND NATURAL BURIALS

By Bryan Furnass



#### Slide 1

These days there is almost as big a taboo on talking about death as there was on talking about sex in the Victorian era. There is much denial, and whispering about it. Life would not be possible without death. As Malcolm Whyte has pointed out, all the cells in our bodies die and are replaced, at different rates, from conception to demise, after which their contents are irreversibly re-cycled into the biosphere in different ways. The Buddhist philosophy about the flow of life is that we never step into the same stream twice. I'll concern myself today not with cell biology, but (in a secular way) with the dying and death of individuals, including my own experience spanning four generations.

Apart from people dying suddenly from a cardiovascular episode or external violence, a recent British study has shown that 70% of people die in hospital, 10% in nursing homes or hospices and 20% at home. Traditionally, birth and death were regarded as primarily social rather than medical events, but with lifestyle and medical changes an increasing majority of deaths now occur in hospital.

## **Personal experiences of home deaths**

Growing up in the pre-immunisation, pre-antibiotic era. I learnt of the sad deaths of children of our friends and of school mates from infectious diseases – diphtheria, polio, rheumatic fever, nephritis, pneumonia and tuberculous meningitis – now all preventable and seldom encountered in industrialized societies, except amongst indigenous Australians and people in the developing world. Public health measures in the 19<sup>th</sup> century and effective therapeutic measures in the 20<sup>th</sup> have dramatically lowered mortality rates from infectious diseases, particularly in children. One consequence has been a sixfold increase in human population, to over 6.7 billion. Another has been the survival of an increasing proportion of people into middle and old age, placing an increasing burden on medical services.

My first family experience of home death was of my great grandmother, born in the mid-19<sup>th</sup> century, who at the then grand old age of 83 fell out of bed and fractured her hip. She died peacefully at home a few days later from pneumonia – then called the old person's best friend, but now seldom possible in our high-tech interventionist world of hospital medicine. The second example is her daughter, my 73-year old grandmother who suffered a severe stroke, at our home at Christmas. We carried her up to bed and called in our wise family GP, who advised against getting her into hospital, and since I was then a medical student, left a syringe of morphia to be given in case she became restless. After a couple of days she died peacefully "in the bosom of her family", who were all able to say goodbye. My final example is an 18 year old girl who consulted me with a malignant osteosarcoma of the pelvis. She responded well to radiotherapy and was able to return to work. Unfortunately the tumour recurred after three years, with secondary deposits in the lung and a grim prognosis. She was readmitted to hospital and the question of further treatment in Sydney discussed with the patient, her family and GP, but she was insistent on returning home to the family, including younger siblings, for her 21<sup>st</sup> birthday. The district nurse gave morphia when required and she died two weeks later, relatively pain free, the family glad to have had her die at home.

## **The hospice-palliative care movement**

Shortly after the death of my young patient I sat on a committee discussing the possible establishment of a Canberra hospice, to be associated with a home-based palliative care program, giving emotional and social as well as physical support. The hospice was first located on the site of the old Canberra hospital and was subsequently re-located to its present site, named Clare Holland House, run by the Little Company of Mary. This enabled patients with terminal illness to be cared for in pleasant surroundings, with the priority on improving their quality rather than the quantity of remaining life, an emphasis on holistic medicine which is often sadly neglected in the hospital environment.

While effective pain management may sometimes shorten life in terminal illness, this is now accepted by most medical and religious authorities under the adage “Thou shall not strive officiously to keep alive”. Morphine and its derivatives (derived from the Greek god Morpheus, meaning sleep and dreams) is the mainstay of pain control, but is not always effective in severe pain, and other psychotropic drugs need to be considered. For example, in my teaching hospital in London, the famous Brompton mixture was sometimes prescribed in the cancer ward, consisting of gin, honey and lemon, cocaine and opiates. In Canada it is legal to prescribe cannabis for symptom relief in terminal colonic cancer. Aldous Huxley gave his dying wife and later himself an injection of LSD, and they both apparently died in a state of bliss.

### **Euthanasia**

Deliberate termination of life by euthanasia ( derived from a Greek word meaning easy death) is permitted in the State of Oregon, USA, and the Netherlands, and does not lead to prosecution in Switzerland, provided malicious intent can be disproved. It has not yet entered the mainstream of medical care, owing to medical, ethical, legal and religious objections. Euthanasia societies claim that the right to die is a basic human right. While few doctors may be found who would deliberately give a lethal injection, society may eventually come to terms with voluntary autonomous legalized euthanasia (acronym VALE, meaning farewell), with the patient being offered a suitable pill. Many ethical and legal minefields will need to be crossed, and effective safeguards established, but pressure for voluntary euthanasia may become greater as hospital medical care becomes over burdened. Already, 80% of medical expenses are incurred during the last year of life, and resource depletion may require the general adoption of a triage system for medical intervention, as occurs during wartime and natural disaster calamities.

### **Near death experiences (NDEs)**

It may often be that dying is more distressing for the observer than for the dying person. There is a growing literature on people who have apparently died from accidents, severe illness such as pneumonia or heart attack or exposure to extreme conditions and who unexpectedly recovered, providing interesting insights into the interface between dying and death. Probably over three quarters of people who nearly die have near-death experiences, which have been alluded to by philosophers and mystics for centuries.

NDEs have many features in common, irrespective of ethnic or religious differences. Five stages have been described:

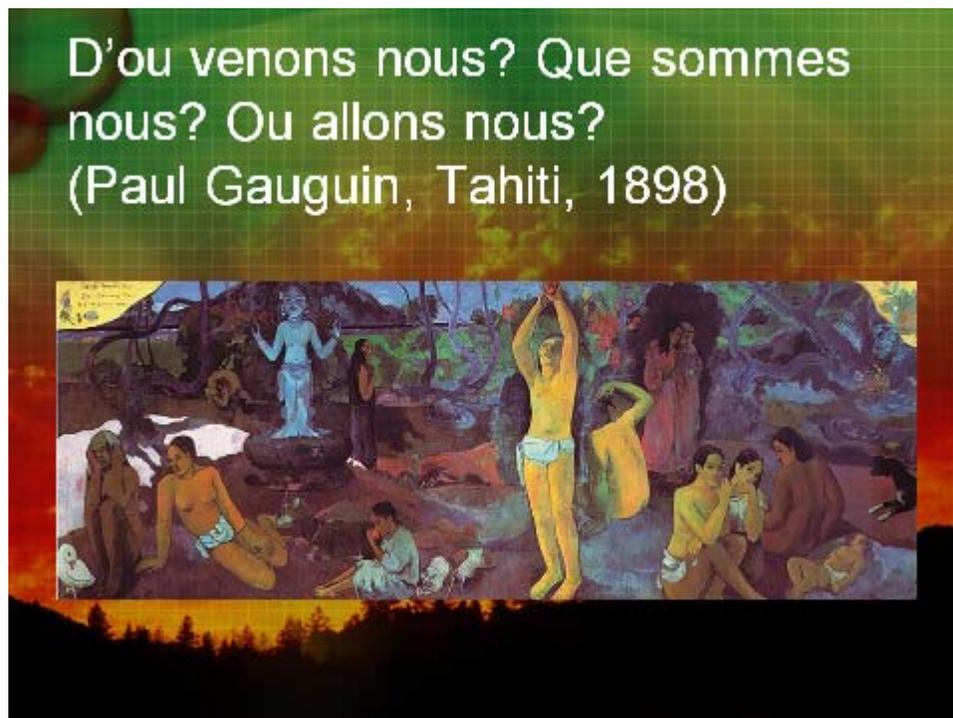
- 1) A sensation of peace and wellbeing
- 2) A feeling of separation from the body, often looking down on it from above, often accompanied by a sense emotional detachment and sharpened awareness

- 3) A sense of entering the darkness, such as travelling down a dark tunnel
- 4) Seeing the light, which is usually brilliant white, golden or sometimes blue
- 5) Entering the light and experiencing unsurpassed beauty, love and peace.

Some have cited these experiences as evidence of an afterlife. Sceptics maintain that they can be explained by shortage of oxygen in the temporal lobes of the brain and the retina. A possible chemical explanation is the release of endorphins – hormones with a morphia-like effect – as part of the body's protective response to stress. Support for the latter is that people with severe injury sometimes experience no pain until sometime after the event. A classical description is from the nineteenth century explorer David Livingstone, who felt calm, peaceful and painless while being crushed across the chest by a lion's jaws. Whatever the truth of the matter, to know that nature has evolved a way to allow dying humans to feel blissful can only be reassuring, even for sceptics who dismiss the visions as delusionary.

### Some notable deaths

The French painter and writer, Paul Gauguin suffered from cosmological vertigo induced by the work of Charles Darwin and other Victorian scientists. In the 1890s Gauguin ran away from Paris, family and stockbroking career to paint (and bed) native girls in the tropics, in an attempt to find what he called the “savage” – the elusive nature of humankind. In 1897 a passing steamer brought the news of the death of his favorite child from pneumonia. After months of illness, poverty and suicidal despair, the artist harnessed his grief to produce in Tahiti a vast painting which he entitled “*D’ou venons nous? Que sommes nous? Ou allons nous?*” - “where do we come from? What are we? Where are we going?”



#### Slide 2

These fundamental questions were also addressed by English poets of the so-called romantic era, including Keats, Shelly, Byron and Wordsworth. During his short life of 25 years, John Keats mused about death.



### Slide 3

Keats suffered from tuberculosis, which had captured the lives of his mother and sister. In one of his most famous poems *Ode to a Nightingale* he contrasts his own forthcoming mortality to the perceived immortality of the nightingale's song:

“ Darkling I listen; and for many a time  
I have been half in love with easeful death  
Call'd him soft names in many a mused rhyme,  
To take into the air my quiet breath;  
Now more than ever seems it rich to die,  
To ease upon the midnight with no pain,  
While thou art pouring forth thy soul abroad  
In such an ecstasy!  
Still wouldst thou sing, and I have ears in vain-  
To thy high requiem become a sod”.

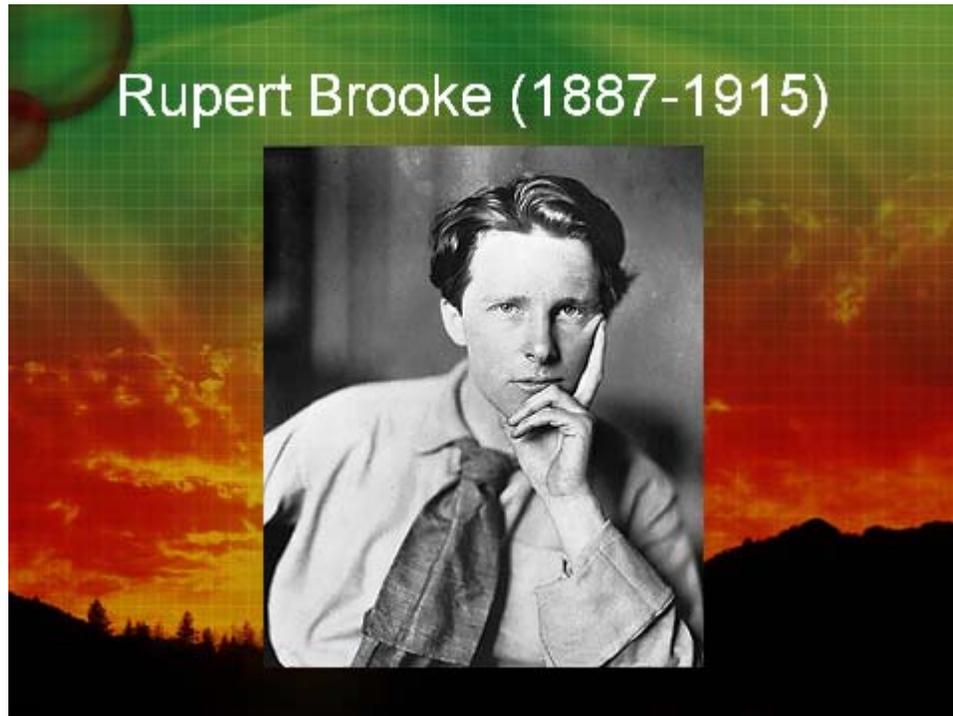
This poem was written in the Spaniards Inn on the edge of Hampstead Heath in London. Shortly afterwards, Keats moved to a warmer clime in Italy for the sake of his health. He

died peacefully in Rome, in a house next to the Spanish Steps, which is now a museum to Keats and Shelley.



Slide 4

A romantic poet of the First World War was Rupert Brooke, described by the Irish poet WB Yeats as the handsomest young man in England.



**Slide 5**

Brooke enrolled in the Royal Navy in 1915, sailing with the Mediterranean Fleet on the way to Gallipoli, when he died unromantically from septicaemia following a mosquito bite at the age of 27. He was buried on the Greek island of Skyros in a field of thyme under an olive grove with a view of the sea – an appropriate natural burial site for a poet!

Brooke seemed to have had a premonition of death from an early age, as in one of his first poems entitled *Second Best*, written at the age of seventeen:

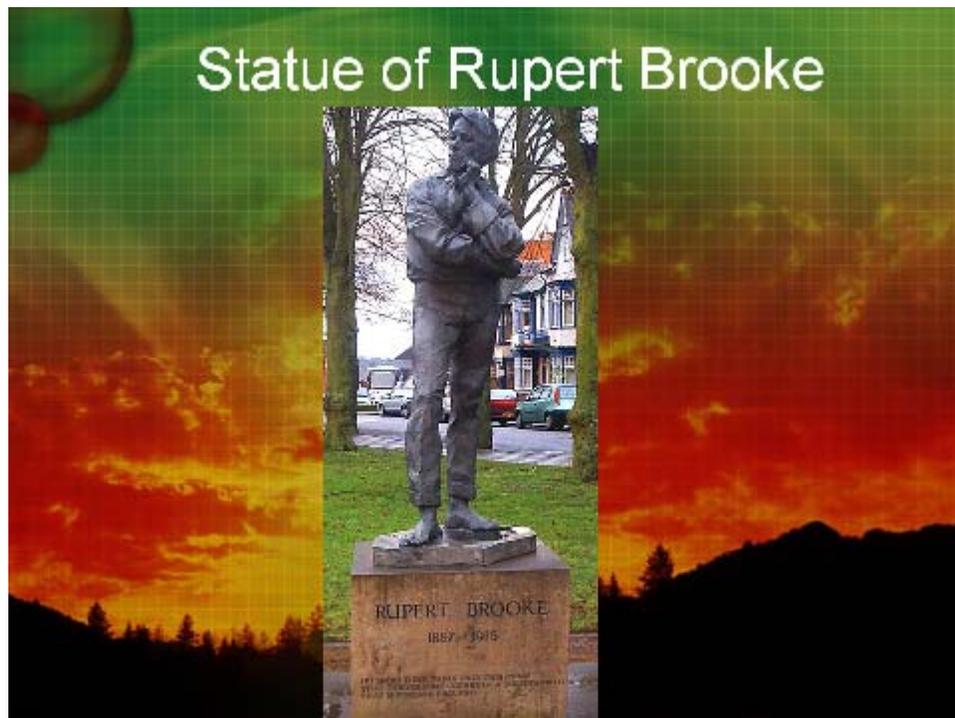
“Mid youth and song, feasting and carnival,  
Through laughter, through the roses, as of old  
Comes Death, on shadowy and relentless feet  
Death, unappeasable by prayer or gold;  
Death is the end, the end!”

Proud, then, clear eyed and laughing, go to greet death as a friend!”

One of Rupert Brooke’s last and best known poems is entitled *The Soldier*:

“If I should die, think only this of me:  
That there’s some corner of a foreign field  
That is forever England. There shall be  
In that rich earth a richer dust concealed;  
A dust whom England bore, shaped, made aware,  
Gave, once, her flowers to love, her ways to roam,  
A body of England’s, breathing English air,  
Washed by the rivers, blest by suns of home”.

This famous poem is engraved on a memorial to Rupert Brooke in his birthplace in Rugby



**Slide 6**

A less charitable view of death was expressed by Dylan Thomas “Go not gentle into that eternal night, but rage, rage against the darkening of the light”. Retaining his wit to the end, Oscar Wilde, having moved to a Paris garret after his imprisonment in Reading gaol, glared at the hideous wallpaper of his room and stated “one of us will have to go”, whereupon he died during the night.

There is much recorded evidence of stoicism at the time of death. The classic example is of Socrates, sentenced to death by hemlock by the Athenian Senate. After drinking the fatal draught, Socrates said to his slave “I owe Aesculapeus a cock. See that it is paid”. In his final days, Albert Einstein developed a leaking aneurysm of the aorta. A surgical team was brought in from New York, who gave the opinion that an operation would give him a fifty per cent chance of survival, whereas without surgery his chances of survival were minimal. Einstein was ‘violently opposed’ to the surgery, saying philosophically to his housekeeper “The end comes some time; does it matter when?”

Death by suicide in young people, which seems to be on the increase, can be a particularly traumatic experience for family, friends and colleagues, who often see this as unfulfilled life wasted.



**Slide 7**

On the other hand, particularly for people past their prime, we might acknowledge Voltaire’s opinion that while he disapproved of people committing suicide, he would fight to the death for their right to do so.

## Preparing for death

Although often denied and postponed, life carries a 100% mortality rate, and we can spare our relatives a great deal of trouble by making our wishes known about the disposal of our bodies and our estates.



### Slide 8

Everyone should make a Will, either in an easily obtained public document or, in complex cases, with the help of a lawyer. A power of attorney should be granted to a next of kin to carry out our wishes in the event of our becoming incompetent. We can increase our autonomy by drawing up a Living Will concerning medical intervention, such as refusal to accept emergency treatment in the event of developing an incurable disease. If we wish to make a postmortem contribution to society we can become organ donors and carry a card to that effect. Organs can be usefully harvested following sudden death or after the switching off of life support systems in cases of brain death. Old age is not necessarily a barrier to organ donations, healthy corneas, for example sometimes being able to restore sight.

## Choices for Body disposal

*Homo sapiens* is the only species which does not return directly to its ecosystem after death. Today's choices for body disposal boil down to Bury, Burn or Compost.

**Choices for body disposal**  
**Bury, burn or compost ?**

**Standard cemetery deep burials**

- Large ecological footprint
- Slow body decomposition
- What to do with the 1-2 billion people dying in the next 20 years?

**Cremation**

- Preferred option by 70%
- Not a 'clean' option - pollution by heavy metals, organic chemicals and CO<sub>2</sub> emissions
- But remains do not occupy much space

**Natural burials**

- Return corpses rapidly to the biosphere, improving soil fertility
- With tree planting, provide carbon sinks and restoration of degraded landscapes.
- Graves should be 1.2 metres deep, coffins or shrouds made of non-polluting biodegradable materials, no headstones, grave locations located by GPS
- If land use is critical - the Orwellian option of mass graves and body composting??

### Slide 9

Throughout history, humans have developed cultural practices for formally acknowledging death and disposal of their remains in a dignified manner. The ancient Romans built underground catacombs where bodies were placed and after soft parts had rotted away their skeletons were transferred to ossuaries to make more space. For the Abrahamic religions – Judaism, Christianity and Islam, bodies have been traditionally been buried in the ground.



**Slide 10** shows how energy intensive this used to be before mechanical diggers took over.

Despite the wide variety of stone memorials and tombs, the eighteenth century poet Thomas Gray beautifully describes the levelling effect of death in his *Elegy written in a Country Churchyard*:

“Let not Ambition mock their useful toil,  
Their homely joys, and destiny obscure;  
Nor Grandeur hear with a disdainful smile  
The short and simple annals of the poor  
The boast of heraldry, the pomp of pow’r,  
And all that beauty, all that wealth e’re gave,  
Awaits alike th’inevitable hour:  
The paths of glory lead but to the grave”.

Although death is no laughing matter, I’d like to interrupt this discourse with a little story set in a Lancashire cotton town, where, following the adage of “where there’s muck there’s brass”, there lived a wealthy mill owner and mayor and his worthy wife, who was a veritable pillar of the church. Following the death of his wife from cancer, the mayor

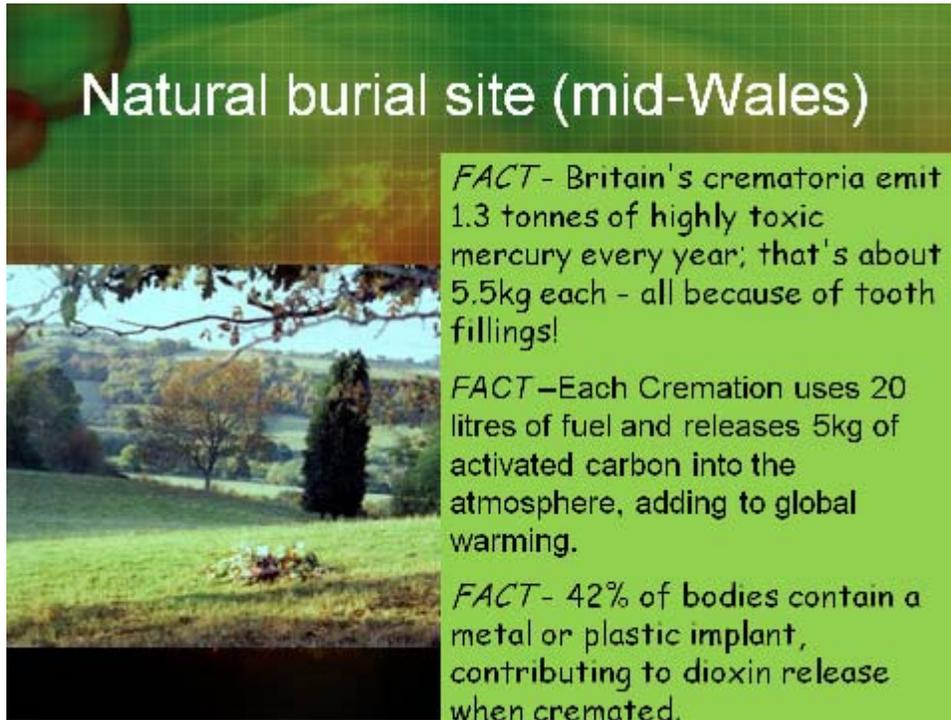
ordered from a local sculptor an expensive headstone of Italian marble, on which was to be engraved “Here lies the body of Mary Jane, etc., etc”., and in view of her piety ending with the words “Lord she was Thine”. On returning to inspect the work a week later the mayor saw that the last line was spelt “Lord she was Thin”. Furious, he said “I’m not partin’ wi’ no brass unless tha puts an ‘e’ in”. At the funeral next day, the town’s dignitaries were able to read on the headstone “E, Lord she was thin”.

When churchyards became full, civic cemeteries were established, occupying many hectares of land on city outskirts. These are generally deep burials-two metres or more, and if plastic is included in the coffin, disintegration takes a very long time, particularly if the body has been embalmed. Public cemeteries in turn have become overcrowded, and bodies sometimes have to be disinterred and buried deeper.

Cremation has a very long history, dating from the finding of charred bones of a woman near Lake Mungo in Victoria, some 40,000 years ago. Cremation has been traditional in the Hindu religion, until in recent years wood has become scarce. The first modern cremation was in England in 1893 and has become established in Australia for over a century, being now the favoured method of body disposal for 70% of the population. It has the great advantage of saving space, the deceased’s ashes afterwards being placed in a memorial urn, buried or scattered. The disadvantage is pollution from heavy metals and organic materials, including fossil fuels used in the incineration process, amounting to some 5kg CO<sub>2</sub> equivalent per cremation. In addition, standard burials and cremation consume valuable timber for coffin manufacture. Some of the disadvantages and costs of modern funerals have been described in a book entitled *Funeral Rights – What the Australian ‘death-care’ industry doesn’t want you to know*, by Melbourne Barrister Robert Larkins. Larkins asks “how can a funeral director charge \$700 for a chipboard coffin worth only \$80?” and calls for more public autonomy in making decisions about body disposal and memorials, including eco-friendly funeral alternatives.

## Natural earth burials

Natural earth burials involve interring the body in a shallow grave (around 1 metre deep) so that the soil's organisms can decompose it and return it to the biosphere in a relatively short time. They are becoming popular in Britain, where there are over two hundred natural burial sites.



**Natural burial site (mid-Wales)**

*FACT* - Britain's crematoria emit 1.3 tonnes of highly toxic mercury every year; that's about 5.5kg each - all because of tooth fillings!

*FACT* - Each Cremation uses 20 litres of fuel and releases 5kg of activated carbon into the atmosphere, adding to global warming.

*FACT* - 42% of bodies contain a metal or plastic implant, contributing to dioxin release when cremated.

Slide 11



## Costs of natural burial (Wales)

<b>Right of Burial</b>	
Single	£500
Double	£850
Dig & Fill the grave	£200

### **Ashes**

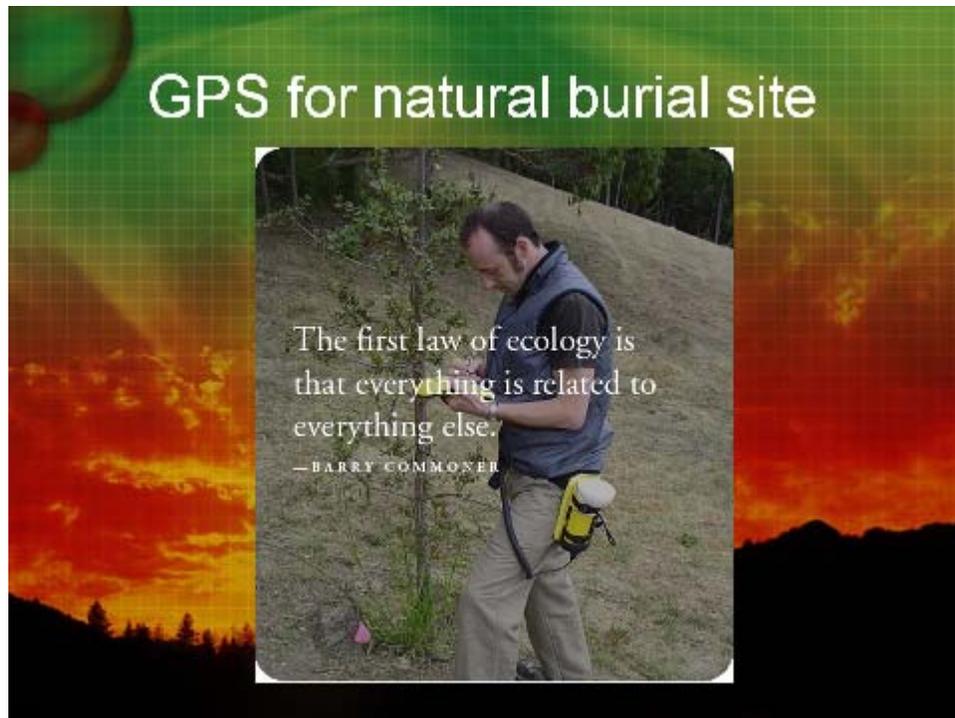
Right of Burial	£100
Interment	£50
Scatter	£30

### **Memorials**

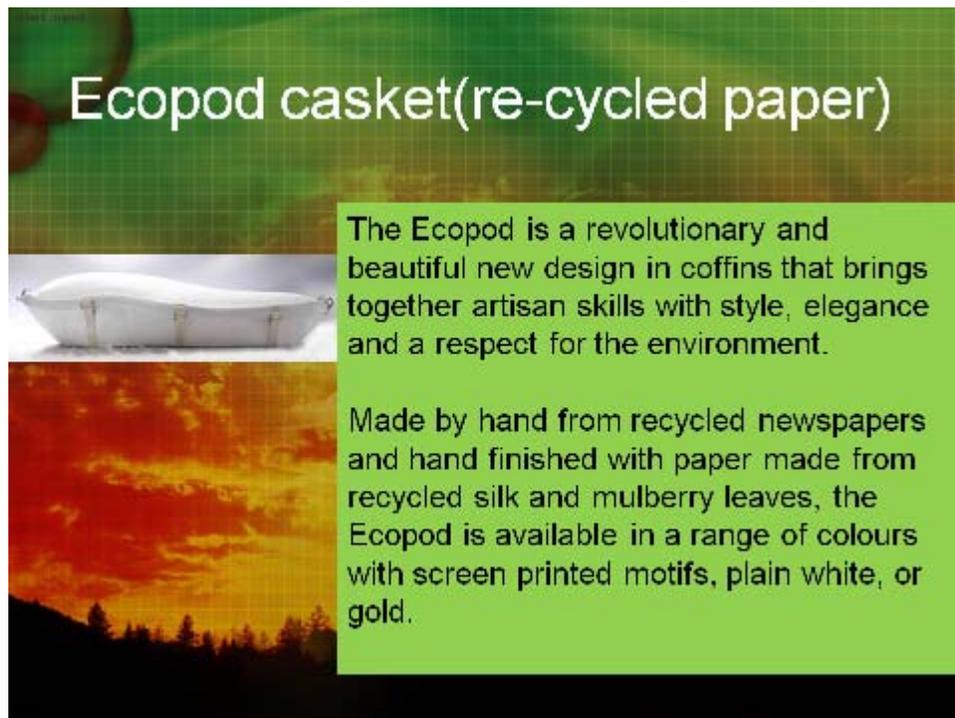
Tree with plaque	£150
Inscribed bedstone	£200
Adopt a tree with plaque	£75
Sculptures by arrangement.	

### Slide 12

The body may be buried in bushland or open country and a tree or shrub planted nearby to contribute to a memorial grove which can be a pleasant place to visit. Requirements are that the corpse and clothing should contain no pollutants and can be contained in a bio-degradable coffin or shroud, composed of re-cycled newspaper and covered in silk and mulberry leaves.



Slide 13



Slide 14

No headstones are permitted, but small flat plaques or markers can be placed near the corpse, and the place identified by a GPS system.

## Bio-degradable Ecopod/Urn



The Ecopod is suitable for cremation, or burial in woodland sites or traditional cemeteries, and biodegrades naturally over time when placed in the ground. Our unique strap and handle system make it especially easy for families to carry the Ecopod at a funeral, and participate more fully in the ceremony.

The Eco Urn.

### Slide 15

Jewish and Muslim faiths require that the body be disposed of as soon as possible after death, and arrangements can be made to lower the body, enclosed in a shroud directly into the earth, without a coffin, although local regulations require that the body be carried into the burial site in a coffin.

**Slide 16**

Natural burials revive the custom of families, including children being involved directly in the interment process.

### **Thinking about life and death**

Disease and bereavement can be unpleasant experiences, but we should see them in perspective and not take ourselves too seriously. Provided we've had a good innings, dropping off the twig with consequent ecological body disposal we can make a positive contribution to society and the environment, as we become non-consumers, imposing a smaller footprint on the planet. Traditional burials and cremations impose an increased footprint through use of non-renewable resources, occupation of valuable land and pollution. Although Western society is focused on the individual, the prospect of one or two billion deaths globally in the next two decades means that we need to consider mass burial sites which would improve soil fertility directly (as happened tragically in Flanders Fields) or indirectly by composting and distributing human remains over degraded landscapes. Techniques are available by which corpses can be snap frozen and pulverized by sound waves or dissolved in alkali and used as organic fertilizer.

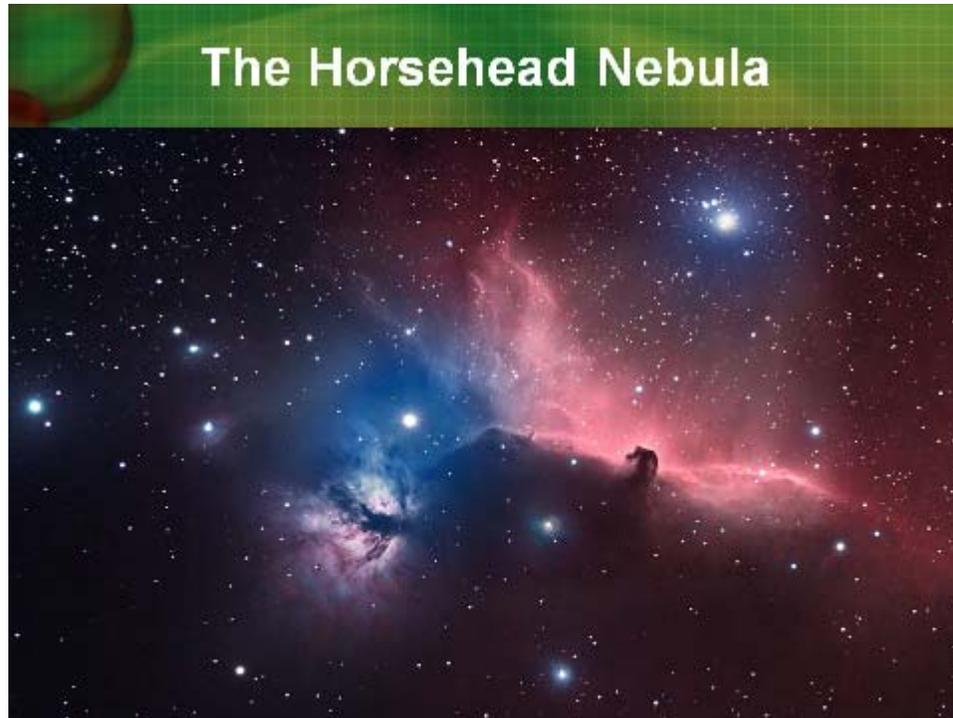
These concepts are probably repulsive to Western thinking, but consonant with Hindu and Buddhist ideas about humanity being involved in nature's re-cycling processes.

Gauguin's painting



**Slide 17** asks the fundamental questions “Where do we come from? What are we? Where are we going?”

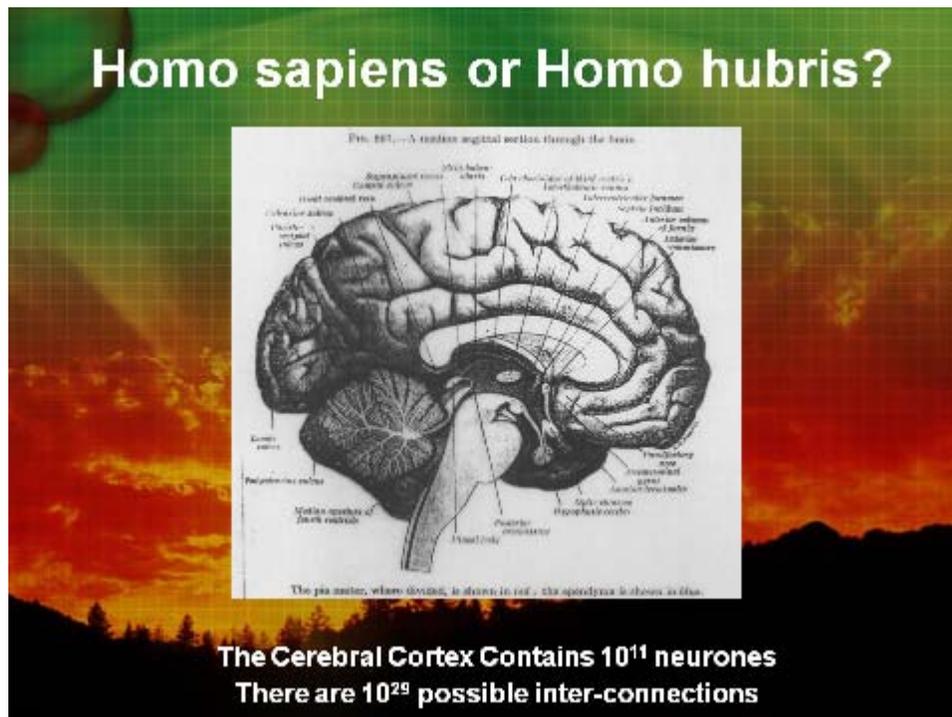
Although religious beliefs may have different interpretations, science can give us a partial answer to the first and third questions. This photograph of the Horsehead nebula in the Constellation of Orion, with Orion's belt in the foreground was taken in a seven hour exposure by a telescope in the desert of New Mexico.



**Slide 18**

This is 1400 light years from us, which seems a long way compared with our nearest star Alpha Centauri, four light years away, but it is relatively close in cosmological terms. This knowledge and vision should fill us with a sense of awe and, if we are honest with ourselves, an awareness of our own material insignificance. But it should also remind us that every atom in our bodies is composed of stardust, revealing that we are children not only of the biosphere but also of the universe, being re-cycled through space and time for infinity. The red flush in the photograph is from the spectrum of hydrogen, which constitutes 98% of all atoms in the universe.

Gauguin's second question "what are we?" is more difficult, but we may find the answer by using the most complex collection of star dust in the known universe.



### Slide 19

The brain allows us to ask multiple choice questions, such as "what is consciousness, what is conscience?", "should we be creative or destructive?" "how can we become wise rather than pompous?" "how should we die, and where should we go?". Scholars throughout the ages have advocated the use of the brain, through mottos adopted by learning institutions. These include Horace in *sapere aude* (dare to be wise), Descartes in *cogito ergo sum* (I think, therefore I am) and the ANU's motto from Lucretius *naturam primum cognoscere rerum* (first to learn the nature of things).

On a personal note, after death I would like to have my remains re-cycled through an ACT Natural Burial Park, and, old fossil that I am, buried under a Wolemi Pine, with merriment rather than sorrow. My memorial in the short term would be imprinted in the memory bank of people I have left behind, and in the longer term, embedded in the DNA molecules of my descendants.

# WE ARE PART OF THE BIOSPHERE

## THANK YOU



# Thank you!



Slide 20